



Ajuste emocional y relacional en la etapa perinatal: experiencias adversas en la infancia, apego y afrontamiento diádico.

Rebeca Santamaría Gutiez

Directores

Dra. Laura Lacomba Trejo
Dr. Francisco González Sala

Valencia, marzo 2026

A *Laura*, por ser un ejemplo de dedicación y sensibilidad. Gracias por sostener este trabajo (y a mí) con tu conocimiento, pero sobre todo con tu corazón, por cada consejo y cada palabra que ha ido construyendo este camino. Gracias por enseñarme que la rigurosidad y la humanidad pueden ir de la mano, y por recordarme que acompañar también es sostener con cuidado, con respeto y con confianza.

A *Fran*, por aportar una visión constructiva y cariñosa a estas páginas.

A *mis padres*, por estar a través del tiempo y los múltiples espacios. Irse tiene sentido porque sé que siempre hay un lugar al que regresar: a casa, a vosotros. Gracias por sostenerme y darme alas. A mi *hermana*, por ser la energía más bonita y vibrante que conozco, cuya presencia llena de ilusión y vida cada estancia.

A *mis amigas*. A las que he tenido la suerte de cruzarme en estos tiempos convulsos, a las que van conmigo en la piel y a las que han compartido su cariño a lo largo de los años, incluso en la distancia. Ellas son un abrazo en la lejanía, risas que aligeran los días largos y devuelven el equilibrio, palabras que abrigan, y la certeza de que no se recorre ningún camino completamente sola.

Este trabajo nace del deseo de aportar un pequeño rayo de luz a la visibilización de las mujeres en los ámbitos de la investigación y la práctica clínica, espacios en los que históricamente han sido olvidadas o infrarrepresentadas. Las experiencias recogidas en estas páginas constituyen una fuente de conocimiento que puede contribuir a iluminar el camino hacia una transformación más humana y sensible de la práctica clínica y social.

Por ello, el agradecimiento más profundo es para aquellas *mujeres* que, desde su generosidad y su amor, han decidido alzar la voz y compartir parte de su experiencia, su dolor y también su cariño, con la esperanza de ayudar a mejorar la atención y la comprensión, para que futuras madres puedan atravesar el dolor de una manera más acompañada y menos silenciada por el sistema.

En este trabajo hemos intentado escuchar y honrar esos dolores que existen incluso cuando el mundo no sabe bien cómo mirar, escuchar, comprender o acompañar. A *todas las madres* que han formado parte de este camino: a las que hoy sostienen a sus hijos en brazos y a las que los sostienen en la memoria.

Y, sobre todo, *gracias a la mía.*

RESUMEN.....	9
ABSTRACT.....	17
RESUM.....	24
ESTRUCTURA DE LA TESIS DOCTORAL.....	32
MARCO TEÓRICO.....	36
1. La transición a la maternidad o paternidad como evento vital crítico.....	37
1.1 Modalidad de acceso a la maternidad y paternidad.....	37
2. El embarazo y el posparto como eventos vitales críticos.....	43
2.1 Pérdida perinatal (PP) y duelo perinatal (DP).....	45
3. Factores de riesgo y protección en la etapa perinatal.....	49
3.1 Factores distales: experiencias adversas en la infancia (ACEs).....	49
3.2 Factores individuales proximales: apego adulto y resiliencia.....	53
3.2.1. Apego adulto.....	53
3.2.2. Resiliencia.....	57
3.3. Factores relacionales: clima familiar y coping diádico (CD).....	58
3.3.1. Clima familiar.....	58
3.3.2. Coping diádico.....	60
3.4. Factores contextuales y sanitarios: violencia obstétrica (VO).....	61
4. Resultados psicológicos en el periodo perinatal: salud mental y crecimiento postraumático.....	65
4.1. Salud mental: depresión posparto (DPP).....	65
4.2. Salud mental: trastorno de estrés postraumático asociado al parto (TEPT).....	67
4.3. Crecimiento postraumático (CPT).....	68
4. Integración conceptual.....	70
JUSTIFICACIÓN DE LA TESIS DOCTORAL.....	74
OBJETIVOS E HIPÓTESIS.....	78
ESTUDIOS EMPÍRICOS.....	88
Estudio 1.....	89
Estudio 2.....	130
Estudio 3.....	158
Estudio 4.....	198
Estudio 5.....	241
Estudio 6.....	281
DISCUSIÓN.....	325
CONCLUSIONES.....	354
REFERENCIAS.....	358

Figura 1. Modelo conceptual que integra las experiencias adversas en la infancia, el apego adulto, los contextos reproductivos y estresores perinatales, los recursos individuales y diádicos, los resultados de salud mental y adaptación.	72
---	----

- **ACEs:** Experiencias adversas en la infancia (Adverse Childhood Experiences).
- **CD:** Coping Diádico.
- **CPT:** Crecimiento Postraumático.
- **DP:** Duelo Perinatal.
- **DPP:** Depresión Posparto.
- **fsQCA:** Análisis Cualitativo Comparativo Difuso (fuzzy set Qualitative Comparative Analysis).
- **GS:** Gestación Subrogada.
- **HRM:** Regresión Múltiple Jerárquica
- **PP:** Pérdida Perinatal.
- **TEPT:** Trastorno de Estrés Postraumático.
- **TEPTP:** Trastorno de Estrés Postraumático relacionado con el parto.
- **TRA:** Técnicas/Tratamientos de Reproducción Asistida.
- **VO:** Violencia Obstétrica.

RESUMEN

1. Introducción y justificación de la tesis

El periodo perinatal constituye una etapa de especial vulnerabilidad psicológica caracterizada por profundos cambios fisiológicos, emocionales y relacionales. Durante este periodo, factores de riesgo previos, como las experiencias adversas en la infancia (ACEs), así como factores contextuales propios del proceso reproductivo, como la violencia obstétrica (VO), pueden incrementar la probabilidad de desarrollar problemas de salud mental, entre ellos depresión posparto (DPP), trastorno de estrés postraumático relacionado con el parto (TEPTP).

Las ACEs actúan como factores de vulnerabilidad distal que influyen en los patrones de apego adulto y en la regulación emocional, modulando la capacidad de afrontamiento ante eventos perinatales críticos, como la pérdida perinatal (PP) y el duelo perinatal (DP). Por su parte, la VO constituye un factor de riesgo proximal con efectos adversos sobre la salud mental materna y el establecimiento del vínculo temprano.

No obstante, diversos factores protectores —como el apego seguro, la resiliencia, el funcionamiento familiar positivo y el coping diádico (CD) positivo— pueden mitigar el impacto de estas adversidades. Asimismo, incluso en contextos altamente estresantes pueden producirse procesos de crecimiento postraumático (CPT), caracterizados por cambios positivos en la percepción de uno mismo, las relaciones y el significado de la experiencia.

En este marco, la presente tesis propone un modelo integrador que analiza cómo las vulnerabilidades individuales, los recursos relacionales y los factores contextuales interactúan a lo largo del continuo perinatal —preconcepción, embarazo y posparto— para influir en la adaptación psicológica.

2. Objetivos y metodología empleada.

2.1. Objetivo general.

El objetivo general de esta tesis es examinar los factores individuales, relacionales y contextuales que influyen en la salud mental perinatal y en el coping diádico positivo, integrando distintos contextos reproductivos —reproducción asistida, GS, pérdida perinatal y posparto— mediante un enfoque metodológico mixto.

En primer lugar, se pretendió sintetizar sistemáticamente la evidencia científica disponible sobre tres ámbitos: el papel del coping diádico positivo en parejas sometidas a tratamientos de reproducción asistida (**Estudio 1**), los patrones de apego en contextos de GS y sus implicaciones para el bienestar emocional (**Estudio 2**), y la relación entre pérdida perinatal y apego (**Estudio 3**). Para ello se realizaron tres revisiones sistemáticas registradas en PROSPERO y desarrolladas siguiendo las directrices PRISMA.

En segundo lugar, se analizó cómo las ACEs, el apego romántico inseguro, la culpa y los problemas de salud mental predicen el CD positivo en mujeres tras una pérdida perinatal (**Estudio 4**). En tercer lugar, se examinó la influencia conjunta de vulnerabilidades individuales, recursos relacionales y factores contextuales en el duelo perinatal y el crecimiento postraumático tras la pérdida (**Estudio 5**). Finalmente, se evaluó el papel de las ACEs, el apego inseguro, la resiliencia, el funcionamiento familiar y la VO en la DPP y el TEPTP (**Estudio 6**).

Para abordar estos objetivos, previa aprobación del Comité de Ética de la Universitat de València (2024-PSILOG-3468509 y 2024-PSILOG-3773873), se llevaron a cabo estudios empíricos transversales, que utilizaron autoinformes de evaluación y posteriormente integraron análisis estadísticos lineales como regresión jerárquica

(HRM), análisis de mediación, y análisis configuracionales mediante fsQCA.

3. Principales resultados

En el **Estudio 1**, en contextos de reproducción asistida, el CD y de apoyo se asoció con mayor satisfacción de pareja, menor malestar sexual y menor sintomatología ansioso-depresiva en ambos miembros, así como con mayor cohesión familiar. Por el contrario, las estrategias negativas y evasivas se vincularon con mayor malestar psicológico y menor consenso diádico. La evitación del apego se relacionó con menor uso de CD y peor ajuste relacional. Las mujeres reportaron mayor estrés relacionado con la fertilidad, mientras que los hombres mostraron mayores niveles percibidos de capacidad de CD.

En el **Estudio 2**, las madres subrogadas mostraron menor conexión emocional prenatal pero adecuado cuidado fetal, y el tipo de subrogación y la relación con los padres intencionales influyeron en la calidad del apego gestacional. No se hallaron diferencias en la seguridad del apego infantil entre niños nacidos por gestación subrogada, otras TRA o métodos convencionales, destacando el papel de la sensibilidad parental y la calidad del entorno familiar. Los padres intencionales presentaron mayor ansiedad durante la pandemia, y la comunicación transparente favoreció la integración de la historia de nacimiento.

En el **Estudio 3**, el apego inseguro o desorganizado predijo peor adaptación al duelo perinatal, mientras que el apego seguro se asoció con menor sintomatología y mejor funcionamiento relacional. El vínculo materno-fetal mostró un efecto protector en embarazos posteriores, aunque la literatura evidenció resultados heterogéneos en relación con la intensidad del duelo.

En el **Estudio 4**, la evitación del apego emergió como el principal predictor de menor CD durante el duelo, seguida de la ansiedad de apego. Las ACEs influyeron indirectamente a través de la ansiedad, y la culpa y los problemas de salud mental configuraron perfiles de riesgo acumulativo. Los resultados apoyaron una lógica equifinal, identificándose perfiles de alta vulnerabilidad y perfiles protectores caracterizados por baja inseguridad de apego.

En el **Estudio 5**, el duelo perinatal (DP) se explicó principalmente por proximidad temporal a la pérdida, ACEs, ansiedad de apego y CD, mientras que el crecimiento postraumático (CPT) dependió fundamentalmente de recursos relacionales, especialmente del CD. Los hallazgos respaldan modelos de doble proceso, diferenciando factores de vulnerabilidad (DP) y recursos protectores (CPT).

Finalmente, el **Estudio 6** confirmó el papel de las ACEs, la violencia obstétrica (VO) y el apego inseguro en la salud mental perinatal. La VO fue el predictor más robusto del TEPTP, mientras que la resiliencia emergió como el principal factor protector frente a DPP y TEPTP. Los resultados subrayan la relevancia de intervenir sobre factores individuales, relacionales y estructurales en la prevención de la psicopatología posparto.

En conjunto, los estudios evidencian que, a lo largo de todo el periodo perinatal —desde las etapas previas al embarazo, pasando por la gestación, hasta el posparto—, la calidad de los recursos relacionales, especialmente el apego seguro, el coping diádico y la resiliencia, desempeña un papel central en la adaptación psicológica en contextos reproductivos adversos. En contraste, las ACEs, la inseguridad de apego y la violencia obstétrica configuran perfiles de vulnerabilidad que incrementan el riesgo de malestar psicológico en estas etapas.

4. Conclusiones.

Los resultados de esta tesis muestran que la adaptación psicológica durante el periodo perinatal se configura a partir de la interacción entre vulnerabilidades individuales, recursos relacionales y factores contextuales a lo largo de todo el continuo reproductivo.

El apego adulto emerge como un elemento central para comprender la adaptación ante eventos perinatales estresantes. El apego inseguro, especialmente el patrón evitativo, se asocia con menor CD, mayor malestar psicológico y mayores dificultades en los procesos de vinculación, mientras que el apego seguro actúa como factor protector tanto en contextos de TRA como en procesos de DP.

Las ACEs incrementan la vulnerabilidad psicológica durante el periodo perinatal, favoreciendo la aparición de duelo complicado, DPP y sintomatología postraumática. No obstante, su impacto depende de la presencia de recursos protectores, especialmente de relaciones familiares positivas y estrategias de CD positivo.

En este sentido, el CD positivo y la resiliencia emergen como factores protectores clave que favorecen la regulación emocional compartida y la adaptación psicológica ante experiencias adversas, incluyendo TRA, la PP y los desafíos del posparto. Asimismo, la VO se identifica como un predictor específico de sintomatología postraumática, lo que subraya la necesidad de promover modelos de atención perinatal respetuosos y sensibles al trauma.

En conjunto, esta tesis contribuye a una comprensión integradora de la salud mental perinatal, destacando la importancia de fortalecer los recursos relacionales y de considerar la diversidad de trayectorias reproductivas —incluyendo TRA, GS y

experiencias de PP— para promover el bienestar psicológico de mujeres, parejas, bebés y familias en este período.

ABSTRACT

1. Introduction and justification of the thesis.

The perinatal period is a stage of particular psychological vulnerability characterised by profound physiological, emotional and relational changes. During this period, previous risk factors, such as adverse childhood experiences (ACEs), as well as contextual factors specific to the reproductive process, such as obstetric violence, can increase the likelihood of developing mental health problems, including postpartum depression and post-traumatic stress disorder related to childbirth.

ACEs act as distal vulnerability factors that influence adult attachment patterns and emotional regulation, modulating the ability to cope with critical perinatal events, such as perinatal loss and perinatal grief. For its part, obstetric violence constitutes a proximal risk factor with adverse effects on maternal mental health and the establishment of early bonding.

However, various protective factors—such as secure attachment, resilience, positive family functioning, and positive dyadic coping—can mitigate the impact of these adversities. Furthermore, even in highly stressful contexts, post-traumatic growth processes can occur, characterised by positive changes in self-perception, relationships, and the meaning of the experience.

Within this framework, this thesis proposes an integrative model that analyses how individual vulnerabilities, relational resources and contextual factors interact throughout the perinatal continuum—preconception, pregnancy and postpartum—to influence psychological adaptation.

2. Objectives and methodology.

2.1. General objective.

The general objective of this thesis is to examine the individual, relational, and contextual factors that influence perinatal mental health and positive dyadic coping, integrating different reproductive contexts—assisted reproduction, surrogacy, perinatal loss, and postpartum—using a mixed methodological approach.

Firstly, the aim was to systematically synthesise the available scientific evidence on three areas: the role of positive dyadic coping in couples undergoing assisted reproduction treatments (**Study 1**), attachment patterns in IVF contexts and their implications for emotional well-being (**Study 2**), and the relationship between perinatal loss and attachment (**Study 3**). To this end, three systematic reviews were conducted, registered in PROSPERO and developed following the PRISMA guidelines.

Secondly, we analysed how ACEs, insecure romantic attachment, guilt, and mental health problems predict PDS in women after perinatal loss (**Study 4**).

Thirdly, the combined influence of individual vulnerabilities, relational resources, and contextual factors on perinatal grief and post-traumatic growth following loss was examined (**Study 5**). Finally, the role of early adversity, insecure attachment, resilience, family functioning, and obstetric violence in postpartum depression and childbirth-related post-traumatic stress disorder was evaluated (**Study 6**).

To address these objectives, following approval by the Ethics Committee of the University of Valencia (2024-PSILOG-3468509 and 2024-PSILOG-3773873), cross-sectional empirical studies were conducted using self-report assessments and subsequently integrating linear statistical analyses such as hierarchical regression (HRM), mediation and moderation analyses, and configurational analyses using fsQCA.

3. Main results

In **Study 1**, in assisted reproduction contexts, dyadic coping and support were associated with greater couple satisfaction, less sexual distress, and fewer anxiety-depressive symptoms in both partners, as well as greater family cohesion. In contrast, negative and avoidant strategies were linked to greater psychological distress and less dyadic consensus. Attachment avoidance was related to lower use of dyadic coping and poorer relational adjustment. Women reported higher fertility-related stress, while men showed higher perceived levels of dyadic coping capacity.

In **Study 2**, surrogate mothers showed lower prenatal emotional connection but adequate foetal care, and the type of surrogacy and relationship with the intended parents influenced the quality of gestational attachment. No differences were found in infant attachment security between children born through surrogacy, other assisted reproduction treatments or conventional methods, highlighting the role of parental sensitivity and the quality of the family environment. Intended parents experienced greater anxiety during the pandemic, and transparent communication facilitated the integration of the birth story.

In **Study 3**, insecure or disorganised attachment predicted poorer adaptation to perinatal grief, while secure attachment was associated with fewer symptoms and better relational functioning. The maternal-foetal bond showed a protective effect in subsequent pregnancies, although the literature showed heterogeneous results in relation to the intensity of grief.

In **Study 4**, attachment avoidance emerged as the main predictor of lower dyadic coping during grief, followed by attachment anxiety. ACEs indirectly influenced through anxiety, and guilt and mental health problems shaped cumulative

risk profiles. The results supported an equifinal logic, identifying high vulnerability profiles and protective profiles characterised by low attachment insecurity.

In **Study 5**, perinatal grief was mainly explained by temporal proximity to loss, ACEs, attachment anxiety, and dyadic coping, while post-traumatic growth depended primarily on relational resources, especially dyadic coping. The findings support dual-process models, differentiating between vulnerability factors (perinatal grief) and protective resources (post-traumatic growth).

Finally, **Study 6** confirmed the role of ACEs, obstetric violence, and insecure attachment in perinatal mental health. Obstetric violence was the most robust predictor of post-traumatic stress disorder related to childbirth, while resilience emerged as the main protective factor against postpartum depression and post-traumatic stress disorder related to childbirth. The results underscore the importance of intervening on individual, relational, and structural factors in the prevention of postpartum psychopathology.

Taken together, the studies show that throughout the perinatal period—from the stages prior to pregnancy, through gestation, to the postpartum period—the quality of relational resources, especially secure attachment, dyadic coping, and resilience, plays a central role in psychological adaptation in adverse reproductive contexts. In contrast, ACEs, attachment insecurity, and obstetric violence constitute vulnerability profiles that increase the risk of psychological distress during these stages.

4. Conclusions.

The results of this thesis highlight that psychological adaptation during the

perinatal period is shaped by the interaction between individual vulnerabilities, relational resources, and contextual factors throughout the reproductive continuum.

Adult attachment emerges as a central element in understanding adaptation to stressful perinatal events. Insecure attachment, especially the avoidant pattern, is associated with lower post-traumatic growth, greater psychological distress, and greater difficulties in bonding processes, while secure attachment acts as a protective factor in both assisted reproduction contexts and perinatal grief processes.

ACEs increase psychological vulnerability during the perinatal period, favouring the onset of complicated grief, postpartum depression, and post-traumatic symptoms. However, their impact depends on the presence of protective resources, especially positive family relationships and positive dyadic coping strategies.

In this sense, positive dyadic coping and resilience emerge as key protective factors that favour shared emotional regulation and psychological adaptation to adverse experiences, including assisted reproduction treatments, perinatal loss and postpartum challenges. Likewise, obstetric violence is identified as a specific predictor of post-traumatic symptoms, underscoring the need to promote respectful and trauma-sensitive models of perinatal care.

Overall, this thesis contributes to an integrated understanding of perinatal mental health, highlighting the importance of strengthening relational resources and considering the diversity of reproductive trajectories—including assisted reproduction, surrogacy, and experiences of loss—to promote the psychological well-being of women, couples, babies, and families during this period.

RESUM

1. Introducció i justificació de la tesi.

El període perinatal constituïx una etapa d'especial vulnerabilitat psicològica caracteritzada per profunds canvis fisiològics, emocionals i relacionals. Durant este període, factors de risc previs, com les experiències adverses en la infància (ACEs), així com factors contextuais propis del procés reproductiu, com la violència obstètrica (VO), poden incrementar la probabilitat de desenvolupar problemes de salut mental, entre ells la depressió postpart (DPP) o el trastorn d'estrés posttraumàtic relacionat amb el part (TEPTP).

Les ACEs actuen com a factors de vulnerabilitat distal que influïxen en els patrons d'aferrament adult i en la regulació emocional, modulant la capacitat d'afrontament davant esdeveniments perinatals crítics, com la pèrdua perinatal (PP) i el dol perinatal (DP). Per part seua, la VO constituïx un factor de risc proximal amb efectes adversos sobre la salut mental materna i l'establiment del vincle amb l'infant.

No obstant això, diversos factors protectors —com l'aferrament segur, la resiliència, el funcionament familiar positiu i el coping diàdic (CD) positiu— poden mitigar l'impacte d'estes adversitats. Així mateix, fins i tot en contextos altament estressants poden produir-se processos de creixement posttraumàtic (CPT), caracteritzats per canvis positius en la percepció pròpia, les relacions i el significat de l'experiència.

En aquest sentit, la present tesi proposa un model integrador que analitza com les vulnerabilitats individuals, els recursos relacionals i els factors contextuais interactuen al llarg del continu perinatal —preconcepció, embaràs i postpart— per a influir en l'adaptació psicològica.

2. Objectius i metodologia emprada.

2.1. Objectiu general.

L'objectiu general d'esta tesi és examinar els factors individuals, relacionals i contextuals que influïxen en la salut mental perinatal i en CD positiu, integrant diferents contextos reproductius —reproducció assistida, gestació subrogada (GS), PP i postpart— mitjançant un enfocament metodològic mixt.

En primer lloc, es va pretendre sintetitzar sistemàticament l'evidència científica disponible sobre tres àmbits: el paper del CD positiu en parelles sotmeses a tractaments de reproducció assistida (**Estudi 1**), els patrons d'aferrament en contextos de GS i les seues implicacions per al benestar emocional (**Estudi 2**), i la relació entre PP i aferrament (**Estudi 3**). Per a això es van realitzar tres revisions sistemàtiques registrades en PROSPERO i dutes a terme seguint les directrius PRISMA.

En segon lloc, es va analitzar com les ACEs, l'aferrament insegur, la culpa i els problemes de salut mental predien el CD positiu en dones després d'una PP (**Estudi 4**). En tercer lloc, es va examinar la influència conjunta de vulnerabilitats individuals, recursos relacionals i factors contextuals en el DP i el CPT després de la pèrdua (**Estudi 5**). Finalment, es va avaluar el paper de les ACEs, l'aferrament insegur, la resiliència, el funcionament familiar i la VO en la DPP i el TEPTP (**Estudi 6**).

Per a abordar estos objectius, prèvia aprovació del Comité d'Ètica de la Universitat de València (2024-PSILOG-3468509 i 2024-PSILOG-3773873) es van dur a terme estudis empírics transversals, que van utilitzar autoinformes d'avaluació i posteriorment van integrar anàlisis estadístiques lineals com a regressió jeràrquica (HRM), anàlisi de mediació i moderació, i anàlisi configuracionals mitjançant fsQCA.

3. Principals resultats

En ***l'Estudi 1***, en contextos de reproducció assistida, el CD i de suport es va associar amb major satisfacció de parella, menor malestar sexual i menor simptomatologia ansiós-depressiva en els dos membres, així com amb major cohesió familiar. Per contra, les estratègies negatives i evasives es van vincular amb major malestar psicològic i menor consens diàdic. L'evitació de l'aferrament es va relacionar amb menor ús de CD i pitjor ajust relacional. Les dones van reportar major estrés relacionat amb la fertilitat, mentre que els hòmens van mostrar majors nivells percebuts de capacitat de CD.

En ***l'Estudi 2***, les mares subrogades van mostrar menor connexió emocional prenatal però adequada cura fetal, i el tipus de subrogació i la relació amb els pares intencionals van influir en la qualitat de l'aferrament gestacional. No es van trobar diferències en la seguretat de l'aferrament infantil entre xiquets nascuts per GS, altres tractaments de reproducció assistida o mètodes convencionals, destacant el paper de la sensibilitat parental i la qualitat de l'entorn familiar. Els pares intencionals van presentar major ansietat durant la pandèmia, i la comunicació transparent va afavorir la integració de la història de naixement.

En ***l'Estudi 3***, l'aferrament insegur o desorganitzat va predir pitjor adaptació al dol perinatal, mentre que l'aferrament segur es va associar amb menor simptomatologia i millor funcionament relacional. El vincle matern-fetal va mostrar un efecte protector en embarassos posteriors, encara que la literatura va evidenciar resultats heterogenis en relació amb la intensitat del dol.

En ***l'Estudi 4***, l'evitació de l'aferrament va emergir com el principal predictor de menor CD durant el dol, seguit de l'ansietat d'aferrament. Les ACEs van influir

indirectament a través de l'ansietat d'aferrament, i la culpa i els problemes de salut mental van configurar perfils de risc acumulatiu. Els resultats van donar suport a una lògica equifinal, identificant-se perfils d'alta vulnerabilitat i perfils protectors caracteritzats per baix aferrament insegur.

En ***l'Estudi 5***, el DP es va explicar principalment per proximitat temporal a la pèrdua, ACEs, ansietat d'aferrament i CD, mentres que el CPT va dependre fonamentalment de recursos relacionals, especialment del CD. Les troballes recolzen models de doble procés, diferenciant factors de vulnerabilitat i recursos protectors.

Finalment, ***l'Estudi 6*** va confirmar el paper de les ACEs, la VO i l'aferrament insegur en la salut mental perinatal. La VO va ser el predictor més robust del TEPTP, mentres tant, la resiliència va emergir com el principal factor protector enfront de DPP i TEPTP. Els resultats subratllen la rellevància d'intervindre sobre factors individuals, relacionals i estructurals en la prevenció de la psicopatologia durant el postpart.

En conjunt, els estudis evidencien que, al llarg de tot el període perinatal —des de les etapes prèvies a l'embaràs, passant per la gestació, fins al postpart—, la qualitat dels recursos relacionals, especialment l'aferrament segur, el CD i la resiliència, exerceixen un paper central en l'adaptació psicològica en contextos reproductius adversos. En contrast, les ACEs, la inseguretat d'aferrament i la VO configuren perfils de vulnerabilitat que incrementen el risc de malestar psicològic en estes etapes.

4. Conclusions.

Els resultats d'esta tesi mostren que l'adaptació psicològica durant el període perinatal es configura a partir de la interacció entre vulnerabilitats individuals, recursos relacionals i factors contextuais al llarg de tot el continu reproductiu.

L'aferrament emergeix com un element central per a comprendre l'adaptació davant esdeveniments perinatals estressants. L'aferrament insegur, especialment el patró evitatiu, s'associa amb menor CD, major malestar psicològic i majors dificultats en els processos de vinculació, mentres que l'aferrament segur actua com a factor protector tant en contextos de reproducció assistida com en processos de DP.

Les ACEs incrementen la vulnerabilitat psicològica durant el període perinatal, afavorint l'aparició de dol complicat, DPP i simptomatologia posttraumàtica. No obstant això, el seu impacte depén de la presència de recursos protectors, especialment de relacions familiars positives i estratègies de CD positiu.

En este sentit, el CD positiu i la resiliència emergeixen com a factors protectors clau que afavoreixen la regulació emocional compartida i l'adaptació psicològica davant experiències adverses, incloent els contextos de reproducció assistida, la PP i els desafiaments del postpart. Així mateix, la VO s'identifica com un predictor específic de simptomatologia posttraumàtica, la qual cosa subratlla la necessitat de promoure models d'atenció perinatal respectuosos i sensibles al trauma.

En conjunt, esta tesi contribueix a comprendre de manera integradora la salut mental perinatal, destacant la importància d'enfortir els recursos relacionals i de considerar la diversitat de trajectòries reproductives —incloent reproducció

assistida, GS i experiències de pèrdua— per a promoure el benestar psicològic de dones, parelles, bebès i famílies en este període.

ESTRUCTURA DE LA TESIS

La presente tesis se encuentra estructurada en ocho capítulos.

En el **Capítulo 1**, se referencian las publicaciones y los estudios que componen esta tesis doctoral y se muestra la organización de la investigación realizada. La tesis se encuentra formada por un compendio de cuatro artículos que ya están publicados o aceptados para su publicación. En esta tesis se recogen asimismo los resultados de dos estudios que se hallan en proceso de evaluación por pares, en conformidad con la Normativa de Estudios de Doctorado de la Universitat de València que permite regular los estudios oficiales del doctorado. De este modo, en primer lugar, se presentan las referencias de los estudios publicados/ aceptados y a continuación las referencias de dos estudios que están en proceso de revisión y que constituyen el núcleo de la presente tesis doctoral:

Santamaría-Gutiez, R., Martínez-Corredor, S., González-Sala, F. y Lacomba-Trejo, L. (2025), Relevance of positive dyadic coping for couples undergoing assisted reproduction treatments: A systematic review. *Journal of Marital and Family Therapy*, 51, e70016. <https://doi.org/10.1111/jmft.70016>

Santamaría-Gutiez, R., González-Albors, E. M., González-Sala, F., y Lacomba-Trejo, L. (2025). Exploring attachment dynamics in surrogacy: A systematic review. *Psychiatry International*, 6(4), 145. <https://doi.org/10.3390/psychiatryint6040145>

Santamaría-Gutiez, R., González-Sala, F., y Lacomba-Trejo, L. (2025). The role of attachment in perinatal loss: A systematic review. *Journal of Loss and Trauma*, 1–38. <https://doi.org/10.1080/15325024.2025.2471817>

Santamaría-Gutiez, R., González-Sala, F. y Lacomba-Trejo, L. (2026), Attachment, adverse childhood experiences, guilt, and mental health as

predictors of dyadic coping after perinatal loss in women.. *Behavioral Psychology/ Psicología Conductual*. [Manuscrito aceptado para publicación].

Santamaría-Gutiez, R. y Lacombra-Trejo, L. Predictors of perinatal grief and posttraumatic growth in women with partners: The role of attachment, adverse childhood experiences, dyadic coping, and loss-related variables. [Manuscrito en proceso de revisión por pares].

Santamaría-Gutiez, R. García-Tribaldos, V. y Lacombra-Trejo, L. Postpartum depression and post-traumatic stress: Risk factors and protection throughout the life cycle. [Manuscrito en proceso de revisión por pares].

En el **Capítulo 2**, se expone el marco teórico en el que se encuadra la tesis.

En el **Capítulo 3**, se desarrolla la justificación de los estudios que forman parte de esta tesis doctoral, así como sus variables y las asociaciones entre ellas.

En el **Capítulo 4** se recogen tanto el objetivo general, como los objetivos específicos de la investigación y las hipótesis formuladas.

En el **Capítulo 5** se encuentran los estudios que conforman la tesis doctoral.

En el **Capítulo 6** se desarrolla la discusión general de los resultados y hallazgos obtenidos en cada estudio. Asimismo, se incluye un apartado con las principales limitaciones de esta tesis, consideraciones para futuras investigaciones e implicaciones.

En el **Capítulo 7** se presentan las principales conclusiones, donde se destacan las implicaciones científicas más relevantes y las aportaciones en este ámbito de estudio.

MARCO TEÓRICO

1. La transición a la maternidad o parentalidad como evento vital crítico.

1.1 Modalidades de acceso a la maternidad y paternidad.

En el campo de la psicología evolutiva destaca el interés por identificar aquellas etapas vitales donde se es más vulnerable psicológicamente, para así prevenir la aparición de problemas de salud mental y otras dificultades. La transición a la maternidad constituye una de estas transiciones evolutivas sensibles, dado que implica una profunda reorganización identitaria, relacional y contextual (Athan, 2024; Orchard et al., 2023).

En la mayoría de los casos, el acceso a la maternidad se produce mediante concepción espontánea, proceso que, aun siendo normativo, no está exento de ambivalencias, incertidumbre y estrés, especialmente ante complicaciones médicas o expectativas no cumplidas (Malina y Suwalska-Barancewicz, 2021; Molina-García et al., 2019). Sin embargo, para un porcentaje creciente de personas, el acceso a la maternidad requiere la utilización de tratamientos de reproducción asistida (TRA), los cuales incorporan estresores adicionales de carácter médico, económico y emocional (Stanhiser y Steiner, 2018).

Los TRA comprenden un conjunto de procedimientos médicos destinados a ayudar a personas que experimentan dificultades para concebir. Estos tratamientos son utilizados por personas con condiciones médicas que afectan a la fertilidad, por personas que eligen la monoparentalidad y por miembros de la comunidad LGTBIQ+ (Jain y Singh, 2023). Entre las técnicas incluidas en TRA se encuentran la inseminación artificial, la fecundación in vitro (FIV) con o sin inyección intracitoplasmática de espermatozoides (ICSI) y la transferencia embrionaria (Peigné y Epelboin, 2018).

La utilización de TRA ha aumentado progresivamente en los últimos años, en parte debido al reconocimiento de la diversidad de estructuras familiares (Newman, 2019) y al incremento de la edad media de concepción, influido por factores sociopolíticos y el retraso en determinadas etapas vitales (Arnett et al., 2014; Artini et al., 2018).

Las regulaciones y políticas relacionadas con la adopción y los TRA varían considerablemente entre países y regiones, reflejando diferentes enfoques respecto a la inclusión y los derechos de parejas heterosexuales, personas solteras y colectivos LGTBIQ+ (Goldberg et al., 2019; Seeman, 2018).

En la Unión Europea, la adopción es legalmente posible en todos los países, aunque existen notables diferencias en cuanto a la elegibilidad de parejas casadas, parejas LGTBIQ+ y personas solteras, evidenciando un panorama heterogéneo de aceptación y restricciones (European Union, 2021). De forma similar, el acceso a TRA presenta una distribución desigual, ya que algunos países ofrecen una amplia accesibilidad a distintos grupos, mientras que otros imponen limitaciones significativas (Brandão, 2022).

En los Estados Unidos, la legislación estatal en materia de TRA y adopción es altamente variable. Algunos estados promueven leyes que facilitan la financiación de TRA a través de aseguradoras (Martin et al., 2011), mientras que otros restringen el acceso en función del estado civil o la orientación sexual, reflejando diferentes niveles de inclusión y protección legal. Esta desigualdad en el acceso a los tratamientos puede tener un impacto negativo en la salud mental de las personas afectadas (Brandão, 2022).

A pesar de sus beneficios, los TRA pueden suponer importantes desafíos

emocionales y psicológicos. Estos se derivan de los procedimientos médicos, los efectos secundarios, la percepción de pérdida de control y la incertidumbre respecto a los resultados. Entre las consecuencias psicológicas más frecuentes se encuentran el estrés, el miedo, la ansiedad, el malestar emocional y la depresión (Wischmann, 2020).

Asimismo, las dificultades de acceso, los elevados costes económicos y las restricciones legales asociadas a los TRA pueden generar estrés financiero, conflictos de pareja y sentimientos de estigmatización y exclusión, intensificando la frustración y la desesperanza (Stanhiser y Steiner, 2018). Las pérdidas perinatales recurrentes durante estos tratamientos se asocian, además, con un mayor riesgo de problemas emocionales y de duelo complicado (McGrath et al., 2020).

Por otro lado, el estrés y la medicalización de la sexualidad pueden afectar negativamente a distintas áreas de la vida de pareja, incluyendo la satisfacción marital y la vida sexual (Cocchiaro et al., 2020). A ello se suma que muchas personas que recurren a TRA presentan condiciones de salud concomitantes, como ser supervivientes de cáncer (Carter et al., 2010), padecer enfermedades crónicas como la endometriosis (Burgio et al., 2022) o tener problemas de salud mental previos, lo que añade desafíos emocionales específicos.

Más allá de las TRA, existen otras modalidades de acceso a la parentalidad que implican configuraciones médicas, jurídicas y vinculares diferenciadas. Entre ellas, la gestación subrogada (GS) es un método reproductivo controvertido, utilizado principalmente en contextos de infertilidad con el objetivo de establecer un vínculo biológico con la descendencia (Taebi et al., 2020). Se distinguen dos modalidades principales: GS tradicional y GS gestacional.

En la modalidad tradicional, la gestante aporta su propio óvulo, lo que implica una relación genética directa con el bebé. En cambio, en la GS gestacional interviene una donante de óvulos, de modo que no existe vínculo genético entre la gestante y el embrión (Gunnarsson et al., 2020). Aunque ambas modalidades persiguen la consecución de la parentalidad mediante TRA, difieren de forma significativa en sus implicaciones legales, éticas y psicológicas.

La GS tradicional puede conllevar una mayor complejidad emocional, ya que el vínculo genético puede dificultar el proceso de separación tras el nacimiento y aumentar el riesgo de malestar emocional en la gestante (Van Den Akker, 2017). Por el contrario, la ausencia de vínculo genético en la GS gestacional tiende a facilitar el distanciamiento emocional, lo que algunas gestantes perciben como un factor protector de cara a la entrega del bebé (Teman, 2014). Aunque pueden emerger emociones positivas durante el embarazo, especialmente cuando la gestante se siente implicada en el proceso o mantiene una relación cercana con los padres intencionales (Imrie y Jadvá, 2014), es habitual que las gestantes subrogadas presenten mayores niveles de depresión tanto durante el embarazo como el posparto en comparación con madres gestantes convencionales (Lamba et al., 2018). Estas diferencias subrayan la importancia de considerar el tipo de subrogación al analizar los patrones de apego y los resultados emocionales de las personas implicadas.

Las prácticas de GS varían notablemente entre países, tanto a nivel cultural como legal, lo que influye de forma directa en las dinámicas relacionales y emocionales entre gestantes, padres intencionales y menores. Mientras algunos países cuentan con marcos normativos claros, otros prohíben explícitamente la GS o carecen de una regulación específica, generando experiencias muy heterogéneas y

distintos niveles de protección legal (Alkorta, 2020; Brunet et al., 2013; Deomampo, 2015; Hobzová, 2018).

En numerosos países europeos, como Austria, Francia, Alemania, Italia, Portugal y España, la GS está prohibida. Otros, como Bélgica, Países Bajos, Grecia o Reino Unido, permiten únicamente la subrogación altruista bajo regulaciones estrictas, excluyendo cualquier forma de compensación económica. En países como Polonia o la República Checa no existe una legislación específica, lo que genera una importante inseguridad jurídica (Brunet et al., 2013; Deomampo, 2015).

Fuera de Europa, los marcos legales son aún más diversos. La subrogación comercial es legal en países como Georgia, Ucrania, Rusia, Israel, India y en algunos estados de Estados Unidos, especialmente California, mientras que países como Canadá, Australia y Nueva Zelanda solo permiten modalidades altruistas (Hobzová, 2018).

En el caso de España, la gestante es considerada siempre la madre legal en el momento del nacimiento, y los padres intencionales deben iniciar posteriormente un proceso de adopción tras la renuncia judicial de la gestante, incluso cuando no existe vínculo genético entre esta y el menor (Alkora. 2020). Este marco legal ha contribuido a que muchas familias recurran a procesos de gestación subrogada en otros países, lo que implica enfrentarse a contextos legales, sanitarios y éticos diversos.

Los contextos culturales y normativos también influyen en la vivencia emocional de la subrogación. En sociedades donde esta práctica está estigmatizada o moralmente cuestionada, tanto las gestantes como los padres intencionales pueden experimentar mayor malestar psicológico, secretismo y menor apoyo social, factores que pueden interferir en el desarrollo de vínculos emocionales seguros (Frati et al.,

2021). Asimismo, la ausencia de regulación afecta al consentimiento informado, al acceso a apoyo psicológico y a la seguridad jurídica de la filiación, elementos clave para el bienestar emocional de las personas implicadas.

La literatura ha prestado escasa atención al bienestar psicológico tanto de las gestantes como de los niños nacidos mediante subrogación (Jadva et al., 2014). Algunos estudios indican que las gestantes pueden desarrollar menores niveles de apego hacia el embrión (Fischer y Gillman, 1991), lo que podría funcionar como una estrategia de afrontamiento para reducir el impacto emocional de la separación tras el nacimiento (Van Den Akker, 2017).

Otros trabajos sugieren que las gestantes que conciben la subrogación desde una perspectiva comercial pueden experimentar un mayor desapego psicológico como preparación para la separación, aunque este mecanismo podría asociarse a dificultades psicológicas a largo plazo (Baslington, 2002; Berk, 2015).

En relación con los niños y las niñas nacidos mediante subrogación, estudios longitudinales indican que la mayoría no percibe efectos negativos en la relación con sus padres debido a la ausencia de vínculo genético o gestacional (Jadva et al., 2023). Muchos niños, niñas y familias describen la experiencia de forma positiva, expresando orgullo y gratitud hacia la gestante. No obstante, también se han identificado reacciones de ambivalencia, ansiedad o tristeza en algunos casos (Riddle, 2022).

Revisiones recientes señalan que las gestantes pueden experimentar efectos psicológicos a largo plazo, como ansiedad, depresión o sentimientos de inseguridad (Dumitru et al., 2021), y que el grado de vínculo desarrollado durante el embarazo podría contribuir a estas dificultades tras la entrega del recién nacido (Edelmann, 2004).

2. El embarazo y el posparto como eventos vitales críticos.

El embarazo puede ser un evento potencialmente estresante, en el que la prevalencia del estrés informado por parte de las madres alcanza el 36,10% (Kingston et al., 2012). El estrés es considerado como un factor de riesgo debido a su impacto tanto a corto como a largo plazo en la salud de la madre y del recién nacido. A corto plazo, aumenta el riesgo de desarrollar problemas de salud mental durante el posparto (Shorey et al., 2018), incrementando la probabilidad de producirse un parto prematuro (Zhang et al., 2024), pudiendo afectar a largo plazo al desarrollo evolutivo del niño (Brummelte y Galea, 2010). Estudios como el de Zhang et al. (2024) identificaron estresores asociados al estrés a lo largo del embarazo, clasificados en factores de fertilidad, familiares y sociales.

El embarazo constituye un proceso en el que los cambios sociales, fisiológicos y psicológicos inherentes pueden afectar a la estabilidad mental de la madre, pudiendo desarrollar diferentes problemas psicológicos, específicos o no, de esta etapa vital (Kingston et al., 2012). Entre los problemas más estudiados se encuentran la DPP y el TEPTP.

El posparto puede constituir igualmente un periodo de transición crítico que se extiende más allá de las tradicionales 6-12 semanas, que abarca, según las orientaciones, contemporáneas hasta los dos primeros años tras el nacimiento (Adhikari et al., 2023; Rosander et al., 2021; Stewart y Vigod, 2019). Durante esta etapa, se producen cambios neurobiológicos, cognitivos, emocionales y sociales profundos que configuran lo que se ha denominado matrescencia. Este concepto, desarrollado como un análogo a la adolescencia, describe la transformación

identitaria y psicológica experimentada por la mujer en su transición a la maternidad (Athan, 2024; Orchard et al., 2023). En este sentido, la maternidad implica una reorganización del sentido del yo, de las relaciones interpersonales y de los roles sociales, procesos que requieren tiempo y la movilización recursos adaptativos significativos (Athan, 2024; Ghadimi y McCormack, 2025).

Desde esta perspectiva, los desafíos psicológicos propios del posparto no han de interpretarse exclusivamente como patológicos, sino como parte de un proceso normativo del desarrollo adulto. Aunque cabe señalar que esta etapa puede incrementar la vulnerabilidad a problemas de salud mental cuando confluyen factores de riesgo individuales, relacionales y contextuales (Athan, 2024; Li, 2026). En este sentido, la literatura disponible indica que la prevalencia de síntomas de ansiedad y depresión puede mantenerse elevada, o incluso incrementarse, a lo largo de los primeros dos años tras el parto, identificándose picos específicos a los 9, 12 y 17 meses posparto (Adhikari et al., 2023; Rosander et al., 2021). Por ello, se hace necesario un seguimiento clínico y psicosocial prolongado, que trascienda el periodo perinatal inmediato.

Desde la perspectiva de la teoría sistémica, la estabilidad psicológica materna no puede comprenderse únicamente a partir de variables individuales, sino como el resultado de la interacción dinámica entre factores pertenecientes a los distintos sistemas en los que la persona se desarrolla (microsistema, mesosistema, exosistema y macrosistema) (Bronfenbrenner, 1979; Minuchin, 1974).

En este marco, se identifican **experiencias críticas** que pueden afectar negativamente a la estabilidad psicológica de la madre en diferentes niveles del sistema. En el plano individual y relacional, destacan las ACEs, que forman parte de la

historia vital y configuran vulnerabilidades previas. En el ámbito sanitario e institucional, la vivencia de VO durante el embarazo y el posparto constituye un estresor contextual relevante, inscrito en sistemas más amplios de atención y organización social.

Asimismo, se contemplan **factores protectores** que operan también en múltiples niveles sistémicos y que pueden amortiguar el impacto de estos riesgos. Entre ellos se encuentran *variables individuales*, como el apego adulto y la resiliencia; *relacionales*, como el clima familiar y las estrategias de CD; y *contextuales*, en la medida en que estas dinámicas se insertan en redes de apoyo más amplias. En conjunto, estos factores interactúan entre sí configurando trayectorias de mayor vulnerabilidad o de mayor ajuste psicológico en el periodo perinatal (Minuchin, 1974).

2.1. La pérdida perinatal (PP) y el duelo perinatal (DP).

En este contexto, aunque el embarazo y el posparto constituyen transiciones normativas del ciclo vital, no siempre culminan en el nacimiento y la consolidación del vínculo parental. En algunos casos, el proceso reproductivo se ve abruptamente interrumpido por la muerte gestacional o neonatal, configurando uno de los eventos más perturbadores dentro del periodo perinatal (Cacciotore, 2023; Frøen et al., 2011).

La PP constituye un acontecimiento vital profundamente estresante, asociado a consecuencias psicológicas significativas y potencialmente duraderas. Engloba un amplio conjunto de experiencias que pueden ocurrir desde la gestación hasta el primer año de vida del bebé, incluyendo abortos espontáneos e inducidos, embarazos

ectópicos, muerte de uno de los bebés en gestaciones múltiples, muerte del bebé intraútero o intraparto, parto prematuro con fallecimiento neonatal y la entrega del recién nacido en adopción y la GS (Álvarez et al., 2012; Fenstermacher y Hupcey, 2013). Más allá de la muerte física del hijo esperado, la PP implica la ruptura de expectativas, proyectos vitales y significados asociados a la maternidad y la paternidad, lo que contribuye a la complejidad y heterogeneidad de sus efectos psicológicos.

El DP presenta características diferenciales que lo distinguen de otros procesos de duelo. Con frecuencia ha sido descrito como un duelo desautorizado o socialmente no reconocido, marcado por el silencio cultural que rodea a las pérdidas reproductivas y, en ocasiones, por respuestas sanitarias o sociales invalidantes o minimizadoras (Delgado et al., 2023). Esta falta de reconocimiento social puede limitar el acceso al apoyo emocional y dificultar la expresión del dolor, intensificando el malestar psicológico de las personas afectadas.

Además de la pérdida del bebé, madres y padres suelen experimentar múltiples pérdidas secundarias, como la del rol parental anticipado, aspectos de la identidad personal y relacional, y la alteración de creencias fundamentales relacionadas con la seguridad, la previsibilidad y la confianza en el propio cuerpo (Côté-Arsenault y Denney-Koelsch, 2011). Estas pérdidas acumuladas pueden intensificar y prolongar el sufrimiento emocional, contribuyendo a trayectorias de duelo más complejas (Cuenca, 2023). En este sentido, la vivencia subjetiva de la pérdida y el significado atribuido al embarazo y al bebé resultan determinantes, más allá de variables objetivas como la edad gestacional.

La evidencia empírica indica que la PP puede desencadenar una amplia gama

de respuestas psicológicas, incluyendo duelo prolongado, depresión, ansiedad y TEPT, aunque también se han descrito procesos de adaptación más favorables e incluso cambios psicológicos positivos en algunos casos (Eisma y Stroebe, 2021; Quenby et al., 2021). Aunque la PP conlleva un profundo sufrimiento emocional, la elaboración del duelo por un hijo deseado es conceptualmente distinta del duelo prolongado o complicado, caracterizado por una intensidad y persistencia del malestar que excede las expectativas culturales y genera un deterioro funcional significativo (APA, 2022). Distinguir entre respuestas normativas y desadaptativas resulta fundamental para evitar la patologización del DP.

Existe una elevada variabilidad interindividual en la adaptación psicológica tras una PP. Mientras algunas personas experimentan un malestar persistente a lo largo del tiempo, otras logran integrar progresivamente la pérdida en su narrativa vital, mostrando una disminución del sufrimiento emocional e, incluso, transformaciones psicológicas positivas (Mørk et al., 2023). Los modelos contemporáneos de duelo, como el modelo de trayectorias de duelo (Bonanno et al., 2011), el modelo de proceso dual (Stroebe y Schut, 1999) y el modelo bidimensional (Bonanno y Kaltman, 1999), subrayan que estas respuestas no siguen trayectorias lineales ni homogéneas, sino que pueden fluctuar en intensidad y forma a lo largo del tiempo, y destacan la alternancia entre la orientación hacia la pérdida y la restauración.

Desde una perspectiva de riesgo y resiliencia o de diátesis-estrés (Alves et al., 2021; Hajure et al., 2024; Van Haeken et al., 2021), la PP puede conceptualizarse como un estresor mayor cuyo impacto psicológico depende de la interacción entre vulnerabilidades previas, recursos individuales y relacionales, y factores contextuales

(Kishimoto et al., 2021). Dentro de este marco, los desenlaces negativos, como el duelo prolongado, y los ajustes adaptativos o de crecimiento pueden coexistir como parte de un proceso complejo de adaptación. Las aproximaciones contemporáneas al duelo enfatizan la diversidad de respuestas ante la pérdida, advierten contra la patologización del sufrimiento y destacan la resiliencia como un resultado frecuente, observándose que una gran proporción de personas alcanza una adaptación funcional a lo largo del tiempo (Bonanno et al., 2011).

Finalmente, variables contextuales como el tiempo transcurrido desde la pérdida y el número de PP experimentadas pueden modular tanto la intensidad como la trayectoria del DP, influyendo en su evolución a corto y largo plazo (Ryninks et al., 2022). En conjunto, el DP debe entenderse como un proceso dinámico y multidimensional, determinado por la interacción entre variables individuales (p. ej., ACEs, apego, resiliencia...), las características propias de la pérdida, la coexistencia de pérdidas secundarias y el contexto relacional y sociocultural en el que acontece. Desde una perspectiva sistémica, la PP no constituye un evento aislado, sino una experiencia que reconfigura el equilibrio psicológico, diádico y familiar, pudiendo incrementar la vulnerabilidad a psicopatología perinatal posterior (Beato et al., 2025; Faleschini et al., 2021; Herbert et al., 2022).

Asimismo, desde el enfoque del ciclo vital, la vivencia y elaboración del DP se inscriben en una trayectoria biográfica más amplia, en la que las experiencias acumuladas a lo largo del desarrollo influyen en la forma de afrontar los acontecimientos perinatales críticos (Beato et al., 2025; Facão y Madeira, 2024). En este sentido, determinados factores distales, como las ACEs pueden configurar patrones de vulnerabilidad que modulan la respuesta emocional y el ajuste

psicológico ante la PP y otras situaciones de estrés en el periodo perinatal.

3. Factores de riesgo y protección en la etapa perinatal.

3.1 Factores distales: experiencias adversas en la infancia (ACEs).

Las ACEs son eventos estresantes o potencialmente traumáticos que ocurren desde el nacimiento hasta los 18 años e incluyen abuso, negligencia, exposición a violencia o psicopatología parental (Felitti et al., 1998; Lacomba-Trejo et al., 2024). Entre el 50 y el 66% de la población general ha experimentado al menos una ACE en su vida, aunque solo el 16,1% ha vivido cuatro o más, considerado este valor como umbral crítico en la literatura, debido al incremento significativo de riesgos psicológicos y físicos (Finch et al., 2024; Madigan et al., 2023; Alhowaymel et al., 2023).

Felitti et al. (1998) clasifica las ACEs en dos dimensiones: abuso infantil, donde se incluye abuso psicológico, físico o sexual; y disfunción familiar, englobando la exposición a violencia de género en el núcleo familiar o la convivencia con un familiar que abusa de sustancias o que sufre problemas de salud mental, entre otros.

En su modelo, Felitti et al. (1998) plantea una concatenación de consecuencias resultantes de la vivencia de ACEs. Estas experiencias provocan un déficit en el desarrollo social, emocional y cognitivo de la persona que le lleva a adoptar estrategias, sobre todo conductuales, que suponen un riesgo para su salud. Como resultado de estas conductas, se aumenta la probabilidad de desarrollar enfermedades, dificultades y problemas sociales en comparación con la población general (Felitti et al., 1998). Entre las consecuencias más frecuentes se encuentran: el déficit de estrategias de afrontamiento (Lacomba-Trejo et al., 2024), el consumo de

sustancias (Anda et al., 1999; Dube et al., 2002, 2003), las conductas sexuales de riesgo, la violencia hacia otros o la pareja, la alta percepción de estrés, la dificultad en el control de la ira (Anda et al., 2006), las conductas suicidas (Van Wyk, 2023) y el aumento de la probabilidad de ser víctimas de violencia de género (Tian et al., 2024), entre otras.

A nivel fisiológico, el estrés crónico asociado a las ACEs altera el desarrollo del sistema nervioso central. Como consecuencias, su estructura queda modificada, lo que afecta al aprendizaje, a las habilidades lingüísticas, a las cognitivas y a las socioemocionales, así como a la activación crónica del sistema de respuesta al estrés, generando con mayor probabilidad una reactividad desadaptativa ante futuras adversidades (Koyama et al., 2022; Hildyard y Wolfe, 2002; Shonkoff et al., 2012). Este patrón se traduce en un estrés diario más intenso y en síntomas físicos y emocionales más pronunciados que en personas sin ACEs (Mosley-Johnson et al., 2021). De este modo, las ACEs también impactan la salud física aumentando la prevalencia de problemas de salud (Anda et al., 2006; Armer et al., 2024; Dong et al., 2003), que pueden tener como última consecuencia, el incremento del riesgo de sufrir una muerte prematura (Felitti et al., 1998).

El impacto de las ACEs es acumulativo: a mayor número de experiencias adversas, mayor riesgo de trastornos psicológicos y físicos (Felitti et al., 1998; Dube et al., 2001). Un claro ejemplo aparece en la depresión, que es de cuatro a doce veces más prevalente en personas que han experimentado cuatro o más ACEs (Felitti et al., 1998). La exposición a múltiples ACEs está directamente relacionada con el desarrollo de problemas internalizantes (Bielas et al., 2016; Gomis-Pomares et al., 2025), como la depresión (American Psychiatric Association, 2022), la DPP (Fu et al., 2024), la

ansiedad, los ataques de pánico y el TEPTP (Anda et al., 2006; Souch et al., 2025; Thurston et al., 2025; Young-Wolff et al., 2019), de problemas externalizantes, como las agresión y la delincuencia (Bolger y Patterson, 2003; Finch et al., 2024) y de síntomas psicóticos (Anda et al., 2006; Young-Wolff et al., 2019). A su vez, aumentan los problemas de memoria acerca de la infancia, siendo el número de periodos afectados proporcional al número de ACEs (Anda et al., 2006). Además, incrementa el riesgo de pensamientos autolesivos (Armer et al., 2024), sabiéndose que el 67% de los intentos de suicidio se puede atribuir a la presencia de una o más ACEs. En este sentido, la prevalencia del riesgo suicida se incrementa del 1,1% observado en la población general al 31,1% en personas que acumulan siete o más factores de riesgo (Dube et al., 2001).

En el contexto perinatal, la exposición a ACEs se asocia con diversas vulnerabilidades tanto a nivel de salud física como psicológica en la mujer. La exposición a ACEs se ha relacionado con un aumento del riesgo de complicaciones durante el embarazo, como diabetes gestacional, trastornos hipertensivos del embarazo, parto prematuro y aborto espontáneo con efecto dosis-respuesta (Demakakos et al., 2020; Imanishi et al., 2025; Mamun et al., 2023; Troëng et al., 2024). Asimismo, esta exposición compromete la capacidad de afrontamiento psicológico frente a la gestación y tras la PP, así como incrementa el riesgo de estrés, ansiedad, depresión y duelo complicado en el periodo perinatal (Giles y Khoury, 2025; Mamun et al., 2023; Osofsky et al., 2021; Smith et al., 2016; Wright et al., 2025). Además, las ACEs influyen en los patrones de apego adulto, modulando la regulación emocional y la búsqueda de apoyo tras la pérdida de un vínculo anticipado o real (Bowlby, 1980).

Esta vulnerabilidad parece estar relacionada con una alteración de los patrones de apego adulto, dado que las ACEs se asocian con la presencia de apego inseguro (ansioso y evitativo) en la adultez (Araújo et al., 2026; Giles y Khoury, 2025; Snyder et al., 2024; Widom et al., 2018). Durante el periodo perinatal, las dificultades en la regulación emocional actúan como un puente entre las ACEs y los problemas de salud mental materna, evidenciándose que las mujeres con historia de ACEs presentan mayor desregulación emocional durante el embarazo, lo que a su vez predice síntomas de ansiedad y depresión tanto en el embarazo como en el posparto (Giles y Khoury, 2025; Wright et al., 2025). Asimismo, el apego inseguro interfiere en la búsqueda de apoyo social y la capacidad de procesar la pérdida del vínculo, como sucede en la PP, aumentando el riesgo de duelo complicado y problemas de salud mental perinatales (Araújo et al., 2026; Snyder et al., 2024; Widom et al., 2018).

Por lo tanto, las ACEs constituyen factores de vulnerabilidad distal que pueden afectar a la salud física, emocional y social a lo largo del ciclo vital, incrementando la probabilidad de presentar DPP, TEPTP, culpa y peor ajuste psicológico, tal y como evidencian los estudios incluidos en este compendio. Su impacto puede resultar especialmente relevante ante situaciones de estrés o vulnerabilidad como el embarazo, el posparto, las PP o los contextos de TRA.

Desde una perspectiva sistémica, las ACEs no actúan de forma aislada, sino en interacción con variables proximales individuales (como el apego adulto o la resiliencia), relacionales (como el CD o el clima familiar) y del contexto sanitario (como la VO) (Osofsky et al., 2021; Sexton et al., 2015; Young-Wolff et al., 2019). Esta interrelación multinivel puede propiciar o, por el contrario, amortiguar el desarrollo de DPP y TEPTP, configurando trayectorias diferenciales de riesgo o protección en el

periodo perinatal.

3.2 Factores individuales proximales: apego adulto y resiliencia.

3.2.1 Apego adulto.

La teoría del apego, formulada por Bowlby (1969, 1973), sostiene que los seres humanos poseen una necesidad biológica innata de establecer vínculos afectivos estrechos con figuras significativas, las cuales cumplen una función esencial de protección, regulación emocional y seguridad. A partir de las interacciones tempranas con los cuidadores principales, los niños desarrollan esquemas cognitivos y conductuales que organizan sus expectativas sobre la disponibilidad de los demás y su propio valor como merecedores de cuidado (Grady et al., 2017). Estos esquemas configuran los sentimientos de seguridad y protección de la persona y dan lugar al denominado estilo de apego.

La calidad del apego se fundamenta en la capacidad de respuesta, sensibilidad y ajuste del cuidador ante las necesidades del bebé (Bowlby, 1973). El apego infantil se manifiesta conductualmente a través de la búsqueda de proximidad hacia la figura cuidadora, que actúa como base segura desde la cual el niño puede explorar el entorno y a la que recurre en situaciones de malestar para ser consolado (Hazan y Shaver, 1994). Estas experiencias tempranas dan lugar a los denominados modelos internos de trabajo, representaciones relativamente estables del sí mismo y de los otros, que pueden ser positivas o negativas en función de la calidad del vínculo establecido (Zörer y Dirik, 2023).

A partir de los trabajos de Mary Ainsworth y colaboradores (1978), se identificaron tres patrones principales de apego infantil: seguro, inseguro-ansioso (o ambivalente) e inseguro-evitativo. Posteriormente, Main y Solomon (1986)

describieron un cuarto patrón, el apego desorganizado, caracterizado por conductas contradictorias o incoherentes, frecuentemente asociado a historias tempranas de trauma, negligencia o experiencias relacionales altamente desorganizadas (Grady et al., 2017). Estos patrones de apego infantil se consideran fundamentales para el desarrollo socioemocional y han demostrado tener implicaciones a largo plazo en la regulación emocional y las relaciones interpersonales (Dugan et al., 2025; Sroufe, 2005).

Investigaciones posteriores extendieron la teoría del apego a la edad adulta, demostrando que los modelos internos desarrollados en la infancia tienden a mantenerse a lo largo del ciclo vital, influyendo en las relaciones íntimas, especialmente en las relaciones de pareja (Hazan y Shaver, 1987). Así, el apego adulto describe los patrones relativamente estables de intimidad, dependencia, regulación emocional y búsqueda de apoyo que emergen en las relaciones significativas en la adultez. Se identifican estilos de apego seguro, ansioso, evitativo y desorganizado en la adultez, paralelos a los formulados en la infancia.

Las personas con apego seguro suelen mostrar una percepción positiva y estable de sí mismas y de los demás, una mayor flexibilidad emocional y una adecuada capacidad para buscar y ofrecer apoyo en situaciones de estrés (Fraley y Shaver, 2000). En contraste, el apego ansioso se asocia con elevados niveles de activación emocional, miedo al abandono, rumiación y dependencia excesiva de las figuras significativas. El apego evitativo, por su parte, se caracteriza por la inhibición emocional, la autosuficiencia defensiva y la evitación de la intimidad, así como por la minimización de las necesidades afectivas. Finalmente, el apego desorganizado combina estrategias contradictorias de aproximación y evitación, reflejando

dificultades para integrar experiencias relacionales emocionalmente abrumadoras (Turgeon et al., 2023).

La evidencia empírica muestra de forma consistente que el apego inseguro se asocia con mayor psicopatología y malestar psicológico en la edad adulta. Diversos estudios han vinculado los estilos de apego ansioso, evitativo y desorganizado con un mayor riesgo de depresión, ansiedad, ansiedad social y TEPT (Bifulco et al., 2003; Bifulco et al., 2006; Finch et al., 2024; Zörer y Dirik, 2023). Por el contrario, el apego seguro actúa como un factor protector a lo largo del ciclo vital, favoreciendo estrategias adaptativas de afrontamiento, una regulación emocional más eficaz y mejores resultados en salud mental y física (Pace et al., 2023; Steele et al., 2020; Vowels et al., 2023).

Desde una perspectiva evolutiva y relacional, el apego adulto desempeña un papel central en la manera en que las personas afrontan experiencias vitales altamente estresantes, como los procesos reproductivos, el embarazo, el posparto y las pérdidas significativas. Bowlby (1980) subrayó el papel del apego en los procesos de duelo, señalando que la pérdida de una figura de apego o de un vínculo anticipado activa intensamente el sistema de apego y puede dar lugar a respuestas emocionales profundas. En este sentido, el apego seguro se ha asociado con procesos de duelo más adaptativos y con una menor probabilidad de desarrollar duelo complicado, mientras que los estilos ansioso, evitativo y desorganizado se han vinculado a mayores dificultades en la elaboración de la pérdida (Levi-Belz y Lev-Ari, 2019; Neimeyer y Burke, 2017; Sekowski y Prigerson, 2022; Stroebe et al., 2012).

En el periodo perinatal, el estilo de apego adulto de la madre influye tanto en su propia salud mental como en la formación del vínculo con el bebé. Los estilos de

apego inseguros (ansioso y evitativo) se asocian con mayores síntomas de depresión y ansiedad desde el embarazo hasta el primer año posparto, también en las parejas (Gingras et al., 2024; Wahyu et al., 2025). En concreto, el apego ansioso se relaciona con hipersensibilidad emocional y mayor riesgo de DPP, mientras que el apego evitativo predice síntomas depresivos a través de la inhibición emocional (Axfors et al., 2017; Marqués et al., 2018).

El impacto del apego adulto sobre el vínculo materno-fetal está mediado por la psicopatología perinatal. El apego inseguro influye indirectamente en la vinculación a través de síntomas depresivos, ansiosos y de TEPT posparto (Handelzalts et al., 2021; Wahyu et al., 2025). Además, el apego evitativo y la depresión se asocian con menor calidad del vínculo materno-fetal, y este vínculo prenatal predice tanto el vínculo materno-fetal posterior como la salud mental posparto, incluso controlando otros factores de riesgo (Petri et al., 2018; Trombetta et al., 2021).

En el contexto específico de la PP, el estilo de apego es un predictor importante del proceso de duelo. El apego seguro se asocia con menos síntomas de duelo, depresión, ansiedad y TEPT, mientras que el apego ansioso predice mayor somatización, duelo prolongado y depresión (Maccallum y Bryant, 2018; Scheidt et al., 2012; Wijngaards-de Meij et al., 2007). El apego evitativo también se vincula con mayor sintomatología depresiva (Maccallum y Bryant, 2018; Wijngaards-de Meij et al., 2007), y por su parte, el apego desorganizado incrementa el riesgo de duelo complicado (Sekowski y Prigerson, 2022)

En mujeres que han experimentado aborto espontáneo o muerte perinatal, la seguridad en el apego se relaciona con mejor funcionamiento relacional de pareja, y

el CD actúa como mediador entre el apego inseguro (ansioso y evitativo) y el CPT, subrayando la importancia de los recursos relacionales en la adaptación a la pérdida (Freedle y Oliveira, 2024).

A nivel de trabajo clínico, estos hallazgos sugieren que la evaluación del estilo de apego adulto durante el periodo perinatal puede permitir identificar mujeres con mayor vulnerabilidad a la psicopatología y a las dificultades en el vínculo materno-fetal. Las intervenciones centradas en estrategias adaptativas de regulación emocional, que fortalezcan el apoyo de pareja y aborden la modificación de patrones de apego inseguro pueden resultar especialmente indicados tanto en la prevención de problemas de salud mental perinatales como en el acompañamiento tras una PP (Freedle y Oliveira, 2024; Marqués et al., 2018; Scheidt et al., 2012).

3.2.2 Resiliencia.

La resiliencia se define como la habilidad individual de adaptarse positivamente a condiciones adversas, recuperando la estabilidad previa, e incluso transformando la experiencia en una oportunidad para fortalecer la resistencia ante futuras dificultades. Se considera un proceso dinámico que evoluciona a lo largo del tiempo y actúa como factor protector (Sisto et al., 2019).

Este constructo ha sido conceptualizado tanto como un rasgo estable de personalidad como un proceso dinámico y modificable, siendo ambas perspectivas complementarias (Blanke et al., 2023; Ollis et al., 2022).

En el contexto perinatal, la resiliencia se entiende como un proceso dinámico asociado a factores como el apoyo social, la autoeficacia, la autoestima y el sentido de control (Hannon et al., 2022; Van Haeken et al., 2020). La literatura previa ha

encontrado que niveles más altos de resiliencia materna se asocian con menor riesgo de depresión, ansiedad y TEPT durante el periodo perinatal, además de ejercer un efecto protector directo frente a la DPP y mejorar el bienestar emocional mediante el fortalecimiento de la relación de pareja (Hajure et al., 2024; Ji et al., 2025; Wang et al., 2024).

Este efecto protector es especialmente relevante en personas que han sufrido ACEs, antecedentes de trauma o problemas de salud mental, donde la resiliencia modera la relación entre trauma y psicopatología posparto (Sexton et al., 2015). Asimismo, niveles más elevados de resiliencia se asocian con un menor riesgo de victimización por violencia de género en la adultez (Young-Wolff et al., 2019).

Aunque presenta una elevada estabilidad temporal, la resiliencia puede modificarse mediante intervenciones psicosociales, como se ha demostrado en estudios longitudinales en el posparto (Ji et al., 2025). Por lo tanto, dado su carácter parcialmente modificable, la resiliencia parece constituir un objetivo clave para intervenciones preventivas centradas en fortalecer recursos como la regulación emocional, el optimismo, la autocompasión y el apoyo social, las cuales han demostrado eficacia en la prevención de problemas del estado de ánimo y ansiedad perinatales (Bjertrup et al., 2025; Hajure et al., 2024; Monteiro et al., 2019; Werner et al., 2024).

3.3 Factores relacionales: el clima familiar y el coping diádico.

3.3.1 El clima familiar.

El modelo circumplejo de Olson (2000) integra tres dimensiones fundamentales para la comprensión y la intervención en los sistemas familiares:

cohesión, adaptabilidad y comunicación.

La cohesión es definida como el vínculo emocional entre los miembros de la familia y enfatiza el equilibrio entre la individualidad y la cercanía afectiva dentro del sistema familiar. Por su parte, la adaptabilidad hace referencia al grado de cambio en el liderazgo, los roles y las normas relacionales, centrándose en el equilibrio entre la estabilidad y la flexibilidad del sistema familiar. Cada una de estas dimensiones se organiza en cuatro niveles, que oscilan desde dos extremos hasta dos niveles intermedios. Los niveles intermedios se asocian con un funcionamiento familiar saludable, mientras que los extremos reflejan disfunción (Olson, 2000).

La comunicación actúa como una dimensión facilitadora que permite el movimiento entre la cohesión y la adaptabilidad, razón por la cual no se representa gráficamente en el modelo. Esta dimensión se evalúa a través de habilidades como la escucha, la claridad en el discurso y el respeto mutuo. En los sistemas familiares equilibrados se observa una comunicación eficaz, a diferencia de aquellos caracterizados por desequilibrios (Olson, 2000).

El buen funcionamiento familiar actúa como protector sobre la salud mental al correlacionar negativamente con: la presencia de emociones negativas, la psicopatología general (Khodarahimi, 2013), los síntomas de ansiedad y depresión (Park et al., 2018), el TEPT (Uruk et al., 2007), la ideación suicida (Sheftall et al., 2013; Zhou et al., 2020) y los intentos de suicidio (Liang et al., 2014).

En el contexto perinatal, el funcionamiento familiar desempeña una función protectora relevante, al asociarse negativamente con la depresión perinatal y mediar la relación entre apoyo social y síntomas depresivos (Huang et al., 2021). En particular, dimensiones como la comunicación, la respuesta afectiva, la claridad de

roles y el funcionamiento familiar general se han relacionado con el riesgo de depresión posparto (Guan et al., 2021). Asimismo, el apoyo de la pareja y de la familia se asocia longitudinalmente con menores niveles de estrés y ansiedad desde el embarazo hasta el posparto (Racine et al., 2019). En este marco, resulta especialmente relevante analizar no solo la disponibilidad de apoyo, sino también los procesos mediante los cuales las parejas afrontan conjuntamente las demandas y el estrés asociados al periodo perinatal, como el CD.

3.3.2 Coping diádico (CD).

El CD se define como una estrategia de afrontamiento compartida en la pareja, mediante la cual se coordinan esfuerzos para gestionar de forma conjunta situaciones estresantes que afectan a uno o a ambos. Este constructo fue formulado por Bodenmann (2005) y se inscribe en los modelos sistémico-transaccionales del estrés, que concibe a la pareja como una unidad interdependiente de afrontamiento más allá de las respuestas individuales.

Desde este enfoque, el CD implica tres componentes fundamentales: (a) el reconocimiento del estrés como una experiencia compartida, (b) la percepción de la pareja como una fuente primaria de apoyo y (c) el afrontamiento como un proceso dinámico que se despliega a lo largo del tiempo. Las respuestas de cada miembro influyen mutuamente, modulando tanto la regulación emocional como el funcionamiento relacional ante demandas prolongadas o intensas (Bodenmann, 2005).

Las estrategias de CD pueden clasificarse en positivas y negativas. El CD positivo incluye conductas como la comunicación abierta y asertiva, el apoyo

emocional, la validación, la colaboración y la delegación de tareas. Estas estrategias facilitan la regulación del estrés y promueven la adaptación conjunta. Por el contrario, el CD negativo se caracteriza por patrones disfuncionales de interacción, como el control, la hostilidad, la sobreprotección o la minimización del malestar del otro, que pueden interferir en el ajuste individual y relacional (Bodenmann, 2005).

La evidencia empírica ha señalado que el CD cumple una función moduladora del estrés en contextos prenatales y perinatales, donde las exigencias emocionales y relacionales suelen incrementarse. En particular, el uso de estrategias positivas de afrontamiento compartido favorece la adaptación en embarazos de alto riesgo y en procesos de reproducción asistida (Casu et al., 2019; Péloquin et al., 2023), contribuyendo al bienestar psicológico de la pareja y al mantenimiento del funcionamiento relacional. Asimismo, estas estrategias se asocian con una mejora del vínculo madre-pareja, al facilitar un clima emocional de apoyo, cooperación y seguridad durante el proceso reproductivo (Casu et al., 2019; Chaves et al., 2019; Molgora et al., 20019; Péloquin et al., 2023).

3.4 Factores contextuales y sanitarios: la violencia obstétrica (VO).

La VO comprende aquellas acciones u omisiones de profesionales de salud que afectan física, mental, sexual y reproductivamente a la mujer durante embarazo, parto y posparto (Araujo-Cuauro, 2019; Arguedas, 2014; Jojoa-Tobar et al., 2019). Estas conductas atentan contra la salud de las mujeres a través del trato deshumanizado, el abuso de medicalización y la patologización de los procesos naturales (Belli, 2017; Samantha et al., 2024; Suárez, 2023). La experiencia se caracteriza por ser irrespetuosa, humillante, jerarquizada y sin atención suficiente para aquellas que la

han vivenciado (Bellón, 2015; Hernández, 2021; Llobera y Ferrer, 2019; Rodríguez y Martínez, 2021).

En España, la VO afecta al 7,4% de las mujeres (Martínez-Galiano et al., 2021). Ante esta situación, el Ministerio de Sanidad (2007, 2014) ha desarrollado documentos que subrayan la importancia de mejorar la calidad de la atención obstétrica a través de prácticas clínicas respetuosas y basadas en la evidencia (Llobera y Ferrer, 2019).

La VO se encuentra relacionada con la violencia simbólica, constituida por relaciones de poder desiguales en las que la autoridad del personal sanitario puede vulnerar el bienestar de las madres (Belli, 2017; Bellón, 2015; Hernández, 2021; Hernández y Maroto, 2019). A su vez, la VO es una manifestación de violencia institucional (Belli, 2017; Llobera y Ferrer, 2019) y se enmarca en el amplio espectro de violencias de género, que atentan contra las mujeres de manera específica (Bellón, 2015; Jojoa-Tobar et al., 2019).

En la literatura se han propuesto diversas clasificaciones de los tipos de VO. Dada la existencia de superposiciones entre estas clasificaciones, se desarrollará el modelo de Llobera y Ferrer (2019), complementándolo con el último subtipo identificado por Hernández (2021).

Según Llobera y Ferrer (2019), el primer subtipo es el trato de los profesionales sanitarios, caracterizado por el paternalismo, la infantilización, la jerarquización y la falta de información causada por la barrera simbólica resultante de la asimetría de poder. Estas prácticas generan sentimientos de pérdida de control, enfado, miedo, soledad, angustia y sensación de falta de empatía por parte de los profesionales (Rodríguez y Martínez, 2021).

El segundo subtipo de VO hace referencia a la práctica clínica constitutiva de VO, caracterizada por la sobreintervención mediante maniobras aceleradoras y potencialmente traumáticas durante el parto (Samantha et al., 2024), así como por la implementación de prácticas clínicas injustificadas, como la restricción del movimiento libre o la imposición de posiciones concretas en el momento de la expulsión (Arguedas, 2014; Belli, 2017; Martínez-Galiano et al., 2021). A ello se suman procedimientos realizados sin información o consentimiento previo, como los múltiples tactos vaginales (Martín-Castañeda, 2020), los partos asistidos con fórceps o vacío (Valiente et al., 2023), y la presencia de estudiantes en prácticas durante la atención obstétrica (Hernández, 2021). Estas prácticas, además de generar dolor físico y emocional, constituyen una forma de abuso al despojar a la madre de su rol activo en el parto, relegándola a la condición de objeto (Arguedas, 2014).

El tercer subtipo se centra en el entorno en el que se brinda la atención obstétrica, que puede afectar a la experiencia de la madre debido a un insuficiente acondicionamiento de los espacios, generando sentimientos de vergüenza e incomodidad relacionados con la exposición física y la limitación de la posibilidad de moverse, expresarse y permanecer en soledad (Llobera y Ferrer, 2019).

El cuarto subtipo recoge la vulneración de los derechos de autonomía, intimidad e información de las pacientes, derechos reconocidos y protegidos por la Ley 41/2002 (2002). En este sentido, la VO constituye una forma de violación de los Derechos Humanos, al ser una manifestación de violencia de género y al atentar contra los derechos sexuales y reproductivos inherentes a la condición humana (Belli, 2017; Martínez-Galiano et al., 2021).

Para finalizar, se establece como un subtipo de VO la discriminación por

razones culturales, económicas, religiosas, étnicas (Hernández, 2021), capacitistas (Rodríguez-Garrido, 2024), de orientación sexual (Jones et al., 2018) o de identidad de género (Segovia et al., 2023).

La VO también se manifiesta en tres dimensiones complementarias: física, sexual y psicológica. La violencia física la constituyen intervenciones y procedimientos invasivos como: cesáreas y episiotomías sistemáticas a pesar de que la evidencia muestra que su carácter debería ser puntual e individualizado (Araujo-Cuauro, 2019; Jojoa-Tobar et al., 2019; Llobera y Ferrer, 2019; OMS, 2015; Wagner, 2000), el uso de la maniobra de Kristeller (Rengel, 2011) o el uso indiscriminado de oxitocina (Martín-Castañeda, 2020; Valiente et al., 2023).

La violencia sexual por su parte, se evidencia en la realización injustificada de numerosos tactos vaginales por diferentes profesionales (Samantha et al., 2024); así como el rasurado púbico o perineal antes del parto o las suturas excesivas (Távora, 2022). Por último, la violencia psicológica, según Jojoa-Tobar et al. (2019), se divide en dos subtipos. En primer lugar, la violencia verbal y el impedimento de las gestantes a expresarse. Y en segundo lugar, la omisión del derecho a la información y autonomía en la toma de decisiones (Arguedas, 2014; Valiente et al., 2023).

Aunque algunas mujeres se empoderan tras sufrir VO, a través de la identificación o la creación y el fortalecimiento de redes de apoyo o la toma de conciencia de sus derechos y la adopción de una actitud reivindicativa, mediante el activismo (Hernández-Martínez, 2021; Rodríguez y Martínez, 2021), las consecuencias de haber sufrido VO impactan a corto y a largo plazo en la salud física y mental de madres y bebés, pudiendo llegar a ser irreversibles (Kohan et al., 2025).

En primer lugar, la salud sexual y reproductiva puede verse afectada,

reflejándose en el aumento del consumo de anticonceptivos o la aparición de dificultades en las relaciones sexuales, como dolor o dispareunia (Carrera et al., 2023; Hernández y Maroto, 2019). Por último, la salud física se puede ver afectada, aumentando la probabilidad de complicaciones como hemorragia, desgarro, infección, hematoma, dolor perineal o aborto, lo que eleva el riesgo de complicaciones y aborto, y contribuye al incremento de la morbilidad materna (Valiente et al., 2023).

En segundo lugar, el desarrollo óptimo del bebé también se puede ver afectado al ser las madres su vínculo primario (Martínez-Galiano et al., 2021; Valiente et al., 2023). Negar el apego precoz (Martín-Castañeda, 2020) o influir en la lactancia materna son algunos ejemplos concretos de este impacto (Martínez-Galiano et al., 2021).

En tercer y último lugar, la salud mental se ve afectada de manera significativa al aumentar de manera exponencial la probabilidad de desarrollar DPP (Ďuríčková et al., 2024; Martínez-Galiano et al., 2021; Valiente et al., 2023), ansiedad, trauma posparto y TEPTP (Dávila et al., 2022; Finch et al., 2024; Martínez-Galiano et al., 2021; Rodríguez y Martínez, 2021; Silva-Fernández et al., 2023).

4. Resultados psicológicos en el periodo perinatal: salud mental y crecimiento postraumático.

4.1 Salud mental: la depresión posparto (DPP).

La DPP es el problema de salud mental más frecuente en la etapa perinatal, con una prevalencia que oscila entre el 10 y el 19% (Armer et al., 2024; Ayers et al., 2016; Brummelte y Galea, 2010; Zhang et al., 2023). Según el DSM-5-TR, la sintomatología

se considera un especificador de un episodio de depresión mayor con inicio en el periparto, es decir, durante el embarazo o en las cuatro semanas posteriores al parto (American Psychiatric Association, 2022).

La DPP afecta no solo a la madre, sino también a la pareja y al bebé, interfiriendo en la capacidad cognitiva materna, la relación de pareja, la sintonía madre-bebé, el establecimiento del vínculo de apego y la crianza, lo que puede derivar en negligencia o dificultades en el desarrollo cognitivo, motor y socioemocional del niño (Armer et al., 2024; Brummelte y Galea, 2010; Shorey et al., 2018; Zhang et al., 2023).

La etiología de la DPP se asocia a factores genéticos, biológicos (Marcus, 2009), psicológicos (Ďuríčková et al., 2024), del embarazo y del entorno, donde destaca el papel del ambiente familiar (Zhang et al., 2023). Entre sus factores de riesgo se hacen especialmente relevantes: las ACEs (Fu et al., 2024), la historia de antecedentes de depresión o ansiedad (Osofsky et al., 2021), la exposición a violencia de género o a VO (Martínez-Galiano et al., 2021; Valiente et al., 2023), el abuso emocional en el embarazo (Armer et al., 2024), el apego inseguro en la adultez (Bifulco et al., 2006) y la baja resiliencia (Sexton et al., 2015; Young-Wolff et al., 2019).

Las recaídas son frecuentes, especialmente en mujeres con vulnerabilidad genética, historia de problemas de salud mental o salud física previos, o consumo de alcohol durante la gestación (Marcus, 2009). Además, la DPP presenta una elevada comorbilidad con otras dificultades de salud mental en el periodo perinatal, particularmente con el TEPTP (Howard et al., 2023). Ambas condiciones comparten factores de riesgo relevantes y pueden potenciarse mutuamente, configurando perfiles de mayor gravedad clínica y peor ajuste funcional (Horsch et al., 2024;

Howard et al., 2014; Vega-Sanz et al., 2024). En este sentido, resulta fundamental analizar el TEPTP no como entidad aislada, sino en estrecha relación con la DPP.

4.2 Salud mental: Trastorno de Estrés Postraumático asociado al posparto (TEPTP).

El TEPTP se caracteriza por la presencia de memorias intrusivas, conductas evitativas, alteraciones del ánimo o la cognición y aumento de la activación durante al menos un mes, interfiriendo significativamente en el funcionamiento diario (Cook et al., 2018; Ma et al., 2023). Su prevalencia en la población general es del 3,1–4%, aumentando hasta un 15,7–19,6% en madres con antecedentes de ACEs (Ayers et al., 2016; Armer et al., 2024; Hernández-Martínez et al., 2019). Este problema de salud mental no tiene de un especificador concreto del posparto dentro del DSM-5-TR (American Psychiatric Association, 2022), pero podemos hablar de TEPTP cuando la sintomatología, los disparadores y mantenedores están asociados al momento del parto.

Los factores de riesgo identificados para el TEPTP incluyen: depresión prenatal o posparto (Hernández-Martínez et al., 2019), fobia al embarazo (Armer et al., 2024; Ayers et al., 2016), estrés gestacional (Ma et al., 2023), complicaciones obstétricas como VO (Andersen et al., 2012; Ayers et al., 2016; Halperin et al., 2015; Hernández-Martínez et al., 2019), parto instrumental (Silva-Fernández et al., 2023) o cesárea de emergencia (Ma et al., 2023), experiencias subjetivas negativas durante el parto (Ayers et al., 2016; Ďuríčková et al., 2024; Halperin et al., 2015), bajo apoyo social (Andersen et al., 2012; Cook et al., 2018; Ma et al., 2023), episodios disociativos (Ayers et al., 2016), historia traumática previa (Andersen et al., 2012; Finch et al.,

2024; Sexton et al., 2015) y baja resiliencia (Wrenn et al., 2011) o apego inseguro (Finch et al., 2024).

Se ha teorizado acerca de la existencia de un trastorno característico del posparto en madres con malestar psicológico, dada la alta comorbilidad entre síntomas depresivos y postraumáticos, especialmente en aquellas con historia de ACEs, ya que estas aumentan la probabilidad de presentar ambos trastornos simultáneamente (Dekel et al., 2020; Ďuríčeková et al., 2024; Armer et al., 2024).

No obstante, aunque una proporción significativa de mujeres puede experimentar sintomatología clínica durante el periodo perinatal, lo habitual es que la transición a la maternidad no derive en psicopatología persistente, ya que la mayoría de los síntomas clínicos perinatales son leves, transitorios y autolimitados, relacionados con cambios neurobiológicos, hormonales y adaptativos propios del periodo perinatal (Howard et al., 2014; Li, 2016). De hecho, en algunos casos, la vivencia de situaciones perinatales adversas puede dar lugar a procesos de reorganización cognitiva y emocional que favorecen cambios positivos y una percepción de mayor fortaleza personal. Estas trayectorias adaptativas han sido conceptualizadas bajo el término de CPT.

4.3 Crecimiento postraumático (CPT).

El CPT fue conceptualizado por Tedeschi y Calhoun (1995, 2004) como un modelo explicativo de los cambios psicológicos positivos que pueden emerger tras la vivencia de acontecimientos traumáticos o altamente estresantes. Este proceso no sustituye ni excluye las consecuencias negativas del trauma, sino que puede coexistir con el malestar psicológico, configurándose como un fenómeno paralelo al

sufrimiento (Kadri et al., 2022).

El CPT engloba transformaciones relacionadas con una mayor fortaleza personal, una apreciación renovada de la vida, unas relaciones interpersonales más profundas, un mayor desarrollo espiritual y con una percepción de nuevas posibilidades vitales (Tedeschi y Calhoun, 2004). Asimismo, se vincula conceptualmente con la resiliencia como mecanismo de afrontamiento y superación psicológica. Diversos estudios subrayan la importancia de compartir el dolor emocional con personas significativas como facilitador del CPT (Aksu, 2024).

Entre los factores que promueven este proceso destacan: el apoyo social, el uso de estrategias de afrontamiento positivas y el procesamiento cognitivo intencional y deliberado de la experiencia traumática (Henson et al., 2021; Álvarez-Calle y Chaves, 2023). Además, los constructos sociales y culturales influyen en la interpretación del evento traumático, modulando el significado atribuido a la experiencia y el proceso de crecimiento personal (Álvarez-Calle y Chaves, 2023).

La literatura existente ha identificado niveles moderados de CPT con mayor crecimiento en apreciación de la vida, fortaleza personal y relaciones interpersonales en contexto de PP (Büchi et al., 2009; Krosch y Shakespeare-Finch, 2016). Asimismo, se ha descrito que las personas sin hijos vivos presentan una menor probabilidad de experimentar CPT en comparación con aquellas que sí los tienen (Paul et al., 2010). La alteración de las creencias básicas se ha señalado como un predictor relevante tanto del DP como del CPT, mientras que las creencias espirituales pueden actuar como marco de significado o, en otros casos, verse debilitadas tras la pérdida (Krosch y Shakespeare-Finch, 2016).

En contextos de infertilidad y TRA, el apoyo emocional y social también se ha

asociado con un mayor CPT, mientras que estrategias de afrontamiento desadaptativas, como la evitación, pueden obstaculizar su desarrollo (Sun et al., 2024).

Desde una perspectiva teórica, Calhoun et al. (2010) propusieron el Modelo de Crecimiento en el Duelo, que enfatiza el impacto de la pérdida en los supuestos básicos sobre el mundo. Las muertes inesperadas o percibidas como “antinaturales”, como la pérdida de un hijo, tienden a desafiar de forma más intensa estas creencias, generando un elevado malestar, pero también favoreciendo el CPT mediante procesos cognitivos de reevaluación (Tedeschi y Calhoun, 2006; Calhoun et al., 2010).

Finalmente, es fundamental señalar que el CPT no es un resultado universal ni necesario para un ajuste psicológico saludable. No todas las madres en duelo experimentarán crecimiento, y para algunas la noción de CPT puede resultar invalidante u ofensiva en el contexto de su pérdida (Tedeschi y Calhoun, 2004). Sin embargo, acompañar a las madres y a sus familias en la reevaluación de sus creencias básicas puede facilitar procesos de reconstrucción emocional y adaptación tras la pérdida (Cann et al., 2010; Ryninks et al., 2022).

5. Integración conceptual.

A partir de la organización propuesta (Figura 1), el ajuste psicológico en el periodo perinatal puede comprenderse como el resultado de un proceso dinámico que se inicia incluso antes del embarazo, en los contextos de acceso a la maternidad, y se despliega a lo largo del embarazo, el parto y el posparto. Los distintos itinerarios reproductivos —incluidos TRA y GS— pueden introducir demandas médicas, emocionales, sociales y éticas específicas que configuran escenarios iniciales de

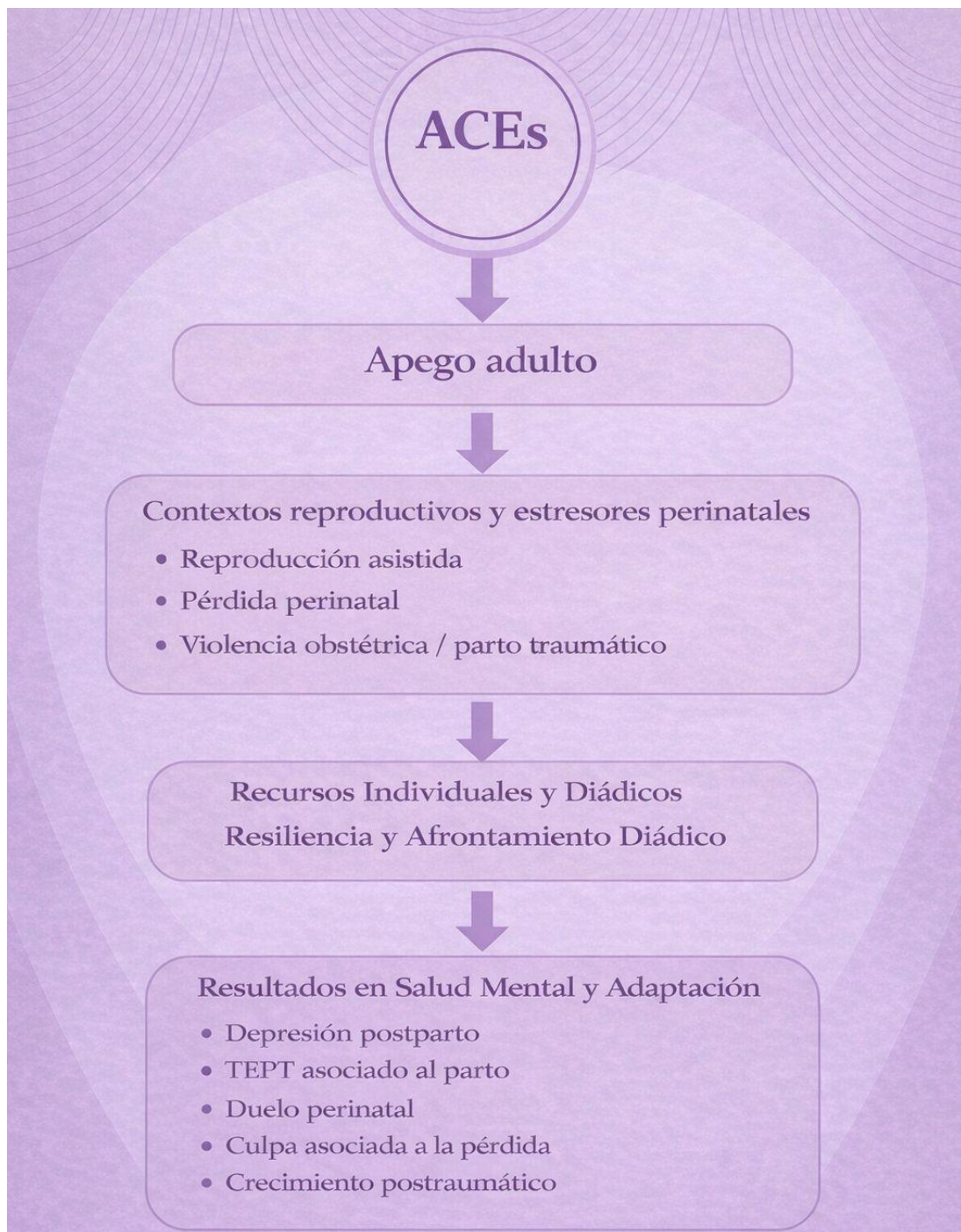
mayor o menor vulnerabilidad.

Durante el embarazo y el posparto, así como ante eventos críticos como la PP o la exposición a VO, pueden activarse vulnerabilidades previas vinculadas a factores distales del ciclo vital, como las ACEs. Estas interactúan con factores individuales proximales (p. ej., resiliencia), factores relacionales (p. ej., CD y clima familiar) y factores contextuales y sanitarios (como la VO), influyendo en la forma en que se afrontan los estresores propios de esta etapa.

No obstante, la presencia de recursos personales y sistémicos —como el apego adulto seguro, la resiliencia, un clima familiar favorable y el CD durante el embarazo, parto y posparto— puede modular el impacto de dichos estresores, disminuyendo el riesgo de DPP, TEPTP y DP, y favoreciendo trayectorias de adaptación positiva, entre ellas el CPT.

En conjunto, este modelo subraya que los resultados psicológicos en el periodo perinatal —incluyendo DPP, TEPTP, DP y CPT— no dependen de un único factor, sino de la interacción continua entre ACEs, TRA, GS, PP, VO y los recursos individuales y relacionales disponibles. Asimismo, estas trayectorias trascienden la salud mental materna individual, afectando al desarrollo socioemocional del bebé, la calidad del vínculo madre-hijo y el ajuste de la relación de pareja, lo que refuerza la necesidad de un abordaje perinatal integral, preventivo y sensible al trauma.

Figura 1. Modelo conceptual que integra las experiencias adversas en la infancia, el apego adulto, los contextos reproductivos y estresores perinatales, los recursos individuales y diádicos, y los resultados de salud mental y adaptación.



Nota. Elaboración para la presente tesis.

JUSTIFICACIÓN DE LA TESIS

A pesar de la creciente evidencia sobre los factores individuales que afectan la salud mental perinatal, existe una notable escasez de estudios que adopten una perspectiva diádica, sistémica y configuracional. La mayoría de las investigaciones se han centrado en efectos lineales de factores aislados, sin considerar que la adaptación psicológica tras eventos perinatales adversos resulta de la interacción compleja entre múltiples vulnerabilidades y recursos a nivel individual, relacional y contextual. Además, la investigación en contextos de habla hispana, particularmente en España, es limitada, lo cual dificulta la generalización de hallazgos obtenidos en otras poblaciones culturales y limita la comprensión de cómo factores culturales específicos modulan la experiencia perinatal.

Los hallazgos de esta tesis doctoral tienen importantes implicaciones clínicas y de salud pública. La identificación de factores de riesgo y protección específicos permite desarrollar estrategias de cribado más efectivas para identificar mujeres y parejas en riesgo de malestar psicológico perinatal. Asimismo, la comprensión de los mecanismos mediante los cuales factores como el CD, la resiliencia y el funcionamiento familiar, protegen contra el malestar psicológico orienta el diseño de intervenciones preventivas y terapéuticas más específicas y efectivas. Finalmente, esta investigación contribuye a visibilizar y validar las experiencias de duelo perinatal, promoviendo una atención perinatal más sensible, informada en trauma y centrada en las necesidades psicológicas de las mujeres y sus familias.

La presente tesis doctoral pretende abordar las cuestiones mencionadas mediante la integración de revisiones sistemáticas de la literatura y estudios empíricos con metodologías mixtas, a través de seis estudios. Se plantea la aplicación de metodologías mixtas que combinan análisis lineales (correlaciones, HRM,

mediación) con enfoques configuracionales (fsQCA) dado que se reconoce que la adaptación psicológica tras eventos perinatales adversos no sigue un patrón único, sino que resulta de múltiples caminos que reflejan la interacción dinámica entre factores individuales, relacionales y contextuales.

La utilización de enfoques configuracionales como fsQCA resulta pertinente dadas las limitaciones en el acceso a la muestra y, por lo tanto, la obtención de muestras pequeñas. A diferencia de los métodos estadísticos tradicionales, fsQCA permite analizar la causalidad compleja y la equifinalidad, es decir, que diferentes configuraciones pueden llevar al mismo resultado, lo cual es especialmente relevante en contextos donde los fenómenos son multifactoriales y las muestras son limitadas (Farrugia, 2019; Kokkinen, 2022; McAlearney et al., 2016; Xu et al., 2024). Además, fsQCA es robusto en muestras pequeñas al no requerir grandes tamaños muestrales para detectar configuraciones relevantes, lo que lo hace adecuado para estudios como el presente, donde la población es restringida (Farrugia, 2019; McAlearney et al., 2016; Xu et al., 2024). Estos análisis permiten identificar combinaciones de factores críticos para la intervención, así como mejorar la comprensión de la complejidad inherente a la salud mental perinatal y a la experiencia de PP (Farrugia, 2019; Kokkinen, 2022; McAlearney et al., 2016; Xu et al., 2024).

OBJETIVOS E HIPÓTESIS

En consonancia con lo desarrollado previamente en la revisión teórica y en los antecedentes empíricos, se definen los siguientes objetivos

Objetivo General:

Analizar, desde una perspectiva ecológica y del ciclo vital, cómo las ACEs y el apego adulto interactúan con recursos individuales y diádicos para configurar trayectorias de ajuste psicológico en el periodo perinatal —incluyendo psicopatología y CPT— en distintos contextos reproductivos y eventos perinatales críticos, mediante un enfoque metodológico mixto que integra revisiones sistemáticas y estudios empíricos con análisis lineales y configuracionales.

Objetivos Específicos e Hipótesis:

Objetivo Específico 1 (Estudios 1, 2 y 3 - Revisiones Sistemáticas):

Sintetizar sistemáticamente la evidencia científica disponible sobre:

a) El papel del coping diádico en parejas sometidas a tratamientos de reproducción asistida (*estudio 1*).

Considerando el aumento de uso e impacto emocional y psicológico asociado a los TRA, así como el creciente interés por los factores protectores en este contexto, el presente estudio tuvo como objetivo analizar de forma sistemática la evidencia científica existente sobre el papel del CD positivo en parejas sometidas a TRA. Para ello, se llevó a cabo una revisión sistemática de la literatura mediante un proceso riguroso de búsqueda, selección y análisis de los estudios, siguiendo las directrices de la guía PRISMA (Page et al., 2021). De este modo, este estudio pretende contribuir a la identificación y sistematización de los efectos del CD positivo en la salud física y mental de las parejas en TRA, facilitando el desarrollo de futuras líneas de investigación e intervención psicológica en este ámbito.

(b) Los patrones de apego en contextos de gestación subrogada y sus implicaciones para el bienestar emocional (*estudio 2*).

Tomando en consideración las complejidades legales, culturales y psicológicas de la GS, el presente estudio tuvo como objetivo analizar de manera sistemática los patrones de apego en contextos de subrogación y sus implicaciones para el bienestar emocional de las gestantes y los niños nacidos mediante este método. Para ello, se llevó a cabo una revisión sistemática de la literatura siguiendo las directrices de PRISMA (Page et al., 2021), evaluando la calidad metodológica de los estudios incluidos y abarcando distintos niveles de apego, desde el vínculo prenatal de la gestante hasta la formación de apego en la infancia.

(c) La relación entre la pérdida perinatal y el apego parental (*estudio 3*).

Dada la relevancia del periodo perinatal para el desarrollo del vínculo madre-hijo y la formación de apego, y considerando el impacto emocional y psicológico que generan las PP, el presente estudio tuvo como objetivo examinar de manera sistemática la evidencia científica disponible sobre la relación entre la PP y el apego. Para ello, se llevó a cabo una revisión sistemática de la literatura siguiendo las directrices de la guía PRISMA (Moher et al., 2016), garantizando un proceso riguroso y transparente de búsqueda, selección y análisis de estudios. Esta revisión pretende proporcionar una base de conocimiento que sirva de sustento para futuras investigaciones y para el diseño de intervenciones clínicas dirigidas a apoyar a los padres que atraviesan procesos de DP.

Objetivo Específico 2 (Estudio 4 - Afrontamiento tras la pérdida perinatal):

Dada la necesidad de profundizar en la comprensión de los factores que influyen en el CD tras la PP, el presente estudio tuvo como objetivo principal examinar cómo las ACEs, el apego romántico inseguro (ansiedad y evitación), la culpa y los problemas de salud mental interactúan para predecir el CD en mujeres tras la PP. Con el fin de captar tanto relaciones lineales como configuraciones complejas de adaptación relacional, el estudio incorporó una metodología mixta que combinó análisis correlacionales, HRM, análisis de mediación, y fsQCA.

Específicamente, se buscó:

- **Objetivo específico 1:** analizar las asociaciones entre ACEs, apego inseguro, culpa y CD.
- **Objetivo específico 2:** identificar los predictores más relevantes del CD mediante HRM.
- **Objetivo específico 3:** explorar combinaciones de factores que contribuyan a niveles altos y bajos de CD a través de fsQCA.
- **Objetivo específico 4:** examinar si el apego inseguro media la relación entre ACEs y CD.

A continuación, se presentan las hipótesis:

Hipótesis 1. Se espera que mayores niveles de ACEs, apego inseguro y culpa se asocien negativamente con el CD, dificultando la cooperación y el apoyo mutuo dentro de la pareja tras la PP.

Hipótesis 2. Se plantea que la presencia de problemas de salud mental se asociará con mayores niveles de ACEs, apego inseguro y culpa, así como con menores niveles de CD, reflejando un patrón de mayor vulnerabilidad emocional y relacional.

Hipótesis 3. Se espera que los factores más directamente asociados con el CD

sean las dimensiones de apego inseguro, especialmente la evitación, mientras que las ACEs, la culpa y los problemas de salud mental influirán de forma secundaria o indirecta sobre el CD.

Hipótesis 4. Desde una perspectiva configuracional, se plantea que no existirá un único factor necesario o suficiente para explicar los niveles de CD, sino que múltiples combinaciones de vulnerabilidad y recursos (ACEs, apego, culpa y problemas de salud mental) determinarán distintas trayectorias de CD.

Hipótesis 5. Se espera que el apego inseguro, especialmente la ansiedad, medie la relación entre ACEs y CD, de manera que los efectos de las ACEs sobre el CD se canalicen principalmente a través de la regulación emocional y los patrones de apego en la adultez.

Previo aprobación del Comité de Ética de la Universitat de València (2024-PSILOG-3468509), se llevó a cabo una evaluación transversal y en línea que contempló las siguientes variables e instrumentos: Cuestionario sociodemográfico y clínico ad hoc, Ítem ad hoc de culpa relacionada con la pérdida, Adverse Childhood Experiences Questionnaire (ACEQ; Felitti et al., 1998; WHO, 2012). Adaptación al castellano de Mendoza y Meza (2022), Experiences in Close Relationships – Revised (ECR-R; Fraley et al., 2000, 2011). Adaptación al castellano de Fernández-Fuertes et al. (2011) y Dyadic Coping Inventory (DCI; Bodenmann, 2008; Ledermann et al., 2010). Adaptación al castellano de Falconier et al. (2012).

Objetivo Específico 3 (Estudio 5 – Procesos de adaptación tras la pérdida perinatal: duelo perinatal y crecimiento postraumático):

Resulta necesario profundizar en la comprensión de los procesos de

adaptación psicológica tras la PP por lo que el presente estudio tuvo como objetivo principal examinar cómo las vulnerabilidades individuales (ACEs, apego inseguro), los recursos relacionales (CD) y los factores contextuales relacionados con la pérdida influyen conjuntamente en el DP y el CPT en mujeres tras la PP. Combinando análisis correlacionales, HRM y fsQCA.

Específicamente, se buscó:

- **Objetivo específico 1:** analizar las asociaciones entre ACEs, las dimensiones del apego, el CD y los resultados de DP y CPT.
- **Objetivo específico 2:** identificar la contribución relativa de los factores individuales, relacionales y contextuales al DP y al CPT mediante HRM.
- **Objetivo específico 3:** determinar múltiples configuraciones de vulnerabilidad y recursos asociadas a niveles altos y bajos de DP y CPT a través de fsQCA.

A continuación, se desarrollan las hipótesis del estudio:

Hipótesis 1. En relación con los resultados de DP, una mayor presencia de factores de vulnerabilidad incrementará la probabilidad de niveles elevados de DP. Específicamente, se espera que una mayor exposición a ACEs y dimensiones de apego inseguro se asocien positivamente con mayores niveles de DP.

Hipótesis 2. Por otra parte, una mayor presencia de factores protectores incrementará la probabilidad de niveles elevados de CPT. En particular, se espera que el CD, se asocie positivamente con mayores niveles de CPT.

Hipótesis 3. Desde una perspectiva configuracional, se plantea que múltiples combinaciones de factores individuales, relacionales y contextuales caracterizarán

distintas trayectorias de adaptación tras la PP.

El estudio contó con la aprobación del Comité de Ética de la Universitat de València (2024-PSILOG-3468509). Se llevó a cabo una evaluación transversal y en línea en la que se administraron los siguientes instrumentos: cuestionario sociodemográfico y clínico ad hoc, ACEQ (Felitti et al., 1998; WHO, 2012). Adaptación al castellano de Mendoza y Meza (2022), ECR-R (Fraley et al., 2000, 2011). Adaptación al castellano de Fernández-Fuertes et al. (2011), DCI (Bodenmann, 2008; Ledermann et al., 2010). Adaptación al castellano de Falconier et al. (2012), Posttraumatic Growth Inventory (PTGI; Tedeschi y Calhoun, 1996). Adaptación al castellano de Quezada-Berumen y González-Ramírez (2020) y Perinatal Grief Scale (PGS; Toedter et al., 1988). Adaptación al castellano de Paramio-Cuevas (2016).

Objetivo Específico 4 (Estudio 6 - Salud mental posparto):

Determinar cómo las vulnerabilidades individuales (ACEs y apego inseguro), los recursos relacionales (cohesión y adaptabilidad familiar), la resiliencia y los factores contextuales (VO) influyen en la DPP y el TEPTP, en mujeres en situación de posparto, utilizando análisis correlacionales, HRM y fsQCA.

Específicamente, se buscó:

- **Objetivo específico 1:** analizar las asociaciones entre las ACEs, los estilos de apego romántico, la VO, la resiliencia, el funcionamiento familiar y los resultados de DPP y TEPTP.
- **Objetivo específico 2:** identificar la contribución relativa de los factores individuales, relacionales y contextuales a DPP y TEPTP mediante regresiones jerárquicas.

- **Objetivo específico 3:** determinar múltiples configuraciones de factores de riesgo y protectores asociadas a niveles altos y bajos de DPP y TEPTP a través de fsQCA.

A continuación, se desarrollan las hipótesis:

Hipótesis 1. Se espera que una mayor exposición a ACEs, la presencia de apego inseguro (ansioso o evitativo) y la experiencia de VO se asocien positivamente con mayores niveles de DPP y TEPTP.

Hipótesis 2. Esperamos que la resiliencia y los recursos relacionales, especialmente la cohesión y la adaptabilidad familiar, se asocien negativamente con DPP y TEPTP.

Hipótesis 3. Existirá una relación positiva entre la DPP y el TEPTP, reflejando su solapamiento sintomatológico.

Hipótesis 4. Desde una perspectiva predictiva, se plantea que las ACEs, el apego inseguro, la VO, la resiliencia y el funcionamiento familiar contribuirán de manera significativa a predecir niveles de DPP y TEPTP.

Hipótesis 5. Desde un enfoque configuracional, se espera que múltiples combinaciones de factores individuales, relacionales y contextuales expliquen los resultados de DPP y TEPTP durante el posparto.

El estudio fue aprobado por el Comité de Ética de la Universitat de València (2024-PSILOG-3773873). Se realizó una evaluación transversal en línea para examinar las variables de interés, utilizando los siguientes instrumentos: cuestionario sociodemográfico y clínico ad hoc, ACEQ (Felitti et al., 1998; WHO, 2012). Adaptación al castellano de Mendoza y Meza (2022), ECR-R (Fraley et al., 2000, 2011). Adaptación al castellano de Fernández-Fuertes et al. (2011), Connor-Davidson

Resilience Scale (CD-RISC; Connor y Davidson, 2003). Adaptación al castellano de Notario-Pacheco et al. (2011), Family Adaptability and Cohesion Evaluation Scales II (FACES II; Olson et al., 1982). Adaptación al castellano de Martínez-Pampliega et al. (2006), Obstetric Violence Scale (Castro y Rates, 2021) y Edinburgh Postnatal Depression Scale (EPDS; Cox et al., 1987). Adaptación al castellano de García-Esteve et al. (2003).

ESTUDIOS EMPÍRICOS

Relevance of Positive Dyadic Coping for Couples Undergoing Assisted Reproduction Treatments: A Systematic Review.

Rebeca Santamaría-Gutiez¹, Silvia Martínez-Corredor², Francisco González-Sala² y Laura Lacomba-Trejo^{2*}

¹ Clinical Psychology and Health Unit Service, General Universitary Hospital of Valencia, Valencia, Spain

² Department of Developmental and Educational Psychology, Faculty of Psychology and Speech Therapy, Universitat de València, Valencia, Spain

* Correspondence: laura.lacomba @uv.es

Journal: *Journal of Marital and Family Therapy*

Year: 2025

Volume: 51

DOI: <https://doi.org/10.1111/jmft.70016>

Journal Impact Factor (JCR): 2.3 (Q1)

Reference

Santamaría-Gutiez, R., Martínez-&, S., González-Sala, F., & Lacomba-Trejo, L. (2025). Relevance of positive dyadic coping for couples undergoing assisted reproduction treatments: A systematic review. *Journal of Marital and Family Therapy*, 51, e70016. <https://doi.org/10.1111/jmft.7001>

ORIGINAL ARTICLE

Relevance of Positive Dyadic Coping for Couples Undergoing Assisted Reproduction Treatments: A Systematic Review

Rebeca Santamaría-Gutiez^{1,2}  | Silvia Martínez-Corredor² | Francisco González-Sala³  | Laura Lacomba-Trejo³ ¹Resident in Clinical Psychology at the General University Hospital of Valencia, Valencia, Spain | ²Faculty of Psychology and Speech Therapy, Universitat de València, València, Spain | ³Developmental and Educational Psychology Department, Faculty of Psychology and Speech Therapy, Universitat de València, València, SpainCorrespondence: Laura Lacomba-Trejo (laura.lacomba@uv.es)

Received: 31 July 2024 | Revised: 5 March 2025 | Accepted: 10 March 2025

Funding: The authors received no specific funding for this work.

Keywords: assisted reproductive treatments | couples | positive dyadic coping | systematic review

ABSTRACT

The present study investigates the impact of positive dyadic coping strategies on the physical and mental health of couples undergoing assisted reproductive treatments (ART). A systematic literature search was conducted in databases, including ProQuest, PubMed, Scopus, and Web of Science, adhering to the PRISMA guidelines. From an initial pool of 1061 studies, 23 were selected for final analysis, encompassing a total of 7079 participants. The findings indicate that positive dyadic coping may significantly enhance mental health, couple adjustment and satisfaction, self-esteem, and quality of life in couples undergoing ART. The quality of the included studies was rated as moderate to high. The study concludes that integrating positive dyadic coping strategies into psychological intervention programs and providing psychological support within the healthcare system may be essential for couples undergoing ART.

1 | Introduction

Assisted reproductive treatments (ARTs) are a range of procedures designed to aid individuals facing difficulties in conceiving. These treatments are utilized by individuals with medical conditions affecting fertility, those choosing to become single parents, or members of the LGBTQ+ community (Jain and Singh 2023). ART includes methods such as artificial insemination, in vitro fertilization with or without intracytoplasmic sperm injection (ICSI), and embryo transfer (Peigné and Epelboin 2018). The adoption of ART has increased due to the growing recognition of diverse family structures (Newman 2019) and the rise in the average age of conception, influenced by sociopolitical factors and life stage delays (Arnett et al. 2014; Artini et al. 2018).

Regulations and policies around adoption and ART vary significantly across regions and countries, reflecting a diversity of

approaches to the inclusion and rights of individuals and couples, including LGBTQ+ (Goldberg et al. 2019) and single people (Seeman 2018). In the European Union, the possibility of adoption is accessible in all countries (European Union 2021), with notable variations in terms of the admission of married couples, LGBTQ+ couples, and single people, evidencing a heterogeneous panorama of acceptance and restrictions. Similarly, access to ART shows a disparate distribution of services offered to different groups, from heterosexual couples to single people and LGBTQ+ couples, with some countries providing wide accessibility, while others impose significant limitations (Brandão 2022).

In contrast, in the United States (USA), state legislation and policies regarding ART and adoption present wide variability, with some states promoting laws to facilitate the financing of ART by insurers (Martin et al. 2011), while others impose restrictions based on marital status or sexual orientation for access, reflecting

different degrees of inclusion and legal protection. This unequal access to treatment could have an impact on the mental health of those affected (Brandão 2022).

Despite its benefits, ART can pose significant emotional and psychological challenges. These challenges stem from the medical procedures, side effects, a perceived loss of control, and the uncertainty of outcomes. Common psychological impacts include stress, fear, anxiety, distress, and depression (Wischmann 2020). Furthermore, difficulties of access, high costs of care, and legal restrictions surrounding ART can trigger financial stress, anxiety, couple conflicts, and feelings of stigmatization and exclusion, intensifying frustration and hopelessness (Stanhiser and Steiner 2018). Likewise, recurrent losses in these treatments are associated with an increased risk of emotional disorders and complicated grief (McGrath et al. 2020). On the other hand, stress and the medicalization of sexuality could negatively impact several areas of a couple's life, including marital satisfaction and sex life (Cocchiaro et al. 2020). Finally, many people who undergo ART face concomitant health conditions, such as being cancer survivors (Carter et al. 2010) or suffering from chronic diseases, for instance, endometriosis (Burgio et al. 2022) or pre-existing mental health disorders, which may add specific emotional challenges.

Positive dyadic coping strategies may help mitigate these negative effects (Molgora et al. 2019). Dyadic coping refers to the efforts made by partners to manage stress collaboratively, aiming to sustain relationship functionality (Bodenmann 2006). It encompasses (1) the interdependence of the stress experience, (2) the partner serving as a primary source of support, and (3) dyadic coping as an ongoing process throughout the stressful period. Dyadic coping can be categorized as (1) positive, involving assertive communication, support, delegation, and collaborative problem-solving (Landolt et al. 2023), or (2) negative, which includes control, hostility, overprotection, and misunderstanding in response to adversity. These coping behaviors are informed by evolutionary-contextual, systemic-transactional, and relationship-centered models. Negative dyadic coping is not only the absence of coping strategies that favor the couple's adaptation and adjustment to stress but also a set of dysfunctional interaction patterns that include hostile responses and ambivalent behaviors. It involves specific dimensions of dysfunctional interaction that significantly affect the couple's relationship (Falconier et al. 2015).

For couples undergoing ART, the application of positive dyadic coping strategies—such as emotion-focused coping (managing the emotional response to a situation), delegation (the partner is directly requested to offer assistance to the other partner), and problem-focused coping (focused on the problem itself)—has been associated with enhanced relationship satisfaction (Molgora et al. 2019), physical health (Weitkamp et al. 2021) and improved quality of life (Bai et al. 2022), while also reducing emotional problems during the ART process (Molgora et al. 2019). On the contrary, negative dyadic coping seems to reduce quality of life, increased couples' distress, stress appraisal, and coping processes of stressful situations, such as undergoing ART (Falconier and Kuhn 2019). Understanding the role of dyadic coping strategies in ART is crucial not only for improving a couple's well-being but also for designing targeted interventions that can enhance treatment adherence, emotional resilience, and relationship satisfaction during this challenging process.

Given that positive dyadic coping strategies could play an important role in relational and emotional well-being, expanding knowledge about these dynamics could provide a robust basis for the design of evidence-based clinical and comprehensive interventions during ART. This systematic review aims to synthesize the existing evidence on the impact of dyadic coping strategies on the relationship and mental health of couples undergoing ART. Additionally, the use of negative dyadic coping strategies is discussed.

1 | Methods

1.1 | Bibliographic Search

This qualitative systematic review adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al. 2021). The research question was formulated using the population, exposure, comparator, and outcomes strategy (Santos et al. 2007): "Do positive dyadic coping strategies impact the relationship and mental health of couples undergoing ART?". The search protocol was registered with PROSPERO on March 24, 2024 (CRD42024524218).

A comprehensive bibliographic search was conducted across the following databases: ProQuest Central, PubMed, Scopus, and Web of Science. Initial searches identified relevant descriptors, and a list of key terms in English was compiled for use in these databases. The first literature search occurred in October 2023, and the final search was completed in February 2024. The Boolean expression used was: (TS = (dyadic coping OR communal coping OR couple coping OR collaborative coping OR relationship-focused coping OR dyadic consensus OR dyadic cohesion) AND TS = (infertility OR subfertility OR in vitro * OR in vitro * OR assisted reproduction OR artificial insemination OR intrauterine insemination OR intracervical insemination OR ICSI)).

All identified articles were imported into Hubmeta (Steel et al. 2023). Two researchers (S.M.C. and L.L.T.) independently reviewed the titles and abstracts, excluding articles that did not meet the inclusion criteria. Selected full texts were then screened. In cases of disagreement, a third researcher, an expert in perinatal psychology (R.S.G.), was consulted.

Interrater agreement was assessed using Cohen's kappa (κ) via Hubmeta (Steel et al. 2023). Values were interpreted as follows: ≤ 0.40 indicates poor agreement, $0.40\text{--}0.75$ indicates moderate agreement, and ≥ 0.76 indicates excellent agreement (Hernández-Nieto 2002). The flow diagram corresponding to the review process is shown in Figure 1.

1.2 | Inclusion and Exclusion Criteria

A systematic review of observational, quantitative research was conducted. Inclusion criteria were as follows: (a) scientific articles evaluating the use of positive dyadic coping strategies in the context of ART, (b) studies involving individuals with couples or couples, (c) publications in scientific journals, (d) general interest journals, (e) professional journals, (f) articles in any language, and (g) publications from any year.

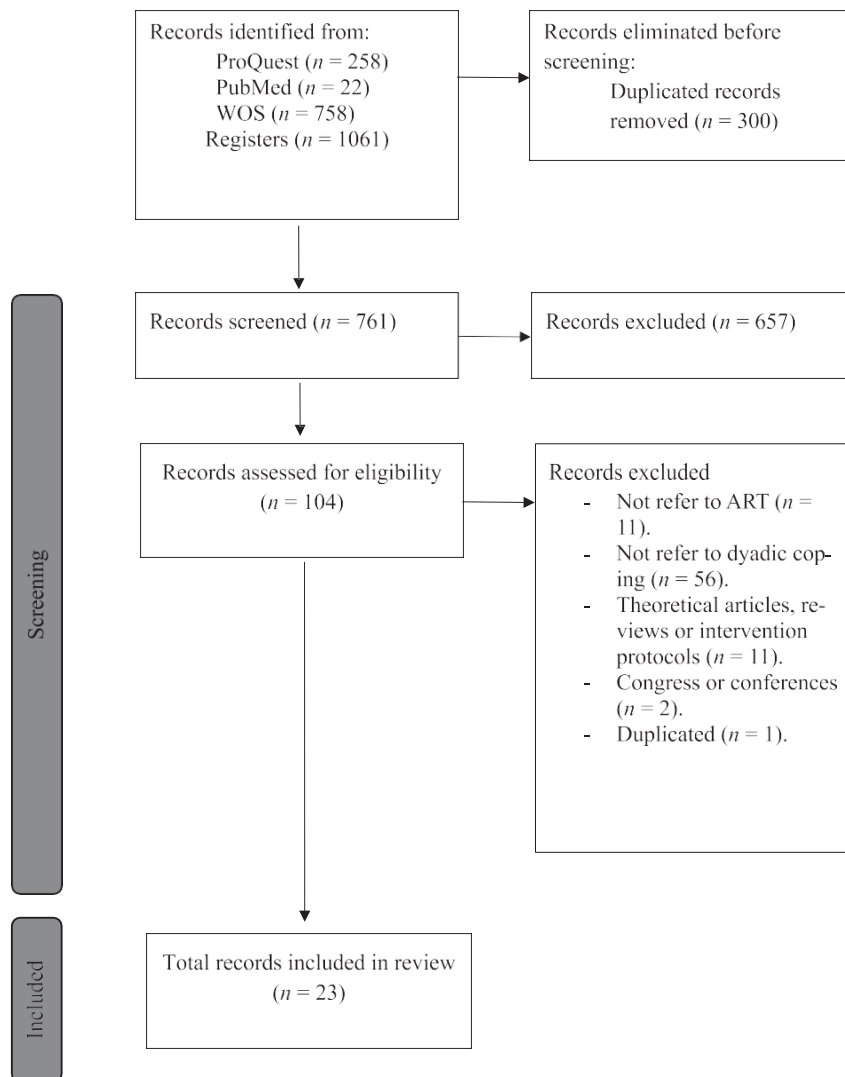


FIGURE 1 | Flowchart. ART, assisted reproductive treatments; WOS, Web of Science.

Exclusion criteria included (a) doctoral theses, (b) conference papers, (c) systematic reviews, (d) books, (e) narrative reviews, (f) case studies, (g) intervention studies, (h) qualitative studies, (e) articles that covered several pathologies, did not break down the results obtained for ART context in detail, (i) studies that focus on types of coping other than dyadic coping, such as personal coping, and (j) articles in which the sample consists exclusively of single individuals. Additionally, searches in all databases were restricted to titles and abstracts to ensure that the search terms appeared in these sections.

1.1 | Quality Assessment

Two authors (S.M.C. and L.L.T.) independently assessed the quality of the studies using an adapted version of the “Quality Assessment Tool for Quantitative Studies” from the Effective Public Health Practice Project (Thomas 2003). Studies were

evaluated on eight criteria, with scores ranging from 4 to 8. Overall quality was categorized as “strong” if the study had three or more “moderate” ratings with no “weak” ratings, “moderate” if there was one “weak” rating or fewer than three “strong” ratings, and “weak” if there were two or more “weak” ratings (McMullan et al. 2019). A total score was calculated based on the average of these ratings, with scores ranging from 1 to 5, where 1 indicated low risk and high methodological quality, and 5 indicated high risk and low methodological quality (Wermelinger-Ávila et al. 2017). The quality assessment is detailed in Table 2.

1.2 | Data Extraction

Two researchers (S.M.C. and L.L.T.) developed a data extraction form to systematically collect relevant information from each study. The form included details such as the first author, year of

publication, sample characteristics, country, variables and instruments, study design, results, and main conclusions, which are summarized in Table 1.

1 | Results

1.1 | Study Selection and Screening

The study selection process is illustrated in Figure 1. After removing duplicates, 761 articles were reviewed. During the initial phase of title and abstract screening, 655 articles were excluded by the two authors (S.M.C. and L.L.T.) for not meeting the inclusion and exclusion criteria. The interrater agreement in this phase was excellent ($\kappa = 0.73$). In the second phase, 104 full-text articles were assessed by the same authors, leading to the inclusion of 23 studies in the qualitative analysis, with excellent interrater agreement ($\kappa = 0.90$).

1.2 | Characteristics of the Studies

1.2.1 | Participants

The characteristics of the included studies are summarized in Table 1. The studies were conducted between 1998 and 2023. The fact that 73.91% of the studies were conducted in the last 10 years indicates a growing interest in this field. More than half of the studies were conducted in the European Union, primarily in Italy (7; Cattaneo et al. 2022; Facchin et al. 2021; Fortunato et al. 2023; Molgora et al. 2019; Zurlo 2018, 2019, 2020), followed by Portugal (3; Chaves et al. 2019; Galhardo et al. 2011, 2013), Spain (1; García-Quintáns et al. 2023), and Switzerland (1; Darwiche et al. 2019). The remaining studies were conducted in the North America (2 in the USA; Jacob et al. 1999; Markestad et al. 1998; 2 in Canada: Péloquin et al. 2023; Rossi et al. 2023; and one conducted in the USA and Canada: El Amiri et al. 2023), China (4; Bai et al. 2022; Tang et al. 2023; 20; Zhang et al. 2023), Sudafrica (Van Der Merwe and Greeff 2015), and Turkey (Güleç et al. 2011).

The total number of participants was 7079, with 39.72% identifying as men, 0.09% ($n = 7$) as genderqueer, and 59.47% as women, with an average sample size of 332 participants and a mean age of 21.14 years. Among these, 6346 participants sought ART due to infertility (Cattaneo et al. 2022; Chaves et al. 2019; Darwiche et al. 2019; El Amiri et al. 2023; Facchin et al. 2021; Fortunato et al. 2023; Galhardo et al. 2011, 2013; García-Quintáns et al. 2023; Güleç et al. 2011; Jacob et al. 1999; Markestad et al. 1998; Molgora et al. 2019; Péloquin et al. 2023; Rossi et al. 2023; Tang et al. 2022; Tang et al. 2023; Van Der Merwe and Greeff 2015; Zhang et al. 2023; Zurlo et al. 2018, 2019, 2020), 106 participants were from the LGBTQ + community (Fortunato et al. 2023; Jacob et al. 1999; Rossi et al. 2023), and the remaining 516 participants did not seek ART, as they were couples who conceived spontaneously (Darwiche et al. 2019; Galhardo et al. 2011), couples who opted for adoption (Galhardo et al. 2011), a control group (Güleç et al. 2011), or women with endometriosis who had never sought ART (Facchin et al. 2021).

A total of 2651 heterosexual couples participated (Cattaneo et al. 2022; Chaves et al. 2019; Darwiche et al. 2019; El Amiri et al. 2023; Fortunato et al. 2023; Galhardo et al. 2011, 2013; García-Quintáns et al. 2023; Güleç et al. 2011; Jacob et al. 1999; Markestad et al. 1998; Molgora et al. 2019; Péloquin et al. 2023; Rossi et al. 2023; Tang et al. 2023; Van Der Merwe and Greeff 2015; Zhang et al. 2023; Zurlo et al. 2018, 2020), 53 lesbian couples (Fortunato et al. 2023; Jacob et al. 1999), and 25 gay couples (Fortunato et al. 2023).

Among the studies, 82.60% included both partners in heterosexual couples undergoing ART, 8.69% included only the husbands (Bai et al. 2022; Galhardo et al. 2013), and 11.58% included only women (Facchin et al. 2021; Tang et al. 2022; Zurlo et al. 2019).

Regarding marital status, data were provided by 30.34% of the studies (Darwiche et al. 2019; El Amiri et al. 2023; Facchin et al. 2021; Markestad et al. 1998; Péloquin et al. 2023; Rossi et al. 2023; Van Der Merwe and Greeff 2015). The percentage of married participants ranged from 41.2% (Péloquin et al. 2023), to being included as inclusion criteria (Markestad et al. 1998; Van Der Merwe and Greeff 2015). Although explicit numerical information on marital status is not provided, four studies reported the duration of marriage (Galhardo et al. 2011; Tang et al. 2022, 2023; Zhang et al. 2023) and one provided whether it was a first marriage (Bai et al. 2022).

In addition, 30.34% of the studies provided information regarding race and ethnicity (El Amiri et al. 2023; Fortunato et al. 2023; Markestad et al. 1998; Péloquin et al. 2023; Rossi et al. 2023; Tang et al. 2022; Van Der Merwe and Greeff 2015). The mean percentage of the White population was 91.18% in these studies. On the other hand, the study by Tang et al. (2022) reported most Tibetan participants (94.11%).

1.2.2 | Sample Selection and Research Design

In 26% of the studies, the sample selection method was not specified (Cattaneo et al. 2022; Chaves et al. 2019; Fortunato et al. 2023; Galhardo et al. 2011; Güleç et al. 2011; Tang et al. 2023). In 73.8% of the studies, the sample was intentionally selected (Bai et al. 2022; El Amiri et al. 2023; Darwiche et al. 2019; Facchin et al. 2021; Galhardo et al. 2013; García-Quintáns et al. 2023; Güleç et al. 2011; Jacob et al. 1999; Markestad et al. 1998; Molgora et al. 2019; Rossi et al. 2023; Tang et al. 2022; Van Der Merwe and Greeff 2015; Zhang et al. 2023; Zurlo et al. 2018, 2019, 2020), with one study mentioning recruitment through flyers or the internet (Péloquin et al. 2023). It is important to emphasize that the selection of participants in the studies was mostly performed in private assisted reproduction medical centers (Bai et al. 2022; Chaves et al. 2019; Darwiche et al. 2019; Cattaneo et al. 2022; Galhardo et al. 2011; García-Quintáns et al. 2023; Jacob et al. 1999; Markestad et al. 1998; Molgora et al. 2019; Péloquin et al. 2023; Rossi et al. 2023; Tang et al. 2022, 2023; Zhang et al. 2023; Zurlo et al. 2018, 2019, 2020), and on a few occasions, they came from public centers (Galhardo et al. 2011; Galhardo et al. 2013; García-Quintáns et al. 2023).

First author	Country	Participants	variables	Design	Results	contributions
García-Quintáns (2023)	Spain	174 heterosexual couples attending assisted reproduction clinics. 75.3% have a diagnosis of primary infertility. 54.6% have undergone ART, and 60.3% had not previously undergone this treatment.	Sociodemographic variables: age, gender, marital status, duration of the relationship, presence or absence of previous children, educational level, employment status, and socioeconomic status. Psychological and relational variables: Emotional maladjustment and adaptive resources: Emotional Maladjustment and Adaptive Resources in Infertility Questionnaire (DERA; Moreno-Rosset et al. 2009); Dyadic Adjustment: Dyadic Adjustment Scale (DAS; Spanier 1976, 2017).	Cross-sectional and correlational.	As women's age increases, emotional maladjustment decreases ($r = -0.18, p \leq 0.05$), and the use of personal ($r = 0.17, p \leq 0.05$), interpersonal ($r = 0.15, p \leq 0.05$), and adaptive resources ($r = 0.21, p \leq 0.05$) increases. For men, the longer the relationship duration, the lower the emotional maladjustment ($r = -0.23, p \leq 0.01$). In men, Model 2, which incorporated dyadic adjustment variables, explained 17% of the variance in low emotional distress, with relationship duration being a significant predictor ($\beta = -0.5, p \leq 0.001$). For personal resources, this model predicted 6% of the variance, with dyadic cohesion as a significant predictor ($\beta = 0.17, p = 0.030$); for interpersonal resources, it explained 13% of the variance, with dyadic satisfaction being significantly associated ($\beta = 0.25, p = 0.005$); for adaptive resources, it explained 9% of the variance, with relationship duration as a predictive variable ($\beta = 0.15, p = 0.045$). For women, it explained 15% of the variance in emotional distress, with low emotional expression as a significant predictor ($\beta = -0.27, p = 0.004$). For emotional resources, it predicted 9% of the explained variance, with low dyadic cohesion ($\beta = -0.27, p \leq 0.005$) and high educational level ($\beta = 0.16, p = 0.038$) as significant predictors. For interpersonal resources, it explained 7% with low emotional expression ($\beta = -0.26, p = 0.007$). For adaptive resources, it significantly explained 11% of the variance, with higher age ($\beta = 0.17, p = 0.028$) and higher dyadic consensus ($\beta = -0.19, p = 0.041$) as predictive variables.	Couples with infertility face gender-differentiated emotional challenges, with women having more interpersonal support and men having more personal resources. However, together they tend to adapt better emotionally than the general population, especially with age and undergoing, which can strengthen their relationship.
El Amiri (2023)	Canada and the USA	232 women and 232 men (232 couples) with a mean age of 32.5 ± 4 and	Sociodemographic and relationship variables: age, education, income,	Cross-sectional.	Women reported greater concerns with sexual satisfaction ($F(1, 175) = 64.632, p \leq 0.001$; $\eta^2 = 0.27$) and sexual distress ($F(1, 175) = 24.843, p \leq 0.001$; $\eta^2 = 0.12$). Perceived negative dyadic	This study suggests the importance of positive dyadic coping for the

(Continues)

TABLE 1 | (Continued)

First author	Country	Participants	Evaluated variables	Design	Results	Main contributions
		34.4 ± 5.2, respectively. All participants had a diagnosis of infertility and had been seeking assisted reproduction for less than 6 months.	marital status, and duration of the relationship. Clinical variables: presence of diagnosis, use of fertility medication, duration of difficulties in conceiving, type of ART, and cause of infertility. Psychological and relational variables: Dyadic coping: DCI (Bodenmann et al. 2008); Relationship satisfaction: DAS-4 (Sabourin et al. 2005); Fertility-related sexual concerns: Fertility Problem Inventory (FPI) (Newton et al. 1999); Sexual distress: Sexual Distress Scale–Short Form (Santos-Iglesias et al. 2020); Sexual satisfaction: Global Measure of Sexual Satisfaction (Lawrance et al. 2020).		coping from the partner in women correlated positively with sexual distress ($r = 0.20, p \leq 0.001$) and fertility-related sexual concerns ($r = 0.13, p \leq 0.05$). In men, perceived negative dyadic coping from the partner correlated positively with sexual distress ($r = 0.21, p \leq 0.001$) and sexual concerns ($r = 0.16, p \leq 0.05$). Perceived positive dyadic coping by men was associated with higher levels of sexual satisfaction ($r = 0.260, p \leq 0.001$), explaining 38% of the model ($R^2 = 0.38$). Common dyadic coping was positively correlated with higher sexual satisfaction in both women ($r = 0.158, p \leq 0.05$) and men ($r = 0.138, p \leq 0.05$), explaining 25% ($R^2 = 0.25$) and 38% of the model, respectively ($R^2 = 0.38$), and negatively correlated with sexual distress in both women ($r = -0.186, p \leq 0.01$) and men ($r = -0.195, p \leq 0.001$), explaining 17% ($R^2 = 0.17$) and 23% of the model, respectively ($R^2 = 0.23$). Men's perceptions of common coping correlated negatively with their partner's fertility-related sexual concerns ($r = -0.207, p \leq 0.05$). According to the actor–partner interdependence model (APIM), using negative and positive dyadic coping as independent variables and fertility-related sexual concerns, distress, and sexual satisfaction as dependent variables, common dyadic coping reduced fertility-related sexual concerns ($\beta_{\text{Wife}} = -0.122, \beta_{\text{Husband}} = -0.157, I = < 0.05$), sexual concern ($\beta_{\text{Wife}} = -0.186, \beta_{\text{Husband}} = -0.195, I = < 0.01$), and increased sexual satisfaction ($\beta_{\text{Wife}} = 0.158, \beta_{\text{Husband}} = 0.138, I = < 0.05$). Perceived positive dyadic coping in the partner increased sexual satisfaction ($\beta_{\text{Husband}} = 0.260, I = < 0.001$) in men and fertility-related sexual concern in women ($\beta_{\text{Wife}} = 0.260, I = < 0.001$). Perceived negative dyadic coping in the partner increased sexual distress ($\beta_{\text{Wife}} = 0.204, \beta_{\text{Husband}} = 0.205, I = < 0.001$) and fertility-related	sexual well-being of couples undergoing ART, as well as the influence of ART on sexual aspects. By considering both partners, the study highlights the importance of including both members in clinical interventions that promote positive dyadic coping.

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
					sexual concerns ($\beta_{\text{Wife}} = 0.133$, $\beta_{\text{Husband}} = 0.164$, $t = -0.001$).	
Molgora (2019)	Italy	167 heterosexual couples with infertility. 57.10% of participants had never undergone ART, and 42.9% had undergone two cycles of ART. The average age of women was 36.13 (SD = 3.92; range = 22–44), and 38.9 (SD = 5.08; range = 22–58) for men.	Sociodemographic variables: age, education level, and employment status. Clinical variables: infertility diagnosis, number of ART attempts, and type of ART being undergone. Psychological and relational variables: Couple Adjustment: DAS; Dyadic Coping: Dyadic Coping Questionnaire (DCQ; Bodenmann 2000; Donato et al. 2009).	Cross-sectional.	Women scored higher in stress communication ($t = 4.270$; $p \leq 0.001$) and their ability to express it ($t = -8.115$; $p \leq 0.001$). Men showed better dyadic coping ($t = -32.674$; $p \leq 0.001$). According to the APIM, using dyadic coping of both men and women as independent variables and marital adjustment of self and partner as dependent variables, stress communication was associated with higher scores in partner adjustment for women ($\beta_{\text{actor}} = 3.82$, $p \leq 0.001$; $\beta_{\text{partner}} = 2.00$, $p \leq 0.01$) and men ($\beta_{\text{actor}} = 3.82$, $p \leq 0.001$; $\beta_{\text{partner}} = 2.00$, $p \leq 0.01$). For women, perceived emotion-focused dyadic coping ($\beta_{\text{actor}} = 4.39$, $p \leq 0.001$; $\beta_{\text{partner}} = 3.23$, $p \leq 0.001$), problem-focused dyadic coping ($\beta_{\text{actor}} = 2.94$, $p \leq 0.001$; $\beta_{\text{partner}} = 2.36$, $p \leq 0.001$), and delegated coping ($\beta_{\text{actor}} = 2.37$, $p \leq 0.05$; $\beta_{\text{partner}} = 1.94$, $p \leq 0.05$) significantly increased partner adjustment scores. Similarly, for men: emotion-focused dyadic coping ($\beta_{\text{actor}} = 5.40$, $p \leq 0.001$; $\beta_{\text{partner}} = 2.83$, $p \leq 0.01$), problem-focused dyadic coping ($\beta_{\text{actor}} = 2.94$, $p \leq 0.001$; $\beta_{\text{partner}} = 2.36$, $p \leq 0.001$), and delegated coping ($\beta_{\text{actor}} = 1.96$, $p \leq 0.05$; $\beta_{\text{partner}} = 2.06$, $p \leq 0.05$) also positively influenced partner adjustment. Negative dyadic coping influenced marital adjustment through actor effects in women ($\beta_{\text{actor}} = 3.17$, $p \leq 0.001$; $\beta_{\text{partner}} = 2.36$, $p \leq 0.01$) and men ($\beta_{\text{actor}} = 3.78$, $p \leq 0.001$; $\beta_{\text{partner}} = 2.36$, $p \leq 0.001$). According to the APIM model, when stress communicated by the partner, emotion-focused dyadic coping, problem-focused dyadic coping, and delegated dyadic coping were set as independent variables and marital adjustment as	The study highlights the importance of promoting both individual and couple dyadic coping in therapies addressing issues such as infertility. It emphasizes the role of dyadic coping in couple adjustment, particularly for those undergoing ART. Specifically, positive dyadic coping fosters communication and resilience, whereas negative dyadic coping exacerbates relationship problems. Therefore, therapy should address the different strategies used by both genders during this process and how

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
					the dependent variable, emotion-focused dyadic coping ($\beta_{actor} = 4.57, p \leq 0.001$; $\beta_{partner} = 2.39, p \leq 0.001$), problem-focused dyadic coping ($\beta_{actor} = 3.03, p \leq 0.01$; $\beta_{partner} = 2.00, p \leq 0.05$), and delegated dyadic coping ($\beta_{actor} = 3.03, p \leq 0.01$; $\beta_{partner} = 2.18, p \leq 0.05$) positively influenced marital adjustment in both women and men ($\beta_{actor} = 4.69, p \leq 0.001$; $\beta_{partner} = 2.94, p \leq 0.01$), problem-focused dyadic coping ($\beta_{actor} = 2.82, p \leq 0.01$; $\beta_{partner} = 3.72, p \leq 0.001$), and delegated dyadic coping ($\beta_{actor} = 4.15, p \leq 0.001$; $\beta_{partner} = 2.14, p \leq 0.01$). According to the APIM model, when common dyadic coping, partner satisfaction, and partner effectiveness were set as independent variables and partner adjustment as the dependent variable, in women, actor effects in common dyadic coping ($\beta_{actor} = 12.35, p \leq 0.001$) positively influenced marital adjustment, and actor satisfaction and effectiveness in both genders (women: Satisfaction $\beta_{actor} = 7.03, p \leq 0.001$, Effectiveness $\beta_{actor} = 6.94, p \leq 0.001$; men: Satisfaction $\beta_{actor} = 4.45, p \leq 0.001$, Effectiveness $\beta_{actor} = 5.25, p \leq 0.001$) positively influenced marital adjustment. Partner satisfaction effects in women ($\beta_{actor} = 2.72, p \leq 0.001$) and men ($\beta_{actor} = 3.84, p \leq 0.001$) along with common dyadic coping ($\beta_{actor} = 9.77, p \leq 0.001$) also positively influenced partner adjustment. Women scored higher in depression ($F = 5.69, p < 0.05$) and psychoticism ($F = 3.53, p < 0.10$) compared with men. Lower levels of somatization in women ($r = -0.49, p < 0.05$) were associated with higher levels in men. Conversely, levels of hostility ($r = 0.47, p < 0.05$), dyadic consensus ($r = 0.55, p < 0.01$), dyadic satisfaction ($r = 0.89, p < 0.01$), affective	to enhance interdependence in couple dynamics, thereby improving relational satisfaction. The study highlights that infertility affects both partners equally, thus their involvement in psychological intervention
Markestad (1998)	The USA	20 married couples (male/female) with primary (65%) or secondary (35%) infertility seeking treatment (average age = 30.7 years; SD = 4.5). Women	Psychological and relational variables: Somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety,	Comparative, descriptive, cross-sectional.		

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
		underwent an average of 3.8 diagnostic tests (SD = 2.3) and men 0.80 (SD = 0.9).	hostility, phobic anxiety, paranoid ideation, and psychoticism assessed with the Symptom Checklist-90 Revised (SCL- 90-R; Derogatis 1992); dyadic relationship adjustment with the DAS (Spanier 1976); and sexual dissatisfaction from one partner towards the other, assessed with the Index of Sexual Satisfaction (ISS; Hudson 1992).		expression ($r = 0.69, p < 0.01$), dyadic cohesion ($r = 0.62, p < 0.01$), dyadic adjustment ($r = 0.76, p < 0.01$), and sexual satisfaction ($r = 0.68, p = 0.01$) from one partner were positively associated with those of the other partner.	should be considered. Both partners are psychologically affected by this process, and it is important for them to seek psychological intervention to reduce psychological stress and improve emotional adjustment.
Zurlo (2020)	Italy	250 dyads of couples with infertility (250 men and 250 women). The average duration of infertility in the couple was 3.28 years (SD = ± 2.66).	Sociodemographic variables: Gender, age, education level, and employment status. Clinical variables: Type of diagnosis (male factor, female factor, combined, or unexplained) and duration of infertility (in years). Psychological and relational variables: Perceived stress due to infertility: FPI; Personal coping styles: Coping	Nonexperimental, cross-sectional.	Women score higher in stress-anxiety ($t = 0.13, p < 0.01$) and depression ($t = 0.17, p < 0.01$) compared with men. There is a negative correlation between social concern and other dimensions of dyadic coping: dyadic consensus ($r = -0.47, p < 0.01$), emotional expression ($r = -0.42, p < 0.01$), dyadic cohesion ($r = -0.42, p < 0.01$), and dyadic satisfaction ($r = -0.44, p < 0.01$). The same pattern is observed with relationship concerns within the couple: ($r = -0.30, p < 0.01$), emotional expression ($r = -0.18, p < 0.01$), dyadic cohesion ($r = -0.24, p < 0.01$), and dyadic satisfaction ($r = -0.30, p < 0.01$). Conversely, the need for parenthood positively correlates with dyadic consensus ($r = 0.12, p < 0.01$) and dyadic satisfaction ($r = 0.10, p < 0.05$) and negatively with emotional expression	The study underscores the importance of implementing positive dyadic coping strategies in infertile couples undergoing treatment to avoid and reduce depressive symptoms. Additionally, it highlights the significance of emotional expression in

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
			Orientation to Problem Experienced-New Italian Version (COPE-NIV; Sica et al. 2008); Dyadic coping: DAS; Anxiety: State-Trait Anxiety Inventory (STAI-Y; Pedrabissi and Santinello 1989; Spielberger 1972); Depression: Edinburgh Depression Scale (EDS; Benvenuti 1999; Murray and Cox 1990).		($r = -0.05, p > 0.05$) and dyadic cohesion ($r = -0.03, p > 0.015$). Regarding the State-Anxiety model in women, it is significantly explained by infertility-related characteristics ($R^2 = 0.06, p < 0.05$), dimensions of infertility-related stress ($R^2 = 0.23, p < 0.001$), and coping strategies adopted ($R^2 = 0.10, p < 0.001$), with higher avoidance behaviors ($\beta = 0.361, p < 0.001$) and lower positive attitude ($\beta = -0.229, p < 0.05$) and emotional expression ($\beta = -0.137, p < 0.05$). In the case of depression, it is significantly explained by sociodemographic variables and infertility-related parameters ($R^2 = 0.13, p < 0.001$), dimensions of infertility-related stress ($R^2 = 0.16, p < 0.001$), and coping strategies adopted ($R^2 = 0.17, p < 0.001$), highlighting greater need for motherhood ($\beta = 0.250, p < 0.001$), relationship concerns ($\beta = 0.246, p < 0.001$), avoidance behaviors ($\beta = 0.460, p < 0.001$), and lower positive attitude ($\beta = -0.172, p < 0.05$). In the case of men, the State-Anxiety model is significantly explained by infertility-related and sociodemographic parameters ($R^2 = 0.08, p < 0.01$), infertility-related dimensions ($R^2 = 0.36, p < 0.001$), adopted coping strategies ($R^2 = 0.50, p < 0.001$), and dyadic coping dimensions ($R^2 = 0.04, p < 0.001$). Among the variables are higher social concern ($\beta = 0.331, p < 0.001$), need for parenthood ($\beta = 0.140, p < 0.05$), seeking social support ($\beta = 0.182, p < 0.05$), avoidance ($\beta = 0.333, p < 0.001$), and lower positive attitude ($\beta = -0.220, p < 0.001$) and dyadic consensus ($\beta = -0.346, p < 0.001$). In the case of depression, it is significantly explained by infertility-related and sociodemographic parameters ($R^2 = 0.13, p < 0.001$), infertility-related dimensions ($R^2 = 0.14, p < 0.001$), adopted coping strategies ($R^2 = 0.24,$	women and dyadic coping in men, emphasizing the need for specific interventions before, during, and after ART to enhance positive dyadic coping and reduce mental health issues.

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
					$p < 0.001$), and dyadic coping dimensions ($R^2 = 0.03$, $p < 0.001$). Among the variables are higher avoidance behavior ($\beta = 0.286$, $p < 0.001$) and lower dyadic consensus ($\beta = -0.352$, $p < 0.001$).	
Van der Merwe (2015)	South Africa	116 participants: 84 women ($M = 33$ years; 76% primary infertility; 24% secondary infertility) and 32 men ($M = 36$ years). 27 individuals underwent ovulation induction, 37 intrauterine insemination (IUI), 24 in vitro fertilization (IVF)/intracytoplasmic sperm injection (ICSI), and 28 had no fertility issues.	Demographic variables: Ethnicity and duration of marriage. Clinical variables: Type of infertility and duration. Psychological and relational variables: Infertility-related stress: FPI; Dyadic coping: DAS; Relationship communication quality: Enriching and Nurturing Relationship Issues, Communication and Happiness (ENRICH; Olson et al. 1983); Sexual satisfaction: ISS; Intimacy with the partner: Assessment of Intimacy in Relationships (Schaefer and Olson 1981).	Descriptive, comparative.	Infertility-related stress negatively correlates with marital adjustment ($r = -0.433$, $p < 0.001$), communication quality ($r = -0.583$, $p < 0.001$), and marital intimacy ($r = -0.549$, $p < 0.001$), while it positively correlates with sexual relationship problems ($r = 0.478$, $p < 0.001$). In contrast, there were no statistically significant differences ($p > 0.05$) between the control group with a pregnancy and the other three treatment groups, nor were there statistically significant differences among the three treatment groups in infertility-related stress ($p > 0.5$).	Infertility-related stress reduces couple communication, sexual satisfaction, marital intimacy, and dyadic coping. The study highlights the importance of couple communication, which reduces stress and improves marital relationship quality. It is necessary to promote couple communication and dyadic coping strategies in therapy to reduce the negative impact of infertility diagnosis and ART.
Tang (2022)	China	482 women with infertility attending reproductive clinics.	Demographic variables: age, nationality,	Descriptive, cross-sectional.	No statistically significant differences were found in stress communication between patients and their perceptions regarding their partner's dyadic	The study highlights that, in the clinical setting,

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
		The mean age of the participating infertile women was 31.73 ± 4.57. More than half of the participants had been dealing with infertility for 2–5 years. Regarding the diagnosis of infertility, 42.3% of the patients had been diagnosed in the last year, and 42.3% had undergone previous treatments.	education level, occupation, and income level. Clinical variables: causes and duration of infertility, previous ART, and main sources of stress during the process. Psychological and relational variables: Family adaptability and cohesion: Family Adaptability and Cohesion Evaluation Scale, Second Edition (FACES-II); Olson et al. (1979). Dyadic coping: DCI		coping ($t = 0.589, p > 0.556$). Women scored higher on dyadic coping support ($t = 7.318, p < 0.01$) compared with what they perceived from their partners. In terms of correlations, family cohesion and adaptability in women with infertility were positively associated with dyadic coping ($r = 0.741, p < 0.001$). Women's stress communication and their partners' stress communication were associated with greater family cohesion ($r = 0.568, p < 0.01$) and adaptability ($r = 0.619, p < 0.01$). Family cohesion ($r = 0.724, p < 0.01$) and family adaptability ($r = 0.718, p < 0.01$) were positively related to dyadic coping ($r = 0.741, p < 0.01$). There was a negative correlation between the age of women with infertility and dyadic coping ($r = -0.09, p < 0.05$). Adaptability was positively related to stress communicated by the partner ($r = 0.619, p < 0.01$), self-communicated stress ($r = 0.619, p < 0.01$), personal dyadic coping support ($r = 0.666, p < 0.01$), partner dyadic coping support ($r = 0.679, p < 0.01$), personal dyadic coping delegation ($r = 0.677, p < 0.01$), partner dyadic coping delegation ($r = 0.631, p < 0.01$), and partner negative dyadic coping ($r = 0.105, p < 0.05$). Cohesion was positively related to stress communicated by the partner ($r = 0.568, p < 0.01$), self-communicated stress ($r = 0.568, p < 0.01$), personal dyadic coping support ($r = 0.671, p < 0.01$), partner dyadic coping support ($r = 0.663, p < 0.01$), personal dyadic coping delegation ($r = 0.676, p < 0.01$), partner dyadic coping delegation ($r = 0.633, p < 0.01$), personal negative dyadic coping ($r = 0.090, p < 0.51$), and partner negative dyadic coping ($r = 0.156, p < 0.01$). Religious beliefs ($\beta = 0.060, p < 0.5$), relationship with family members ($\beta = 0.088, p < 0.05$), number of abortions, and cohesion ($\beta = 0.686, p < 0.001$) explained 56.6% of the variance ($R^2 = 0.566$) in	it is important to inform both members of the couple about the infertility process and to promote group therapy that helps improve positive dyadic coping in couples, especially women with infertility, as well as their mental health.

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
					predicting positive dyadic coping in women with infertility, while the number of abortions ($\beta = -0.120, p < 0.001$) predicted it negatively. According to the Path Analysis model, religious beliefs ($p = 0.07$), relationship with family members ($p = 0.09$), family cohesion ($p = 0.38$), number of abortions ($p = -0.15$), and family adaptability ($p = 0.38$) directly influence dyadic coping. On the other hand, religious beliefs ($p = 0.07$), number of abortions ($p = 0.63$), and relationship with family members ($p = 0.03$) indirectly influence dyadic coping through family cohesion. Religious beliefs ($p = 0.01$), relationship with family members ($p = 0.07$), and number of abortions ($p = 0.64$) indirectly influence dyadic coping through family adaptability.	
Jacob (1999)	The USA	23 lesbian couples with a donor. Control group: 17 single women and 14 heterosexual couples with infertility seeking insemination.	Demographic variables: age, length of relationship, ethnicity, number of previous biological children, education level, profession, and family income level. Clinical variables: medical reasons for undergoing Therapeutic Donor Insemination. Psychological and relational variables: Self-esteem: Rosenberg Self-Esteem Scale (RSES; Rosenberg et al. 1995). Dyadic coping: DAS.	Longitudinal.	Regarding dyadic coping, lesbian patients show better dyadic cohesion than married heterosexual women ($t = -0.213, p < 0.04$). The partners of lesbian patients exhibit better cohesion than the husbands ($t = -2.15, p = 0.04$). The impact of wanting a child negatively influences communication in the couples of lesbian patients compared with the husbands ($t = -2.351, p = 0.03$). Regarding self-esteem, there were no significant differences between lesbian patients ($p > 0.05$) and heterosexual women ($p > 0.05$) or single women ($p > 0.05$), as well as between lesbian couples ($p > 0.05$) and heterosexual men. In the BSI, no significant differences were found between lesbian patients ($p > 0.05$) and heterosexual women ($p > 0.05$) or single women ($p > 0.05$), as well as between lesbian couples ($p > 0.05$) and heterosexual men ($p > 0.05$).	The study suggests that lesbian women show more positive dyadic cohesion than heterosexual couples, as lesbian women have a closer relationship, which helps the positive functionality of the couple. The study highlights the need to address couples based on their personal characteristics, as well as to include affective-sexual diversity in other studies to increase

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
			Psychological symptoms: Brief Symptom Inventory (BSI; Derogatis and Melisaratos 1983).			the representativeness of the research.
Darwiche (2019)	Switzerland	205 heterosexual couples expecting a child, of which 52 couples conceived spontaneously, and 53 couples underwent ART to achieve pregnancy (IVF, $n = 18$; IVF-ICSI, $n = 35$).	Demographic variables: age, years of cohabitation, marital status, and socioeconomic level. Clinical variables: years trying to conceive, previous pregnancies with or without ART, complications at the beginning of pregnancy, prenatal tests, psychological support during pregnancy, years of infertility treatment, previous infertility treatments, origin of infertility or reasons for undergoing ART. Psychological and relational variables: Perceived and received support: DCI (Huber and Hogrefe 2008). Anxiety: State-Trait Anxiety Inventory, Form Y-1 (S-STAI; Spielberger 1983).	Descriptive, longitudinal $T1$ = day of the first-trimester test; $T2$ = 14 weeks of gestation; $T3$ = 22 weeks of gestation.	The dyadic coping support provided by husbands to their wives does not differ between the two groups ($F[2, 174.19] = 0.10, p = 0.901$). However, women undergoing ART perceive less support from their partners compared with those who conceived spontaneously ($F[1, 107.42] = 5.63, p < 0.019$). On the other hand, women undergoing ART offer less support to their husbands than those who conceived spontaneously ($F[1, 108.34] = 9.95, p < 0.002$). Furthermore, for couples in the ART group, receiving and offering support to each other does not reduce anxiety (women: $\beta = 0.07, p < 0.05$; men: $\beta = 0.14, p < 0.05$) or depression (women: $\beta = 0.01, p < 0.05$; men: $\beta = 0.05, p < 0.05$).	Psychological intervention is a significant source of support that should not be discontinued after conception via ART. At this stage, creating mutual support and common dyadic coping is vital. Specifically, these interventions should emphasize the perceptions of support from the other partner during this critical period.

(Continues

First author	Country	Participants	variables	Design	Results	Contributions
Antenatal depression: EDS.						
Zhang (2023)	China	283 heterosexual couples undergoing ART, specifically IVF-ET (embryo transfer).	Demographic variables: age, year of marriage, religion, place of residence, education, occupation, and monthly family income. Clinical variables: duration of infertility, presence or absence of previous children, cause of infertility, treatment duration, and IVF-ET attempts. Psychological and relational variables: Self-esteem, assessed with the RSES (Rosenberg et al. 1995; Schmitt and Allik 2005). Dyadic coping: DCI.	Cross-sectional, comparative.	Dyadic coping was positively related to self-communicated stress ($r = 0.30, p < 0.001$) and partner-communicated stress ($r = 0.24, p < 0.001$). Women's self-esteem was positively associated with their own dyadic coping ($r = 0.26, p < 0.001$), but not with their partner's negative dyadic coping ($r = 0.10, p > 0.05$). The partner's self-esteem was not associated with the woman's dyadic coping delegation ($r = 0.10, p > 0.05$). According to the APIM, there is a partner effect on each other's self-esteem. Higher partner self-esteem was associated with the other member's self-esteem ($\beta = 0.135, p < 0.025$), positive dyadic coping ($\beta = 0.142, p < 0.019$), and negative dyadic coping ($\beta = 0.133, p < 0.024$), but not with their own dyadic coping delegation ($\beta = 0.033, p > 0.601$). The woman's self-esteem had a partner effect on their husband's own supportive dyadic coping ($\beta = 0.086, p > 0.156$) and their own dyadic coping delegation ($\beta = 0.080, p > 0.050$). Both women's and men's self-esteem had a partner effect on their perceptions of their partner's dyadic coping: for women, supportive dyadic coping ($\beta = 0.147, p < 0.014$) and negative dyadic coping ($\beta = 0.144, p < 0.016$); for men, stress communication ($\beta = 0.184, p < 0.003$) and supportive dyadic coping ($\beta = 0.180, p < 0.002$).	The individual self-esteem of each partner influences their own dyadic coping and that of their partner. Furthermore, partner self-esteem can enhance communication and positive dyadic coping for both partners. Therefore, it is necessary for ART, especially IVF-ET, to work in a multidisciplinary manner to increase self-esteem, which in turn improves the couple's dyadic coping.
Cattaneo (2022)	Italy	80 couples with infertility undergoing ART (women $n = 80$; men $n = 80$).	Demographic variables: gender, age, education level, and relationship duration. Clinical variables: duration of infertility.	Nonexperimental, cross-sectional.	26.25% of women and 30% of men had clinical levels of anxiety. 55% of men and 65% of women had clinical levels of depression. Women reported more stress related to relationship concerns than men ($t = 2.96; p = 0.004$). There were no statistically significant differences in the rest of the stressors related to infertility: social concern ($t = 1.52; p = 0.129$), need for parenthood	There is a significant emotional impact on couples undergoing ART. Psychological interventions should consider

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
			Psychological and relational variables: stress related to comments and reminders about infertility and feelings of social isolation, assessed with the Fertility Problem Inventory-Short Form (FPI-SF; Zurlo et al. 2017); personal coping strategies with the COPE-NIV (Sica et al. 2008); dyadic coping with the DAS (Gentili et al. 2002; Spanier 1976); anxiety with the STAI-Y (Pedrabissi and Santinello 1989; Spielberger 1972); and depression with the EDS (Benvenuti 1999; Murray and Cox 1990).		($t = -0.10$; $p = 0.919$), rejection of a childless lifestyle ($t = -0.01$; $p = 0.989$). Regarding dyadic coping strategies, women scored higher in social support strategies ($t = 2.23$; $p = 0.027$) and in religious conversion ($t = 2.46$; $p = 0.015$). For personal coping strategies, they scored similarly in avoidance ($t = 0.67$; $p = 0.504$), positive attitude ($t = 0.48$; $p = 0.633$), and problem-solving ($t = -0.50$; $p = 0.616$), and perceived similar levels of dyadic coping in: dyadic consensus ($t = -0.62$; $p = 0.536$), dyadic satisfaction ($t = 0.32$; $p = 0.749$), dyadic cohesion ($t = 0.32$; $p = 0.746$), and affective expression ($t = 0.99$; $p = 0.320$). According to the APIM, using infertility-related stressors, coping strategies, and dyadic adjustment of the couple as independent variables and anxiety and depression levels in men and women as dependent variables, the following results were found: For men, considering actor effects and infertility-related stress factors, perceived stress related to social concern ($\beta = 0.31$, $p < 0.01$) and relationship concern ($\beta = 0.38$, $p > 0.05$) were associated with higher adverse emotional outcomes. On the other hand, considering coping strategies, social support (anxiety: $\beta = 0.33$, $p < 0.05$; depression: $\beta = 0.12$, $p < 0.05$) and avoidance (anxiety: $\beta = 0.57$, $p < 0.001$; depression: $\beta = 0.27$, $p < 0.001$), problem-solving (anxiety: $\beta = 0.29$, $p > 0.05$; depression: $\beta = 0.33$, $p < 0.001$), and resorting to religion (anxiety: $\beta = 0.17$, $p > 0.05$; depression: $\beta = 0.38$, $p < 0.001$) were associated with higher anxiety and depression. Finally, considering dyadic adjustment, dyadic consensus (anxiety: $\beta = -0.38$, $p < 0.001$; depression: $\beta = -0.15$, $p < 0.05$), dyadic satisfaction (anxiety: $\beta = -0.58$, $p < 0.01$; depression: $\beta = -0.40$, $p < 0.001$), and affective expression (anxiety: $\beta = -0.94$, $p > 0.05$;	individual and couple characteristics to promote dyadic coping. Seeking social support among women and a positive attitude among men can help improve mental health during the process. Therefore, therapy should address personal and dyadic coping strategies to promote cooperation and communication within the couple, as well as their reconfiguration.

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
					depression: $\beta = -0.55, p < 0.05$) were associated with lower levels of anxiety and depression. Regarding partner effects, women's rejection of a childless life increased men's depression ($\beta = 0.17, p < 0.05$), and the social support adopted by women reduced men's anxiety ($\beta = -0.30, p < 0.05$). For women, considering actor effects, social concern (anxiety: $\beta = 0.41, p > 0.001$; depression: $\beta = 0.22, p < 0.001$), need for motherhood (anxiety: $\beta = 0.37, p < 0.05$; depression: $\beta = 0.21, p < 0.001$), and relationship concern (anxiety: $\beta = 0.43, p > 0.05$; depression: $\beta = 0.47, p < 0.001$) increased anxiety and depression. Regarding coping strategies, avoidance (anxiety: $\beta = 0.36, p < 0.05$; depression: $\beta = 0.32, p < 0.001$) and resorting to religion (anxiety: $\beta = 0.62, p < 0.05$; depression: $\beta = 0.32, p < 0.05$) increased anxiety and depression, while dyadic cohesion (anxiety: $\beta = -0.68, p < 0.05$; depression: $\beta = -0.31, p < 0.05$) reduced it.	
Zurlo (2019)	Italy	266 women in relationships diagnosed with infertility who are undergoing ART. 56.4% have undergone IVF, 32.0% ICSI, and 11.6% IUI. Regarding the duration of infertility, 74.8% of the women have been infertile for 3 or more years, and	Sociodemographic variables: Age and education level. Infertility-related variables: Type of diagnosis (male factor, female factor, combined factor, and unexplained factor), type of treatment (IVF, ICSI, IUI), and duration of infertility in years. Psychological and relational variables: Stress-inducing life	Cross-sectional, comparative.	The presence of stress-inducing events within the family of origin (Odds Ratio: 0.45 [95% CI 0.32, 0.98], $p < 0.05$), difficulties in pregnancy present in the family (Odds Ratio: 0.66 [95% CI 0.37, 0.92], $p < 0.001$), predicts lower basic quality of life, while the presence of health problems during childhood (Odds Ratio: 0.45 [95% CI 0.23, 0.92], $p < 0.05$) is negatively associated with treatment quality of life. Positive attitude (quality of life: Odds Ratio: 2.98 [95% CI 1.76, 5.83], $p < 0.05$; treatment: Odds Ratio: 3.54 [95% CI 2.11, 8.49], $p < 0.05$), social support (quality of life: Odds Ratio: 3.25 [95% CI 2.24, 7.12], $p < 0.01$; treatment: Odds Ratio: 2.98 [95% CI 1.65, 6.83], $p < 0.05$), and avoidance strategies (quality of life: Odds Ratio: 2.57 [95% CI 1.84, 6.33], $p < 0.05$; treatment: Odds Ratio: 3.03	The study highlights the importance of addressing stressful life events before ART in women and the need for professional training in this area. Childhood health problems, conception issues in the family, or health problems during childhood can negatively

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
		25.2% for less than 3 years. In terms of diagnosis, 33.5% are due to male factors, 27.8% to female factors, 22.9% are combined, and 15.8% have no explanation.	events assessed with the Stress-inducing Events in the Couples' Lives (FLS; Wischmann 1998); personal coping strategies using the COPE-NIV (Carver et al. 1989); dyadic adjustment assessed with the DAS (Gentili et al. 2002; Spanier 1976); and quality of life assessed with the Fertility Quality of Life (FertiQoL; Boivin et al. 2011).		[95% CI 2.11, 7.42], $p < 0.05$) are positively associated with perceived basic quality of life and treatment quality of life. Problem-solving is positively associated with better perceptions of treatment quality (Odds Ratio: 3.21 [95% CI 1.98, 6.43], $p < 0.01$). The total score in dyadic coping positively influences perceived quality of life (Odds Ratio: 2.56 [95% CI 1.61, 6.89], $p < 0.05$) and perceived treatment quality of life (Odds Ratio: 3.53 [95% CI 2.80, 7.42], $p < 0.05$). There is a negative indirect influence of positive attitude ($r = -2.95$, $p < 0.05$) on the relationship between stress-inducing events in the family of origin and perceived quality of life. There is a negative influence of problem-solving ($r = -3.09$, $p < 0.05$) on the relationship between childhood health problems and perceived quality of life in treatment. The negative influence of pregnancy problems in the family on the perceived quality of life, moderated negatively by social support ($r = -3.986$, $p < 0.05$) and positively by avoidance ($r = 0.43$, $p < 0.05$). The negative relationship between stress-inducing events and perceived quality of life ($r = -2.31$, $p < 0.05$) is significantly moderated by dyadic adjustment.	impact women. Therefore, therapy should address these issues to improve the psychological well-being of these women, specifically their fertility-related quality of life, utilizing dyadic coping strategies.
Galhardo (2011)	Portugal	200 couples, of which 80 were reproductive-age couples with 1 child and no infertility issues, 80 had an infertility diagnosis and had sought ART in public and private clinics, and 40 had infertility, were not under treatment, but	Demographic variables: age, years of education, and years of marriage. Psychological and relational variables: Depression: Beck Depression Inventory (BDI; Beck 1961); Shame from external	Cross-sectional.	Couples with infertility showed higher levels of depression ($F = 15.37$, $p < 0.000$), internal shame ($F = 13.89$, $p < 0.000$) and external shame ($F = 8.50$, $p < 0.000$), more emotion-focused strategies ($F = 12.88$, $p < 0.000$) and avoidance strategies ($F = 15.14$, $p < 0.000$), and less acceptance ($F = 28.73$, $p < 0.000$) compared with the other couples' groups. They also exhibited more dyadic coping than couples without infertility, but did not differ from the adoption group ($F = 3.29$, $p < 0.042$). The adoption group had more dyadic coping than the group without infertility ($F = 3.29$,	Individuals with an infertility diagnosis may experience increased pressure and live with feelings of personal, cultural, and familial disappointment. They also face significant

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
		were candidates for adoption.	comments: Others As Shamer (OAS; Goss et al. 1994); Shame: Experience of Shame Scale (ESS; Andrews et al. 2002); Psychological flexibility: Acceptance and Action Questionnaire II (Bond et al. 2011); Personal coping styles: Coping Styles Questionnaire (Roger et al. 1993); Self-compassion: Self-Compassion Scale (Neff 2003); Couple intimacy: Intimacy Dimensions Scale (Crespo et al. 2006); Couple adaptability: DAS; Female and male sexuality: Female Sexual Function Index (R. Rosen et al. 2000) and International Index of Erectile Function (R. C. Rosen et al. 1997).		$p < 0.042$). Additionally, greater intimacy was found in the infertility group compared with the group without infertility ($F = 3.03, p < 0.049$). Regarding male sexuality ($F = 0.236, p > 0.790$) and female sexuality ($F = 0.440, p > 0.645$), no statistically significant differences were found among the three groups. Nor were there significant differences in emotional independence dyadic coping ($F = 2.79, p > 0.62$), rational dyadic coping ($F = 2.08, p > 0.126$), and self-compassion ($F = 2.92, p > 0.055$) among the three groups.	pressure due to the potentially painful and intrusive nature of treatment, which can translate into a decline in mental health and couple relationship quality. Infertile couples who choose the adoption path tend to show better mental health, greater self-acceptance, improved coping strategies, and better dyadic coping.
Bai (2022)	China	257 women with infertility and 458 men with infertility in stable	Sociodemographic variables: age, gender, marriage, and education level.	Cross-sectional.	Stress negatively correlates with total dyadic coping ($r = -0.208, p < 0.01$), quality of life ($r = -0.598, p < 0.01$), the impact of treatment on quality of life ($r = -0.363, p < 0.01$), and the	The use of dyadic coping strategies, specifically support, common

First author	Country	Participants	variables	Design	Results	contributions
		relationships seeking conception through IVF.	Psychological and relational variables: Stress: Kessler Psychological Distress Scale (K6; Kessler et al. 2002); Dyadic coping strategies: DCI; Quality of life in individuals with fertility problems: FertiQoL.		impact of fertility on quality of life ($r = -0.589$, $p < 0.01$). Conversely, total dyadic coping correlates with fertility-related quality of life ($r = 0.368$, $p < 0.01$), fertility treatment-related quality of life ($r = 0.270$, $p < 0.01$), and overall fertility-related quality of life ($r = 0.375$, $p < 0.01$). Fertility-related quality of life is predicted at 48.40% ($R^2 = 0.484$, $p < 0.001$) by common dyadic coping ($\beta = 0.182$, $p < 0.000$), personal dyadic support ($\beta = 0.154$, $p < 0.000$), the partner's negative dyadic coping ($\beta = 0.114$, $p < 0.000$), and negatively by gender (lower in women) ($\beta = -0.161$, $p < 0.000$) and low psychological stress ($\beta = -0.468$, $p < 0.000$). Overall fertility-related quality of life was predicted at 47.60% ($R^2 = 0.479$, $p < 0.001$) by low psychological stress ($\beta = -0.461$, $p < 0.000$), low negative dyadic coping ($\beta = -0.0130$, $p < 0.000$), high dyadic coping ($\beta = 0.203$, $p < 0.000$), stress communication to the partner ($\beta = 0.150$, $p < 0.000$), and gender ($\beta = -0.148$, $p < 0.000$). For predicting treatment-related quality of life, low psychological distress ($\beta = -0.279$, $p < 0.000$), low negative self-dyadic coping ($\beta = -0.121$, $p < 0.0001$), common dyadic coping ($\beta = 0.116$, $p < 0.0007$), stress communication to the partner ($\beta = 0.169$, $p < 0.000$), and negatively by gender ($\beta = -0.084$, $p < 0.016$) and education level ($\beta = -0.116$, $p < 0.001$) predicted 21.40% of the variance ($R^2 = 0.214$, $p < 0.05$).	coping, and stress communication with the partner, improves fertility treatment-related quality of life. Conversely, psychological distress decreases the quality of life. Interventions should consider the impact of stress on the couple's health, as well as gender differences. Psychological treatment should promote positive dyadic coping in individuals undergoing ART.
Facchin (2021)	Italy	316 women with endometriosis in a romantic relationship for at least 1 year. Of these, 157 women have infertility and 144 do	Sociodemographic variables: age, education level, employment, marital status, partner's gender, relationship duration, and children.	Cross-sectional, comparative.	Lower intimacy in the relationship is associated with more anxiety ($r = 0.381$, $p < 0.001$), depression ($r = 0.404$, $p < 0.001$), and distress ($r = 0.430$, $p < 0.001$), and lower self-esteem ($r = -0.337$, $p < 0.001$) in the current relationship. Similarly, it is associated with more anxiety ($r = 0.162$, $p < 0.01$), depression ($r = 0.180$, $p < 0.01$), distress	Endometriosis affects women's quality of life, particularly influencing intimate relationships and pelvic pain, which

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
		not. Additionally, 36 have sought ART.	Endometriosis variables: type of endometriosis, type of diagnosis, time since diagnosis, hormonal treatment, current infertility and IVF, comorbidities, and severity of pelvic pain. Psychological and relational variables: Satisfaction with partner: Quality of Marriage Index (Norton 1983; Zani and Kirchler 1993); Dyadic coping: DCQ (Donato et al. 2009; Bodenmann 1997); Anxiety and depression: Hospital Anxiety and Depression Scale (HADS); Self-esteem: RSES.		($r = 0.182, p < 0.01$), and lower self-esteem from the previous relationship ($r = -0.201, p < 0.01$). Improved satisfaction in the relationship reduces emotional distress ($r = -0.333, p < 0.001$) and enhances self-esteem ($r = 0.250, p < 0.001$). Higher self-reported negative dyadic coping is related to more anxiety ($r = 0.250, p < 0.001$), depression ($r = 0.203, p < 0.001$), and lower self-esteem ($r = -0.289, p < 0.001$). Similarly, the partner's negative dyadic coping is associated with more anxiety ($r = 0.203, p < 0.01$), depression ($r = 0.235, p < 0.001$), and lower self-esteem ($r = -0.296, p < 0.001$). In contrast, common dyadic coping ($r = -0.293, p < 0.001$) and dyadic coping evaluation ($r = -0.286, p < 0.001$) were associated with less emotional distress. The negative impact of endometriosis is associated with dyspareunia ($r = 0.275, p < 0.001$), which in turn is associated with partner satisfaction ($r = -0.153, p = 0.011$).	can lead to psychological health issues. Regarding partner satisfaction, the study highlights that better dyadic coping positively impacts psychological health. Additionally, partner involvement, such as attending medical visits, improves partner satisfaction and dyadic coping.
Tang (2023)	China	288 heterosexual couples with infertility attending ART.	Demographic variables: age, profession, education level, place of residence, birth history, per capita monthly household income, time since marriage,	Nonexperimental, cross-sectional.	Women show higher levels of anxiety ($t = 15.210, p = 0.000$) and depression ($t = 3.904, p = 0.000$), more stress communication ($t = 5.620, p = 0.000$) and pain expression ($t = 0.000$) than their partners, who tend to engage in avoidant behaviors ($t = -2.117, p = < 0.035$). In women, stressful communication ($r = -0.383, p < 0.01$), support coping ($r = -0.359, p < 0.01$), delegated coping ($r = -0.335, p < 0.01$), and common coping ($r = -0.327, p < 0.01$) were associated with lower	In women, stressful communication and various forms of positive dyadic coping are associated with lower levels of anxiety and depression.

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
			type of marriage, and family type. Infertility-related variables: years of infertility, assisted reproduction cycles, and type of infertility. Psychological and relational variables: Anxiety: Self-Rating Anxiety Scale (Zung 1971); Depression: Self-Rating Depression Scale (Zung 1965); Stress in communication and dyadic coping: DCI.		anxiety. Negative coping in women was significantly and positively related to their anxiety ($r = 0.275, p < 0.01$). Women's stressful communication ($r = -0.341, p < 0.01$), support coping ($r = -0.305, p < 0.01$), delegated coping ($r = -0.268, p < 0.01$), and common coping ($r = -0.323, p < 0.01$) had a negative correlation with depressive symptoms, and there was also a negative correlation between women's positive dyadic coping and their partners' depression ($r = -0.305, p < 0.01$). Negative dyadic coping was associated with more depression in both women ($r = 0.268, p < 0.01$) and their partners ($r = 0.171, p < 0.01$). Similarly, women's stressful communication ($r = -0.190, p < 0.01$), support coping ($r = -0.251, p < 0.01$), delegated coping ($r = -0.291, p < 0.01$), and common coping behaviors ($r = -0.233, p < 0.01$) were negatively and significantly associated with their husbands' anxiety. According to the APIM, when positive dyadic coping of women and their partners were set as independent variables and negative emotions as dependent variables ($\chi^2/df = 3.617$; GFI = 0.927; AGFI = 0.863; RMSEA = 0.095; NFI = 0.916; IFI = 0.938; CFI = 0.937), positive dyadic coping negatively influenced both personal anxiety and depression, with a significant actor effect ($\beta = -0.823, \beta_{\text{Husband}} = -0.930, p < 0.001$), as well as on the other spouse, indicating a significant partner effect ($\beta_{\text{Wife}} = -0.160, \beta_{\text{Husband}} = -0.341, p < 0.05$). According to the APIM model, when negative dyadic coping of women and their partners were set as independent variables and negative emotions as dependent variables ($\chi^2/df = 2.023$; GFI = 0.991; AGFI = 0.952; RMSEA = 0.060; NFI = 0.968; IFI = 0.984; CFI = 0.983), negative dyadic coping positively influenced both personal anxiety and depression,	Conversely, negative coping is positively related to higher levels of anxiety and depression. Women's stressful communication and coping methods are negatively related to their male partners' anxiety, suggesting a cross-sectional effect of female coping and communication strategies on their partners' well-being. The APIM model reveals that positive dyadic coping has a significant negative impact on both personal and partner anxiety and depression, demonstrating significant actor and partner effects. Negative dyadic coping has a significant positive impact on

(Continues)

First author	Country	Participants	variables	Design	Results	Contributions
					with a significant actor effect ($\beta_{\text{Wife}} = 0.798$, $\beta_{\text{Husband}} = 0.805$, $p < 0.001$), as well as on the other spouse, indicating a significant partner effect ($\beta_{\text{Wife}} = 0.350$, $\beta_{\text{Husband}} = 0.359$, $p < 0.05$).	personal and partner anxiety and depression, with significant actor and partner effects. Negative coping strategies increase negative emotions in both the individual and their partner. Positive dyadic coping reduces both personal and partner anxiety and depression, while negative dyadic coping increases them.
Rossi (2023)	Canada	219 couples seeking ART.	Demographic variables: age, partner's gender, sexual orientation, ethnicity, type of relationship, and duration of the relationship (years). Medical variables: infertility diagnosis and treatment status. Psychological and relational variables: Sexual beliefs and maturation: Implicit Theories of Sexuality Scale–Short Form (Maxwell	Experimental, longitudinal (baseline, 6 months, and 12 months).	There is a negative correlation between negative dyadic coping and positive dyadic coping at the time of the study ($r = -0.61$, $p < 0.001$) and positive dyadic coping at 6 months ($r = -0.41$, $p < 0.001$) and at 12 months ($r = -0.43$, $p < 0.001$). There is a positive correlation with negative dyadic coping at 6 months ($r = 0.62$, $p < 0.001$) and at 12 months ($r = 0.57$, $p < 0.001$). Regarding positive dyadic coping, it has a negative correlation with negative dyadic coping at 6 months ($r = -0.42$, $p < 0.001$) and at 12 months ($r = -0.41$, $p < 0.001$), and a positive correlation with positive dyadic coping at 6 months ($r = 0.68$, $p < 0.001$) and at 12 months ($r = 0.66$, $p < 0.001$). Model 1 found a negative influence of beliefs about the sexual maturation of both the actor and the partner on baseline scores of negative dyadic coping at 6 months, and this negatively influences beliefs	Lower levels of growth and higher beliefs about sexual aspects lead couples to use more negative coping strategies, especially those who have recently started ART. Therefore, interventions need to identify and simultaneously modify negative dyadic coping strategies in these couples.
(Continues)						

First author	Country	Participants	variables	Design	Results	contributions
			et al. 2017); Dyadic coping: DCI.		about the sexual maturation of both partners at 12 months. Model 2 indicates the positive influence of beliefs about sexual destiny at 6 months of the actor and their partner on dyadic coping of the actor and their partner at 12 months. Model 3 showed no statistically significant influences within and between couples on beliefs about sexual maturation and positive dyadic coping. Model 4 revealed no significant influences within and between couples on beliefs about sexual destiny and positive dyadic coping.	
Güleç (2011)	Turkey	Infertility group: 120 couples ($n = 120$ men and $n = 120$ women) with primary infertility without mental illness attending ART. The control group consisted of 76 individuals ($n = 76$ men and $n = 76$ women).	Sociodemographic variables: age, duration of marriage, education, place of birth, place of residence, employment status, income level, marital status, consanguinity between spouses. Psychological and relational variables: Depression: BDI; Sexual satisfaction: The Golombok-Rust Inventory of Sexual Satisfaction (Rust and Golombok 1986); Dyadic coping: DAS.	Comparative.	Men with infertility and without infertility showed lower total sexual satisfaction ($z = -10.58$, $p < 0.001$; $z = -5.63$, $p < 0.001$), in the subscale of frequency ($z = -7.01$, $p < 0.001$; $z = -3.22$, $p < 0.001$), communication ($z = -8.99$, $p < 0.001$; $z = -6.01$, $p < 0.001$), satisfaction ($z = -10.18$, $p < 0.001$; $z = -5.65$, $p < 0.001$), and tactile scores ($z = -12.65$, $p < 0.001$; $z = -8.20$, $p < 0.001$) than women. The control group women showed more avoidance ($z = -4.51$, $p < 0.001$). The control group women had higher scores in total dyadic coping ($z = -4.27$, $p < 0.001$), in the dyadic consensus subscale ($z = -4.67$, $p < 0.001$), and affective expression ($z = -5.46$, $p < 0.001$). Similarly, they had higher scores in total sexual satisfaction ($z = -2.61$, $p < 0.01$), in the frequency subscale ($z = -2.70$, $p < 0.01$), satisfaction ($z = -2.66$, $p < 0.01$), avoidance ($z = -3.76$, $p < 0.001$), and tactile subscale scores ($z = -2.89$, $p < 0.01$). The men in the infertility group showed lower sexual satisfaction.	Men and women in the infertility group showed more dyadic adjustment problems than those in the control group. Women with infertility showed less sexual satisfaction than the control group. There were no differences between men and women in marital adjustment whether the cause of infertility was in both members or unexplained. Infertile couples showed disturbances in couple harmony, which can be addressed in

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
						therapy through dyadic adjustment.
Zurlo (2018)	Italy	206 couples (206 women and 206 men) attending ART.	Demographic variables: age, gender, education level, and marital status. Infertility variables: type of diagnosis, previous ART, and duration of infertility. Psychological and relational variables: Personal coping: COPE-NIV (Carver et al. 1989); Dyadic coping: DAS; Fertility-related quality of life: FertiQoL; Anxiety: STAI-Y; Depression: EDS.	Cross-sectional.	Men present lower quality of life ($F = 6.23$, $p < 0.05$) and higher anxiety levels ($F = 7.02$, $p < 0.05$), while women show lower quality of life due to treatment ($F = 0.873$, $p > 0.05$) and higher depression levels ($F = 7.63$, $p < 0.05$). Regarding infertility, the presence of an unexplained diagnosis reduces the quality of life in men ($F = 7.81$, $p < 0.05$) and increases depression ($F = 6.43$, $p < 0.05$) and anxiety levels ($F = 6.16$, $p < 0.05$) in women. Women who have undergone previous ART present higher levels of anxiety ($F = 6.52$, $p < 0.05$) and depression ($F = 8.04$, $p < 0.05$). Educational level (quality of life: OR = 3.85, 95% CI [0.79–3.06], $p < 0.001$; anxiety: OR = 0.64, 95% CI [0.31–1.96], $p > 0.05$; depression: OR = 0.63, 95% CI [0.32–0.94], $p < 0.001$) and social support strategies (quality of life: OR = 3.26, 95% CI [1.64–3.63], $p < 0.001$; anxiety: OR = 0.28, 95% CI [0.13–0.88], $p < 0.001$; depression: OR = 0.42, 95% CI [0.21–0.88], $p < 0.001$) increase quality of life as well as psychological health in women. In men, problem-solving (quality of life: OR = 3.78, 95% CI [2.23–5.86], $p < 0.001$; anxiety: OR = 0.51, 95% CI [0.34–0.82], $p < 0.001$; depression: OR = 0.57, 95% CI [0.31–0.06], $p < 0.001$) increases the quality of life and psychological health. A positive attitude ($F = 2.72$, $p < 0.001$) increases the quality of life in women undergoing treatment.	This study highlights the importance of psychological interventions on quality of life and how it is influenced by stressful life events such as infertility in a couple. Thus, through dyadic coping strategies, the quality of life of these couples can be improved, with these strategies adapted to the individuality of each couple, helping to form a protective couple factor.
Galhardo (2013)	Portugal	309 individuals with infertility; 162 women; 147 men seeking treatments at private and public clinics in Portugal.	Sociodemographic variables: age, marital status. Clinical variables: type of diagnosis, causes of infertility,	Cross-sectional.	Women exhibit more external shame ($t = -2.19$, $p = 0.29$), internal shame ($t = -5.41$, $p < 0.001$), self-judgment ($t = -6.20$, $p < 0.001$), and infertility-related stress ($t = -4.48$, $p < 0.001$). Self-compassion in women is negatively associated with external shame ($r = -0.46$, $p < 0.010$) and internal shame ($r = -0.51$, $p < 0.010$); in men, it is	This study highlights the differences between men and women regarding their protective factors against

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
			duration of infertility problems. Psychological and relational variables: Infertility-related stress: FPI; Marital adjustment: DAS; External shame: OAS; Feelings of shame: ESS (Andrews et al. 2002); Self-compassion: Self-Compassion Scale (Neff 2003).		negatively associated with external shame ($r = -0.21, p < 0.05$). Dyadic adjustment showed a negative association with compassion from women, which was negatively related to infertility-related stress. Infertility-related stress explained 31% of the total variance and self-compassion 29%. In men, external and internal shame have a positive association with self-judgment, which is related to higher infertility-related stress. Infertility-related stress explained 18% of the total variance and self-judgment 41%.	infertility-related stress. Therefore, in the clinical setting, it is important to address this type of stress based on individual characteristics, emphasizing therapeutic approaches such as Compassion-Focused Therapy and Cognitive Behavioral Therapy.
Chaves (2019)	Portugal	67 heterosexual dyads with infertility undergoing fertility treatment in the Portuguese public health system ($N = 134$).	Sociodemographic variables: age, education level, professional level, socioeconomic level, area of residence, and couple's sociability. Clinical variables: infertility history, infertility factor, years trying to conceive. Psychological and relational variables: Impact of infertility on the individual: FPI (Newton et al. 1999); Dyadic coping: DCI; Marital adjustment: Dyadic	Cross-sectional.	The impact of infertility ($t = -2.92, p = 0.005$) and anxiety ($t = -2.526, p = 0.012$) was greater in women. In women, their partners' dyadic coping and the men's dyadic coping showed positive associations ($r = 0.263, p = 0.032$), as well as the partners' dyadic coping in men and their own dyadic coping in women ($r = 0.503, p = 0.000$). Infertility had a negative association with women's perception of dyadic coping and men's own coping, which positively related to marital adjustment in both. Infertility explained 38% of the variability in women's marital adjustment and 31% in men's. Infertility negatively associated with women's perception of dyadic coping and men's own coping, which negatively related to depression in both, except for men's perception of their partner's dyadic coping. Infertility explained 31% of the variability in women's depression and 21% in men's depression. Infertility negatively associated with the perception of the partner's dyadic coping and men's and women's own dyadic coping, which	Infertility can indirectly affect the couple's relationship. How each person perceives their own or their partner's coping with infertility impacts the relationship. If the man perceives he is handling the situation well, it can slightly improve the relationship. Conversely, if the woman perceives her partner (the man) is not managing the

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
			Adjustment Scale-Revised (RDAS; Busby et al. 1995); Anxiety and depression in patients with physical illnesses: HADS (Zigmond and Snaith 1983).		positively related to anxiety, except for men's own dyadic coping. Infertility explained 13% of the anxiety in women and 20% in men.	situation well, it can negatively impact the relationship. These perceptions explain 38% of how well-adjusted the woman feels in the relationship and 30% of how well-adjusted the man feels. This indicates that the perception of infertility management is quite important for the overall health of the relationship.
Péloquin (2023)	Canada	97 couples undergoing ART.	Sociodemographic variables: age, gender, language, education, salary, and relationship information. Clinical variables: fertility-related information, duration of fertility difficulties and treatment, medication, previous pregnancies, diagnosis, and treatments. Psychological and relational variables: Attachment:	Cross-sectional.	In both men and women, attachment avoidance (men: $r = -0.47, p < 0.01$; women: $r = -0.33, p < 0.01$) is negatively associated with positive dyadic coping strategies and positively associated with negative dyadic coping strategies (men: $r = 0.42, p < 0.01$; women: $r = 0.28, p < 0.01$). Similarly, positive dyadic coping strategies are related to better relationship satisfaction (men: $r = 0.53, p < 0.01$; women: $r = 0.41, p < 0.01$) and vice versa. Attachment avoidance had a positive association with negative dyadic coping strategies, which was negatively related to relationship satisfaction. Attachment and coping strategies explained 31% of the variance in relationship satisfaction in both genders. Moreover, anxiety and attachment had a negative association with the use of positive dyadic coping strategies. Anxiety is associated with lower use of positive dyadic coping strategies in both genders, which was negatively	This study highlights that couples undergoing ART show differences in the impact ART has on their relationship. Therefore, it is important for couples in therapy to be provided with a set of dyadic coping strategies, specifically the use of positive dyadic coping strategies to reduce stress, and improve communication

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
			Experiences in Close Relationships questionnaire (ECR-12; Lafontaine et al. 2016); Dyadic coping: DCI (Ledermann et al. 2010); Relationship satisfaction: DAS-4 (Sabourin et al. 2005).		related to lower perceived relationship satisfaction. Avoidance in men is associated with less use of positive dyadic coping strategies by themselves and their partners, related to lower perceived relationship satisfaction. Anxiety in men has direct effects on the use of dyadic coping strategies in their partners. Attachment and coping strategies explained 24% of the variance in relationship satisfaction in women and 43% in relationship satisfaction in men.	and assertiveness, among other things, which will positively influence the relationship.
Fortunato (2023)	Italy	60 lesbian mothers through sperm donation; 50 gay fathers through surrogacy; and 42 heterosexual fathers through gamete donation.	Sociodemographic variables: Family variables: number of children, gender, and age of the baby, duration of the relationship. Individual variables: age, ethnicity, education level, employment status, and salary. Psychological and relational variables: Parental stress: Parenting Stress Index–Short Form (PSI; Abidin 1995); Dyadic coping: DCQ; Parent–child relational self-efficacy (PCRSE): PCRSE questionnaire (PCRSE;	Cross-sectional.	There is a negative association between parental stress and children's emotion regulation ($r = -0.653, p < 0.001$) and parental stress ($r = -0.676, p < 0.001$), and a positive association with PCRSE ($r = 0.504, p < 0.001$). Specifically, gay fathers show better parental control than lesbian mothers ($p = 0.030$), but lesbian mothers show better dyadic coping than gay fathers ($p = 0.003$). Model 4 shows better fit (TCD = 0.660; BIC = 943.587) ($R^2 = 66\%$), indicating that children of gay fathers show better emotion regulation ($p = 0.016$) than children of heterosexual fathers. Additionally, lesbian mothers show better PCRSE ($p = 0.003$) than heterosexual fathers.	The study highlights the importance of emotional regulation during late childhood for children born through ART, as it benefits both parents and children. Additionally, in future interventions, access to coping strategies is crucial for reducing parental stress and improving PCRSE. These strategies can alleviate the emotional burden associated with

(Continues)

First author	Country	Participants	variables	Design	Results	contributions
			Bandura 2006); Parental perception of children's behavior control: Parental Control Scale (Rohner et al. 2005); Parental perception of children's emotion regulation: Emotion Regulation Index for Children and Adolescents Scale (MacDermott et al. 2010); Social desirability: Marlowe–Crowne Social Desirability Scale (Crowne and Marlowe 1960; Reynolds 1982).			infertility or the parents' sexual minority status.

Abbreviations: AGFI, adjusted goodness-of-fit index; APIM, Actor–Partner Interdependence Model; ART, assisted reproductive treatments; BIC, Bayesian Information Criterion; CFI, comparative fit index; CI, confidence interval; DCI, Dyadic Coping Inventory; F , F statistic; GFI, goodness-of-fit index; IFI, incremental fit index; NFI, normed fit index; OR, odds ratio; p , p value; r , Pearson's correlation coefficient; R^2 , coefficient of determination; RMSEA, root mean square error of approximation; t , t value; TCD, test of conditional dependence; β , regression coefficient; ΔF , change in F ; ΔR^2 , change in R^2 ; ηp^2 , partial eta squared; χ^2 , Chi-square statistic.

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$.

TABLE 2 | Quality assessment of studies.

First author	Design	Representativeness	Representativeness (II)	Confounding factors	Data collection	Data analysis	Data reporting	Overall rating
García-Quintáns (2023)	5	5	4	3	5	4	5	Strong
El Amiri (2023)	4	5	2	5	5	5	5	Strong
Molgora (2019)	4	5	4	1	5	4	5	Strong
Markestad (1998)	4	3	2	1	5	4	3	Moderate
Zurlo (2020)	4	5	2	3	5	5	5	Strong
Van der Merwe (2015)	3	4	2	5	5	4	1	Moderate
Tang (2022)	4	4	4	3	5	5	5	Strong
Jacob (1999)	5	1	3	3	5	4	1	Weak
Darwiche (2019)	5	4	2	3	5	4	3	Moderate
Zhang (2023)	4	4	4	5	5	5	5	Strong
Cattaneo (2022)	4	3	2	5	5	5	5	Moderate
Zurlo (2018)	4	4	4	5	5	5	5	Strong
Galhardo (2011)	4	4	2	1	5	4	3	Moderate
Bai (2022)	4	4	2	1	5	5	3	Moderate
Facchin (2021)	4	4	2	5	5	4	1	Moderate
Tang (2023)	4	4	3	3	5	5	5	Strong
Rossi (2023)	5	4	4	1	5	5	5	Moderate
Güleç (2011)	3	3	3	1	5	4	5	Moderate
Zurlo (2019)	4	4	4	3	5	5	3	Strong
Galhardo (2013)	4	4	3	5	5	5	5	Strong
Chaves (2019)	4	2	2	1	5	5	5	Moderate
Péloquin (2023)	4	2	3	3	5	5	5	Strong
Fortunato (2023)	4	2	2	3	5	4	5	Moderate

Note: The quality scores range from 1 to 5 (most likely to be biased or lowest quality).

All the studies were survey based. Among the included studies, three employed a longitudinal design (13.04%), with two of these conducting three evaluations (Jacob et al. 1999; Rossi et al. 2023). The remaining studies (86.96%) used a cross-sectional design (Bai et al. 2022; Cattaneo et al. 2022; Chaves et al. 2019; El Amiri et al. 2023; Facchin et al. 2021; Fortunato et al. 2023; Galhardo et al. 2011, 2013; García-Quintáns et al. 2023; Güleç et al. 2011; Jacob et al. 1999; Markestad et al. 1998; Molgora et al. 2019; Péloquin et al. 2023; Tang et al. 2023; Van Der Merwe and Greeff 2015; Zhang et al. 2023; Zurlo et al. 2018, 2019, 2020).

3.2.3 | Representativity

Regarding participant dropout, 10 studies (43.47%) reported no dropout or rejection by participants (Bai et al. 2022; Cattaneo et al. 2022; Chaves et al. 2019; El Amiri et al. 2023; Facchin et al. 2021; Fortunato et al. 2023; Galhardo et al. 2011; Markestad et al. 1998; Tang et al. 2023; Van Der Merwe and Greeff 2015; Zurlo et al. 2018). In the remaining studies (56.53%), dropout or participant rejection rates were noted. Specifically, 60.88% of the dropout was attributed to incomplete questionnaires (Chaves et al. 2019; Galhardo et al. 2013; García-Quintáns et al. 2023; Güleç et al. 2011; Jacob et al. 1999; Molgora et al. 2019; Zhang et al. 2023; Zurlo et al. 2019, 2020), while 9.96% was due to participant refusal to continue in the study. Additionally, 5.6% of responses were considered invalid, thus excluded from the analysis (Tang et al. 2022).

3.2.4 | Variables

3.2.4.1 | Psychological and Relational Variables. There was substantial heterogeneity in the independent and dependent variables assessed. Psychological variables included dyadic coping in all studies, anxiety (13 studies; Bai et al. 2022; Cattaneo et al. 2022; Chaves et al. 2019; Darwiche et al. 2019; El Amiri et al. 2023; Facchin et al. 2021; Galhardo et al. 2013; García-Quintáns et al. 2023; Markestad et al. 1998; Péloquin et al. 2023; Zurlo et al. 2018, 2019, 2020), infertility-related stress (4 studies; Cattaneo et al. 2022; El Amiri et al. 2023; Van Der Merwe and Greeff 2015; Zurlo et al. 2020), parental stress (1 study; Fortunato et al. 2023), and depression (8 studies; Chaves et al. 2019; Darwiche et al. 2019; Della-Volta et al. 2022; García-Quintáns et al. 2023; Tang et al. 2023; Zurlo et al. 2018, 2019, 2020). In relation to general psychopathology, three studies employed three different scales: Symptom Checklist-90 Revised (Markestad et al. 1998); Brief Symptom Inventory (Jacob et al. 1999) and Kessler Psychological Distress Scale (K6; Bai et al. 2022). Some studies, specifically assessed anxiety through State-Trait Anxiety Inventory (Zurlo 2018, 2020; Darwiche et al. 2019; Cattaneo et al. 2022) and Self-Rating Anxiety Scale (Tang et al. 2023) scales, depression through the Edinburgh Depression Scale (Darwiche et al. 2019; Cattaneo et al. 2022; Zurlo et al. 2018, 2020), Sexual Distress Scale (SDS; Tang et al. 2023) and Beck Depression Inventory (Galhardo et al. 2011; Güleç et al. 2011) and both through Hospital Anxiety and Depression Scale (Chaves et al. 2019; Facchin et al. 2021).

Every study included dyadic coping as a variable, 15 studies applied Dyadic Adjustment Scale (Cattaneo et al. 2022; Chaves et al. 2019;

El Amiri et al. 2023; Galhardo et al. 2011, 2013; García-Quintáns et al. 2023; Güleç, 2011; Jacob et al. 1999; Markestad et al. 1998; Molgora et al. 2019; Péloquin et al. 2023; Van Der Merwe and Greeff 2015; Zurlo 2018, 2019, 2020), 10 Dyadic Coping Inventory (Bai et al. 2022; Chaves et al. 2019; Darwiche et al. 2019; El Amiri et al. 2023; Molgora et al. 2019; Péloquin et al. 2023; Rossi et al. 2023; Tang et al. 2022, 2023; Zhang et al. 2023) and Dyadic Coping Questionnaire (Fortunato et al. 2023).

Other variables related to the couple relationship were also taken into account, such as sexual satisfaction, with instruments such as Index of Sexual Satisfaction (Markestad et al. 1998; Van der Merwe and Greeff 2015), Golombok-Rust Inventory of Sexual Satisfaction (Güleç et al. 2011) and Global Measure of Sexual Satisfaction (El Amiri et al. 2023); sexual distress through SDS (El Amiri et al. 2023), Female Sexual Function Index and International Index of Erectile Function (Galhardo et al. 2011) and fertility-related quality of life applying the Fertility Quality of Life (Zurlo et al. 2018, 2019). In addition, some studies took into account variables such as personal coping strategies, measured with the Coping Orientations to Problem Experienced (Coping Orientation to Problem Experienced–New Italian Version) (Cattaneo et al. 2022; Zurlo et al. 2018, 2019, 2020) and Coping Styles Questionnaire (Galhardo et al. 2011), and self-esteem through Rosenberg Self-Esteem Scale (Facchin et al. 2021; Jacob et al. 1999; Zhang et al. 2023).

3.2.4.2 | Medical Variables. Medical variables assessed included the type of infertility (García-Quintáns et al. 2023; Van Der Merwe and Greeff 2015; Tang et al. 2023), its duration (Cattaneo et al. 2022; Güleç et al. 2011; Tang et al. 2022; Zhang et al. 2023; Zurlo et al. 2018), its cause (El Amiri et al. 2023; Güleç et al. 2011; Molgora et al. 2019; Péloquin et al. 2023; Tang et al. 2022; Zhang et al. 2023; Zurlo et al. 2019, 2020), type of ART (Zhang et al. 2023; Zurlo et al. 2018, 2019, 2020), number of ART attempts (Markestad et al. 1998; Molgora et al. 2019; Tang et al. 2023), gravidity with or without ART (Bai et al. 2022; Fortunato et al. 2023; Jacob et al. 1999; Tang et al. 2022), and number of prenatal tests performed (Darwiche et al. 2019).

3.2.5 | Confounding Factors

Twelve cross-sectional studies considered factors such as the duration of the relationship (Cattaneo et al. 2022; El Amiri et al. 2023; Facchin et al. 2021; Fortunato et al. 2023; Galhardo et al. 2011, 2013; García-Quintáns et al. 2023; Güleç et al. 2011; Jacob et al. 1999; Rossi et al. 2023; Van Der Merwe and Greeff 2015; Zhang et al. 2023), nulliparity status (Bai et al. 2022; Darwiche et al. 2019; Facchin et al. 2021; Fortunato et al. 2023; García-Quintáns et al. 2023; Jacob et al. 1999; Markestad et al. 1998; Zhang et al. 2023), the type of ART (Facchin et al. 2021; Galhardo et al. 2013; Van Der Merwe and Greeff 2015; Zhang et al. 2023; Zurlo et al. 2018, 2019, 2020), the number of attempts (Molgora et al. 2019; Péloquin et al. 2023; Tang et al. 2023; Zhang et al. 2023; Zurlo et al. 2018), and the duration of infertility (Cattaneo et al. 2022; El Amiri et al. 2023; Galhardo et al. 2013; Tang et al. 2022; Tang et al. 2023; Van Der Merwe and Greeff 2015; Péloquin et al. 2023; Zhang et al. 2023; Zurlo et al. 2018, 2019, 2020). Additionally, three studies considered the duration of treatment (Chaves et al. 2019; Darwiche et al. 2019; Zhang et al. 2023).

3.2.3 | Inclusion and Exclusion Criteria

In all, 52.17% of the studies included both inclusion and exclusion criteria, 34.78% included only inclusion criteria, and three studies (13.04%) did not specify any criteria (Molgora et al. 2019; Zurlo et al. 2019, 2020). Seven studies included undergoing ART as an inclusion criterion (El Amiri et al. 2023; Fortunato et al. 2023; Jacob et al. 1999; Van Der Merwe and Greeff 2015; Péloquin et al. 2023; Zhang et al. 2023; Zurlo et al. 2018), and the diagnosis of infertility was included in another set of studies (Bai et al. 2022; Cattaneo et al. 2022; Galhardo et al. 2013; Péloquin et al. 2023; Tang et al. 2023; Tang et al. 2022; Zhang et al. 2023; Zurlo et al. 2018, 2019, 2020). Some studies excluded participants with mental health problems (El Amiri et al. 2023; García-Quintáns et al. 2023; Jacob et al. 1999; Rossi et al. 2023; Tang et al. 2023; Zhang et al. 2023) or oncological diseases (Tang et al. 2022).

3.3 | Main Results of the Psychological and Relational Variables

3.3.1 | Psychopathology

In relation to emotional distress, strong evidence of increased psychological distress related to infertility was found (El Amiri et al. 2023; García-Quintáns et al. 2023; Molgora et al. 2019; Markestad et al. 1998). Elevated levels of anxiety, depression (Chaves et al. 2019; El Amiri et al. 2023; García-Quintáns et al. 2023; Molgora et al. 2019; Markestad et al. 1998; Péloquin et al. 2023), and other emotions, such as shame (Galhardo et al. 2011), were found, which can reach clinical levels (Cattaneo et al. 2022).

Infertility-related stress seems to be related to decreased communication within the couple (Van Der Merwe and Greeff 2015), lower sexual satisfaction (Van Der Merwe and Greeff 2015), lower marital satisfaction (Péloquin et al. 2023; Van Der Merwe and Greeff 2015), worse dyadic coping (Bai et al. 2022; Galhardo et al. 2011; Péloquin et al. 2023; Van Der Merwe and Greeff 2015), decreased quality of life (Bai et al. 2022), and a greater influence of ART on quality of life (Bai et al. 2022).

3.3.2 | Dyadic Coping and ART

Positive dyadic coping appears to be associated with increased sexual satisfaction (El Amiri et al. 2023), self-esteem (Zhang et al. 2023), relationship satisfaction and attachment (Péloquin et al. 2023), perceived quality of life (Zurlo et al. 2018, 2019), and family cohesion and adaptability in women (Tang et al. 2022). It also may be linked to lower anxiety (Tang et al. 2023; Péloquin et al. 2023) and both personal and partner depression (Tang et al. 2023). Similarly, common dyadic coping appears to be linked to greater sexual satisfaction and lower distress (El Amiri et al. 2023). Additionally, emotion-focused, problem-focused, and delegated dyadic coping are associated with better marital adjustment in both men and women (Molgora et al. 2019). In contrast, negative dyadic coping has been linked to higher levels of anxiety and depression, lower self-esteem, and poorer relationship satisfaction (Facchin et al. 2021; Péloquin et al. 2023). Some studies suggest that the perception of negative dyadic coping from the

partner can increase sexual distress and fertility-related concerns (El Amiri et al. 2023), while common dyadic coping can mitigate these concerns. Moreover, attachment avoidance has been negatively associated with positive dyadic coping strategies and positively associated with negative dyadic coping strategies, further influencing relationship satisfaction (Péloquin et al. 2023).

Finally, stress related to infertility appears to negatively impact marital adjustment, communication quality, and intimacy, highlighting the importance of dyadic coping in moderating these effects (Van der Merwe and Greeff 2015). Religious beliefs, relationship with family members, and family cohesion have also been identified as potential moderators of dyadic coping strategies (Tang et al. 2022).

3.3.3 | Other Relevant Findings

Compared with control or noninfertile groups, couples with infertility tend to exhibit better dyadic coping and greater intimacy (Galhardo et al. 2011). They appear to communicate stress more effectively, have improved self-esteem and partner-esteem (Zhang et al. 2023), and perceive greater support from their partner (Darwiche et al. 2019). Conversely, these couples tend to use more emotion-focused coping strategies (Galhardo et al. 2011).

Additionally, increased biological age in women may be associated with an improvement in emotional reactivity and management, while men seem to benefit from longer relationship duration, which is associated with emotional adjustment (García-Quintáns et al. 2023). However, greater social and relationship concerns could be linked to a significant reduction of emotional expression within the couple (Zurlo et al. 2020). Men tend to experience more adverse emotional outcomes related to higher perceived stress from social concerns, infertility-related stress, and stress related to concerns for another member of the couple (Cattaneo et al. 2022).

3.4 | Quality Assessment

The evaluation of their quality indicators using PRISMA standards. The quality of the included studies was evaluated using a modified version of the Quality Assessment Tool for Quantitative Studies, developed by the Effective Public Health Practice Project (Wermelinger-Ávila et al. 2017). This tool, comprising 19 items, assesses eight key criteria: (a) study design, (b) representation, (c) selection bias, (d) withdrawals and dropouts, (e) confounders, (f) data collection methods, (g) data analysis, and (h) reporting. Each criterion is rated on a scale from 1 (low risk of bias; strong) to 3 (high risk of bias; weak) (Table 1). The overall quality score ranges from 1 to 5, where higher scores indicate a greater likelihood of bias or lower quality. Following the approach outlined by McMullan et al. (2019), studies receive between 4 and 8 component ratings based on the assessed criteria. The overall rating is determined by these component scores: a study is classified as strong if it has no weak ratings and at least three strong ratings, moderate if it has one weak rating and fewer than three strong ratings, and weak if it has two or more weak ratings. Table 2 presents the quality ratings of the included studies, with an average score of 4.5. Three studies were rated as weak, three as strong, and the rest as moderate.

4 | Discussion

This review aimed to synthesize the existing evidence on the impact of dyadic coping strategies on the relationship and mental health of couples undergoing ART, without making a direct comparison to couples who do not utilize these strategies. The studies included focused on various aspects of dyadic coping within ART contexts, specifically self-esteem, couple adjustment, mental health, social pressure, couple satisfaction, and sexual satisfaction. The results obtained for negative dyadic coping are also discussed.

The findings suggest that positive dyadic coping may be associated with a lower anxiety and depression level, while it may enhance self-esteem, adjustment, and couple satisfaction. Additionally, it appears to be linked to sexual well-being (El Amiri et al. 2023), communication, marital adjustment (Bai et al. 2022; Molgora et al. 2019), quality of life (Van Der Merwe and Greeff 2015), and positive personal coping strategies (Darwiche et al. 2019). Specifically, positive dyadic coping strategies, such as common dyadic coping, emotion-focused coping, problem-focused coping, and delegated coping, have been consistently associated with improved relationship and psychological outcomes in couples undergoing ART. Common dyadic coping has been linked to higher sexual satisfaction and lower sexual distress in both partners (El Amiri et al. 2023) and plays a crucial role in marital adjustment (Molgora et al. 2019). Similarly, emotion-focused, problem-focused, and delegated coping are positively associated with better marital adjustment in both men and women (Molgora et al. 2019) and lower levels of anxiety and depression (Tang et al. 2023). Stress communication, an essential component of dyadic coping, has been shown to enhance relationship satisfaction and marital adjustment (Molgora et al. 2019) while reducing anxiety and depressive symptoms in women (Tang et al. 2023). Additionally, supportive dyadic coping correlates with lower anxiety and depression in both partners (Tang et al. 2023) and contributes to greater family cohesion and adaptability in women with infertility (Tang et al. 2022). Furthermore, dyadic consensus has been linked to lower stress and anxiety among couples undergoing ART (Zurlo et al. 2020), reinforcing the importance of positive dyadic coping in fostering emotional well-being and relationship stability.

In contrast, negative dyadic coping strategies, including perceived negative dyadic coping from the partner, avoidant coping, low emotional expression, and attachment avoidance, have been associated with greater psychological distress and poorer relational outcomes. The perception of negative dyadic coping from one's partner is linked to higher sexual distress and fertility-related concerns (El Amiri et al. 2023), increased anxiety and depression (Tang et al. 2023), and lower self-esteem and relationship satisfaction (Facchin et al. 2021). Avoidant coping, another negative strategy, is significantly related to higher levels of anxiety and depression in both men and women (Zurlo et al. 2020) and contributes to lower dyadic consensus and poorer quality of life in couples undergoing ART (Bai et al. 2022). Similarly, low emotional expression has been associated with greater emotional distress and interpersonal stress in women (García-Quintáns et al. 2023) and poorer marital adjustment and dyadic cohesion (Zurlo et al. 2020). Additionally, attachment avoidance negatively impacts the use of positive dyadic coping strategies and is linked to lower

relationship satisfaction and increased relational conflict (Péloquin et al. 2023). These findings highlight the detrimental effects of negative dyadic coping on couples' emotional well-being and emphasize the need for interventions that promote positive dyadic coping mechanisms to support couples undergoing ART. For these reasons, most studies (Bai et al. 2022; Darwiche et al. 2019; El Amiri et al. 2023; Fortunato et al. 2023; Galhardo et al. 2013; Markestad et al. 1998; Péloquin et al. 2023; Rossi et al. 2023; Tang et al. 2022; Zurlo et al. 2018, 2019, 2020) underscore the importance of incorporating positive dyadic coping into psychological therapy during challenging times, especially for individuals undergoing ART.

Contradictory results emerge when comparing ART couples with those pursuing alternative paths, such as adoption. Some studies suggest that ART couples tend to experience more emotional distress and less effective coping strategies compared with those who choose adoption (Galhardo et al. 2011). Conversely, ART couples appear to exhibit greater emotional and dyadic adjustment, satisfaction, and emotional expression than the general population (García-Quintáns et al. 2023). These findings may point out that factors such as age and gender may influence outcomes. For instance, a younger age appears to be associated with better emotional adjustment and more positive dyadic coping strategies (García-Quintáns et al. 2023). Gender differences may also be significant, with women experiencing more emotional distress but also demonstrating more positive dyadic coping (El Amiri et al. 2023; Markestad et al. 1998; Zurlo et al. 2020; Molgora et al. 2019), in terms of greater stress communication and emotional expression, whereas men tend to show higher levels of dyadic coping ability (Molgora et al. 2019). Additionally, the perception of supportive dyadic coping is lower in women undergoing ART compared with those who conceived spontaneously, suggesting that ART may impact how couples experience dyadic support (Darwiche et al. 2019).

These results are consistent with previous research highlighting the role of positive dyadic coping in managing stress, as observed in contexts like the COVID-19 pandemic (Relvas et al. 2023) and other physical and mental health challenges (Landolt et al. 2023).

Many studies utilized robust structural equation models or actor-interdependence models (Cattaneo et al. 2022; El Amiri et al. 2023; Galhardo et al. 2013; Molgora et al. 2019; Tang et al. 2022, 2023; Zhang et al. 2023), which aid in understanding the perceived and actual effects of dyadic coping. Including data from both partners in many studies is a significant strength (Bai et al. 2022; Chaves et al. 2019; El Amiri et al. 2023; Darwiche et al. 2019; Cattaneo et al. 2022; Fortunato et al. 2023; Galhardo et al. 2011; García-Quintáns et al. 2023; Güleç et al. 2011; Jacob et al. 1999; Markestad et al. 1998; Molgora et al. 2019; Péloquin et al. 2023; Rossi et al. 2023; Tang et al. 2022, 2023; Van Der Merwe and Greeff 2015; Zhang et al. 2023; Zurlo et al. 2018, 2020). Several studies in this review reported effect size measures, allowing for a better estimation of the associations between dyadic coping and key outcomes. El Amiri et al. (2023) reported partial eta squared (ηp^2) and R^2 values, while Molgora et al. (2019) and Tang et al. (2023) used the Actor-Partner Interdependence Model (APIM), providing regression coefficients (β) and R^2 . Similarly, Zurlo et al. (2020), Bai et al.

Facchin et al. (2021) presented correlation coefficients (r) and regression analyses. Despite these cases, many studies did not provide standardized effect sizes, limiting the possibility of quantitative synthesis and highlighting the need for more consistent reporting in future research. Among the studies, three employed longitudinal designs (Darwiche et al. 2019; Jacob et al. 1999; Rossi et al. 2023), while the remaining 20 were cross-sectional (Bai et al. 2022; Chaves et al. 2019; Cattaneo et al. 2022; El Amiri et al. 2023; Facchin et al. 2021; Fortunato et al. 2023; Galhardo et al. 2011, 2013; García-Quintáns et al. 2023; Güleç et al. 2011; Markestad et al. 1998; Molgora et al. 2019; Péloquin et al. 2023; Tang et al. 2023; Van Der Merwe and Greeff 2015; Zhang et al. 2023; Zurlo et al. 2018, 2019, 2020). Few studies have investigated protective factors in ART, often focusing more on risk factors or associated psychological consequences (Santa-Cruz et al. 2023).

5 | Limitations and Future Research

The results from this study should be considered considering its limitations, which include sampling procedures, design, and methodology.

In terms of sample limitations, only four studies consider lesbian (Jacob et al. 1999; Rossi et al. 2023) and/or homosexual couples (Rossi et al. 2023; Fortunato et al. 2023), with none addressing transgender individuals. This is relevant for future research, as it has been observed that lesbian couples tend to show better dyadic and family cohesion than heterosexual couples (Jacob et al. 1999). In addition, only one study (Rossi et al. 2023) includes nonbinary people, and none considers trans people, which could affect the generalizability of the results. It is crucial to include more lesbian and LGBTQ+ mothers, as well as to consider different relational orientations. It would be interesting to investigate how infertility and social pressure affect variables such as sexual orientation, gender identity, and access to ART, as well as human rights policies such as equal marriage. Furthermore, it is essential to explore the emotional experiences of single individuals undergoing ART. Investigating the significance of diversified support networks and their role in dyadic coping—such as the support provided by friends or family members—could offer valuable insights. This approach would contribute to a more inclusive and comprehensive understanding of the experiences within this process, enriching the study of this field.

Another limitation is the difficulty in accessing the evaluation of couples undergoing ART, as some studies present very low response rates (Galhardo et al. 2013). In addition, it is necessary to obtain consent from both parties and approval from hospital or clinic managers to perform the studies (Tang et al. 2022; Zhang et al. 2023; Zurlo et al. 2020). This may result in insufficient samples (Darwiche et al. 2019; Zhang et al. 2023) or delays due to a lack of data (García-Quintáns et al. 2023). However, the reported samples are generally considered to be sufficient for investigations, despite these difficulties.

In reference to research designs, longitudinal studies are needed to provide insights into dyadic coping strategies throughout the ART process. Additionally, cross-cultural studies should explore how

culture and stigma influence ART coping strategies. The instruments and variables used generally demonstrated good psychometric properties, and robust analyses were employed. Future studies should follow couples throughout the entire ART process, from the initial decision to conception and birth, as coping strategies may vary at each stage. Similarly, it would be interesting for future research to focus on testing interventions that target dyadic coping in the context of infertility and ART, as these interventions hold the potential to enhance the physical and mental well-being of couples facing these challenges. While intervention studies were excluded from this review, existing literature, such as Monirian et al. (2022) and Asazawa et al. (2023), provides valuable insights into how structured approaches to promoting positive dyadic coping could significantly impact couples undergoing ART, and further exploration in this area is highly encouraged. Additionally, future studies should examine how different types of dyadic coping are linked to key outcomes and how contextual factors (e.g., length of infertility, treatment duration, relationship length) influence coping strategies.

Furthermore, while this review is comprehensive, as the literature was examined without time or language restrictions, some potentially relevant papers may have been excluded due to the application of strict inclusion and exclusion criteria. Future research should consider incorporating gray literature and other types of studies, such as qualitative studies, to provide a broader perspective and potentially uncover additional insights.

Due to the lack of consistent reporting of key data, such as standardized coefficients, error terms, and adequate sample sizes in many of the studies, it was not possible to calculate effect sizes reliably across all variables. This limitation also contributed to the decision not to conduct a meta-analysis. Future research would benefit from more systematic reporting of these data, allowing for better integration of the available evidence, better interpretation, and generalization of the results, as well as allowing for more robust quantitative analyses, such as meta-analyses.

In summary, future research should adopt an inclusive approach that considers sociocultural diversity and contextual factors influencing access to ART. Variables such as sexual orientation, gender identity, religion, residence, and socioeconomic status, as well as structural factors like stigma, marriage equality policies, and health coverage, significantly shape dyadic coping and the psychological experiences of individuals and couples. Accounting for these factors in research design is crucial to produce globally relevant and actionable findings.

Furthermore, these characteristics should guide the development of specific and culturally sensitive interventions in this field. Designing strategies that address the needs of couples and individuals involved in ART, considering their sociocultural context, could contribute not only to improving their emotional and psychological well-being but also to promoting the development of a more effective and affective intervention.

6 | Clinical and Practical Implications

The practical implications of this study emphasize the need to integrate positive dyadic coping into the treatment and support

of couples undergoing ART. These strategies not only improve emotional and psychological well-being but also contribute to better psychological adjustment to fertility treatment. Implementing intervention programs, training professionals, and promoting inclusive and equitable policies are essential steps toward achieving these goals.

Thompson (2021) conducted a systematic review of psychological interventions in couples with infertility in which it is revealed that couple therapy and systemic therapy have significant benefits. Authors such as Donarelli et al. (2019) and Emery (2003) conclude in their studies that systemic therapy is effective in reducing relational complaints, although it has a limited impact on psychological problems. Koser (2020) notes that couples therapy is notable for its ability to address both psychological and relational concerns (Koser 2020). The systemic approach seems to favor communication, resolution of dysfunctional family dynamics, conflict management with the medical team or extended family, and fosters emotional connection between partners (Thompson 2021).

In this context, the Infertility Resilience Model (Ridenour et al. 2009) provides a comprehensive framework for understanding how couples cope with infertility, offering valuable insights for assessing and enhancing emotional and relational well-being. Grounded in the ABC-X model of family stress and the family resilience framework, this model posits that resilience in the context of infertility emerges from the interaction of three key levels: (a) external factors, including social support, cultural and religious influences, socioeconomic status, medical diagnosis, and access to treatment; (b) individual factors, such as personal perceptions of infertility, identity reconstruction, coping strategies, and gender differences in emotional responses; (c) couple factors, encompassing relationship quality, communication patterns, shared decision-making processes, and congruence in perceptions. The model conceptualizes couple resilience as a dynamic process characterized by cohesion and positive communication. Through this process, partners can adapt their perspectives and ultimately achieve a shared acceptance of infertility as part of their lived experience. This model could be the basis of the proposed therapeutic interventions. For example, there are some interventions that target positive dyadic coping, such as the Couple Coping Enhancement Training (Bodenmann and Shantinath 2004) program was designed to promote more effective dyadic coping. This program, whose efficacy has been demonstrated in various contexts (Hasanzadeh et al. 2024; Isanejad and Alizade 2020) and, in the field of infertility (Monirian et al. 2022), could be adapted as a basis for the development of specific interventions for couples undergoing ART.

Therefore, based on the results found in this study, as well as in the interventions mentioned above, it would be important that the interventions be directed to:

- On the one hand, working to decrease levels of anxiety, depression, and emotional distress, which could be addressed through: (1) psychoeducation on stress models that allow understanding the dynamics of stress and types of coping; (2) expanding the repertoire of coping strategies, both individually and as a couple, to respond more effectively to emotional challenges; (3) training in relaxation

techniques, with the objective of reducing the impact of stress on individual and relational well-being.

- Focusing on couple intervention, with components that foster positive dyadic coping through work with the dyad: (1) development of problem-solving skills in couples; (2) promotion of effective communication and active listening and emotional validation of the other partner's experiences; (3) promotion of mutual support and intimacy in the relationship, generating greater emotional closeness and synergy in the management of daily challenges.

The design of interventions that integrate these elements would not only strengthen the capacity for mutual affection but would also strengthen the ability to cope with daily challenges.

7 | Conclusion

In conclusion, positive dyadic coping enhances the emotional and psychological health of couples undergoing ART, improving marital adjustment, satisfaction, self-esteem, stress communication, resilience, and coping strategies, while reducing mental health problems. This review underscores the importance of promoting psychological interventions to develop these skills, involving multidisciplinary teams from reproductive medicine, couples and family therapists, and clinical psychology. Additionally, incorporating insights from medical family therapy and integrated behavioral health, particularly within Obstetrics and Gynecology, women's health, and primary care settings, could help adapt effective pre-existing dyadic interventions to better support couples experiencing infertility.

Acknowledgments

We would like to express our sincere gratitude to the editor and reviewers for their invaluable comments and suggestions, which have significantly contributed to improving the quality and clarity of this manuscript. Your insightful feedback has been instrumental in refining our work, and we deeply appreciate the time and effort you have dedicated to this process.

References

- Abidin, R. R. 1995. *Parenting Stress Index*. 3rd ed. Psychological Assessment Resource.
- Andrews, B., M. Qian, and J. D. Valentine. 2002. "Predicting Depressive Symptoms With a New Measure of Shame: The Experience of Shame Scale." *British Journal of Clinical Psychology* 41, no. 1: 29–42. <https://doi.org/10.1348/014466502163778>.
- Arnett, J. J., R. Žukauskienė, and K. Sugimura. 2014. "The New Life Stage of Emerging Adulthood at Ages 18–29 Years: Implications for Mental Health." *Lancet Psychiatry* 1, no. 7: 569–576. [https://doi.org/10.1016/S2215-0366\(14\)00080-7](https://doi.org/10.1016/S2215-0366(14)00080-7).
- Artini, P. G., M. E. Obino, F. Vergine, C. Sergiampietri, F. Papini, and V. Cela. 2018. "Assisted Reproductive Technique in Women of Advanced Fertility Age." *Minerva Ginecologica* 70, no. 6: 738–749. <https://doi.org/10.23736/S0026-4784.18.04247-8>.
- Asazawa, K., K. Takahata, N. Kojima, et al. 2023. "Development and Evaluation of a Decision-Making Aid for Couples Hesitant About Transitioning From Infertility Treatment to Advanced Assisted Reproductive Technology: A Usability and Feasibility Study." *BMC Research Notes* 16: 362. <https://doi.org/10.1186/s13104-023-06652-0>.

- Bandura, A. 2006. "Guide for Constructing Self-Efficacy Scales." In *Self-Efficacy Beliefs of Adolescents*, edited by F. Pajares and T. Urdan, 307–337. Information Age Publishing.
- Bai, J., J. Zheng, Y. Dong, K. Wang, C. Cheng, and H. Jiang. 2022. "Psychological Distress, Dyadic Coping, and Quality of Life in Infertile Clients Undergoing Assisted Reproductive Technology in China: A Single-Center, Cross-Sectional Study." *Journal of Multidisciplinary Healthcare* 15: 2715–2723. <https://doi.org/10.2147/JMDH.S393438>.
- Beck, A. T. 1961. "An Inventory for Measuring Depression." *Archives of General Psychiatry* 4: 561–571. <https://doi.org/10.1001/archpsyc.1961.01710120031004>.
- Benvenuti, P. 1999. "The Edinburgh Postnatal Depression Scale: Validation for an Italian Sample." *Journal of Affective Disorders* 53, no. 2: 137–141. [https://doi.org/10.1016/s0165-0327\(98\)00102-5](https://doi.org/10.1016/s0165-0327(98)00102-5).
- Bodenmann, G. 1997. "Dyadic Coping: A Systemic-Transactional View of Stress and Coping Among Couples: Theory and Empirical Findings." *European Review of Applied Psychology/Revue Européenne de Psychologie Appliquée* 47, no. 2: 137–141.
- Bodenmann, G. 2000. *Stress und Coping bei Paaren [Stress and Coping in Couples]*. Hogrefe.
- Bodenmann, G. 2006. "Dyadic Coping and Its Significance for Marital Functioning." In *Couples Coping With Stress: Emerging Perspectives on Dyadic Coping*, edited by T. A. Revenson, K. Kayser, and G. Bodenmann, 33–49. American Psychological Association. <https://doi.org/10.1037/11031-002>.
- Bodenmann, G., B. Plancherel, S. R. H. Beach, et al. 2008. "Effects of Coping-Oriented Couples Therapy on Depression: A Randomized Clinical Trial." *Journal of Consulting and Clinical Psychology* 76, no. 6: 944–954. <https://doi.org/10.1037/a0013467>.
- Bodenmann, G., and S. D. Shantinath. 2004. "The Couples Coping Enhancement Training (CCET): A New Approach to Prevention of Marital Distress Based Upon Stress and Coping." *Family Relations* 53, no. 5: 477–484. <https://doi.org/10.1111/j.0197-6664.2004.00056.x>.
- Boivin, J., J. Takefman, and A. Braverman. 2011. "The Fertility Quality of Life (FertiQoL) Tool: Development and General Psychometric Properties." *Human Reproduction* 26, no. 8: 2084–2091. <https://doi.org/10.1093/humrep/der171>.
- Bond, F. W., S. C. Hayes, R. A. Baer, et al. 2011. "Preliminary Psychometric Properties of the Acceptance and Action Questionnaire-II: A Revised Measure of Psychological Inflexibility and Experiential Avoidance." *Behavior Therapy* 42, no. 4: 676–688. <https://doi.org/10.1016/j.beth.2011.03.007>.
- Brandão, P. 2022. "European Policies on Same-Sex Relationships, Adoption and Assisted Reproduction." *International Journal of Reproduction, Contraception, Obstetrics and Gynecology* 11, no. 8: 2306–2314. <https://doi.org/10.18203/2320-1770.ijrcog20221961>.
- Burgio, S., C. Polizzi, G. Buzzaccarini, et al. 2022. "Psychological Variables in Medically Assisted Reproduction: A Systematic Review." *Menopausal Review* 21, no. 1: 47–63. <https://doi.org/10.5114/pm.2022.114404>.
- Busby, D. M., C. Christensen, D. R. Crane, and J. H. Larson. 1995. "A Revision of the Dyadic Adjustment Scale for Use With Distressed and Nondistressed Couples: Construct Hierarchy and Multidimensional Scales." *Journal of Marital and Family Therapy* 21, no. 3: 289–308. <https://doi.org/10.1111/j.1752-0606.1995.tb00163.x>.
- Carter, J., L. Raviv, L. Applegarth, et al. 2010. "A Cross-Sectional Study of the Psychosexual Impact of Cancer-Related Infertility in Women: Third-Party Reproductive Assistance." *Journal of Cancer Survivorship* 4, no. 3: 236–246. <https://doi.org/10.1007/s11764-010-0121-2>.
- Carver, C. S., M. F. Scheier, and J. K. Weintraub. 1989. "Assessing Coping Strategies: A Theoretically Based Approach." *Journal of Personality and Social Psychology* 56, no. 2: 267–283. <https://doi.org/10.1037/0022-3514.56.2.267>.
- Cattaneo, M. F., F. Vallone, and M. C. Zurlo. 2022. "Predictors of Psychological Health in Couples Diagnosed With Male Infertility: A Dyadic Approach." *Mediterranean Journal of Clinical Psychology* 10, no. 2: 1–25. <https://doi.org/10.13129/2282-1619/mjcp-3305>.
- Chaves, C., M. C. Canavarro, and M. Moura-Ramos. 2019. "The Role of Dyadic Coping on the Marital and Emotional Adjustment of Couples With Infertility." *Family Process* 58, no. 2: 509–523. <https://doi.org/10.1111/famp.12364>.
- Cocchiaro, T., C. Meneghini, A. Dal Lago, et al. 2020. "Assessment of Sexual and Emotional Distress in Infertile Couple: Validation of a New Specific Psychometric Tool." *Journal of Endocrinological Investigation* 43, no. 12: 1729–1737. <https://doi.org/10.1007/s40618-020-01263-z>.
- Crespo, C., I. Narciso, M. Ribeiro, and M. E. Costa. 2006. "Desenvolvimento da Escala de Dimensões da Intimidade: primeiro estudo empírico." *Psychologica* 41: 45–63.
- Crowne, D. P., and D. Marlowe. 1960. "A New Scale of Social Desirability Independent of Psychopathology." *Journal of Consulting Psychology* 24, no. 4: 349–354. <https://doi.org/10.1037/h0047358>.
- Darwiche, J., A. Milek, J. P. Antonietti, and Y. Vial. 2019. "Partner Support During the Prenatal Testing Period After Assisted Conception." *Women and Birth* 32, no. 2: e264–e271. <https://doi.org/10.1016/j.wombi.2018.07.006>.
- Derogatis, L. R. 1992. *SCL-90-K Administration, Scoring, & Procedures Manual-II for the Revised Version and Other Instruments of the Psychopathology Rating Scale Series*. 2nd ed. Clinical Psychometric Research.
- Derogatis, L. R., and N. Melisaratos. 1983. "The Brief Symptom Inventory: An Introductory Report." *Psychological Medicine* 13, no. 3: 595–605. <https://doi.org/10.1017/S0033291700048017>.
- Donarelli, Z., L. Salerno, G. Lo Coco, A. Allegra, A. Marino, and D. M. Kivlighan. 2019. "From Telescope to Binoculars. Dyadic Outcome Resulting From Psychological Counselling for Infertile Couples Undergoing ART." *Journal of Reproductive and Infant Psychology* 37, no. 1: 13–25. <https://doi.org/10.1080/02646838.2018.1548757>.
- Donato, S., R. Iafrate, D. Barni, A. Bertoni, G. Bodenmann, and S. Gagliardi. 2009. "Measuring Dyadic Coping: The Factorial Structure of Bodenmann's 'Dyadic Coping Questionnaire' in an Italian Sample." *TPM—Testing, Psychometrics, Methodology in Applied Psychology* 16, no. 1: 25–47. <https://doi.org/10.4473/TPM.16.1.2>.
- El Amiri, S., N. O. Rosen, A. Brassard, M. A. Rossi, S. Bergeron, and K. Péloquin. 2023. "Dyadic Coping and Sexual Well-Being in Couples Seeking Assisted Reproductive Technology." *Family Relations* 72, no. 5: 3134–3151. <https://doi.org/10.1111/fare.12874>.
- Emery, M. 2003. "Results From a Prospective, Randomized, Controlled Study Evaluating the Acceptability and Effects of Routine Pre-IVF Counselling." *Human Reproduction* 18, no. 12: 2647–2653. <https://doi.org/10.1093/humrep/deg501>.
- European Union. 2021. *Adopting a Child From Another EU Country*. https://europa.eu/youreurope/citizens/family/children/adoption/index_en.htm.
- Facchin, F., L. Buggio, P. Vercellini, A. Frassinetti, S. Beltrami, and E. Saita. 2021. "Quality of Intimate Relationships, Dyadic Coping, and Psychological Health in Women With Endometriosis: Results From an Online Survey." *Journal of Psychosomatic Research* 146: 1–7. <https://doi.org/10.1016/j.jpsychores.2021.110502>.
- Falconier, M. K., J. B. Jackson, P. Hilpert, and G. Bodenmann. 2015. "Dyadic Coping and Relationship Satisfaction: A Meta-Analysis." *Clinical Psychology Review* 42: 28–46. <https://doi.org/10.1016/j.cpr.2015.07.002>.
- Falconier, M. K., and R. Kuhn. 2019. "Dyadic Coping in Couples: A Conceptual Integration and a Review of the Empirical Literature." *Frontiers in Psychology* 10: 571. <https://doi.org/10.3389/fpsyg.2019.00571>.

- and A. M. Speranza. 2023. "Parenting, Dyadic Coping, and Child Emotion Regulation in Lesbian, Gay, and Heterosexual Parent Families Through Assisted Reproduction." *Journal of Reproductive and Infant Psychology* 28: 1–17. <https://doi.org/10.1080/02646838.2023.2287678>.
- Galhardo, A., M. Cunha, and J. Pinto-Gouveia. 2011. "Aspects Psychologiques Des Couples Infertiles." *Sexologies* 20, no. 4: 255–260. <https://doi.org/10.1016/j.sexol.2011.08.006>.
- Galhardo, A., M. Cunha, J. Pinto-Gouveia, and M. Matos. 2013. "The Mediator Role of Emotion Regulation Processes on Infertility-Related Stress." *Journal of Clinical Psychology in Medical Settings* 20, no. 4: 497–507. <https://doi.org/10.1007/s10880-013-9370-3>.
- García-Quintán, L., R. M. Limiñana-Gras, M. P. Sánchez-López, and R. M. Patró-Hernández. 2023. "Dyadic and Emotional Adjustment in Infertile Couples." *Family Relations* 72, no. 5: 3152–3166. <https://doi.org/10.1111/fare.12837>.
- Gentili, P., L. Contreras, M. Cassaniti, and F. D'Arista. 2002. "La dyadic adjustment scale: una misura dell'adattamento di coppia [The Dyadic Adjustment Scale: A Measure of Couple Adjustment]." *Minerva Psichiatria* 43: 107–116.
- Goldberg, A. E., R. L. Frost, L. Miranda, and E. Kahn. 2019. "LGBTQ Individuals' Experiences With Delays and Disruptions in the Foster and Adoption Process." *Children and Youth Services Review* 106: 104466. <https://doi.org/10.1016/j.childyouth.2019.104466>.
- Goss, K., P. Gilbert, and S. Allan. 1994. "An Exploration of Shame Measures—I: The Other as Shamer Scale." *Personality and Individual Differences* 17, no. 5: 713–717. [https://doi.org/10.1016/0191-8869\(94\)90149-X](https://doi.org/10.1016/0191-8869(94)90149-X).
- Güleç, G., H. Hassa, E. G. Yalçın, and C. Yenilmez. 2011. "The Effects of Infertility on Sexual Functions and Dyadic Adjustment in Couples That Present for Infertility Treatment." *Türk psikiyatri dergisi = Turkish Journal of Psychiatry* 22, no. 3: 166–176.
- Hasanzadeh, M., M. Samavati, and A. Javaheri. 2024. "Effectiveness of Couples Coping Enhancement Training on Resilience and Marital Conflict During the Transition to Parenthood." *Applied Family Therapy Journal* 5, no. 2: 46–54. <https://doi.org/10.61838/kman.ajt.5.2.6>.
- Hernández-Nieto, R. A. 2002. *Contribuciones al análisis estadístico: sensibilidad estabilidad y consistencia de varios coeficientes de variabilidad relativa y el coeficiente de variación proporcional cvp el coeficiente*. CreateSpace Independent Publishing Pub.
- Hudson, W. W. 1992. *Walmyr Assessment Scales Scoring Manual*. Walmyr.
- Isanejad, O., and Z. Alizade. 2020. "The Effectiveness of Couples Coping Enhancement Training (CCET) on Marital Adjustment and Marital Coping Strategies." *Journal of Applied Psychological Research* 11, no. 1: 67–85. <https://doi.org/10.22059/japr.2020.277483.643200>.
- Jacob, M. C., S. C. Klock, and D. Maier. 1999. "Lesbian Couples as Therapeutic Donor Insemination Recipients: Do They Differ From Other Patients?" *Journal of Psychosomatic Obstetrics & Gynecology* 20, no. 4: 203–215. <https://doi.org/10.3109/01674829909075597>.
- Jain, M., and M. Singh. 2023. *Assisted Reproductive Technology (ART) Techniques*. StatPearls Publishing.
- Kessler, R. C., G. Andrews, L. J. Colpe, et al. 2002. "Short Screening Scales to Monitor Population Prevalences and Trends in Non-Specific Psychological Distress." *Psychological Medicine* 32, no. 6: 959–976. <https://doi.org/10.1017/s0033291702006074>.
- Koser, K. 2020. "Fertility Counseling With Couples: A Theoretical Approach." *Family Journal* 28, no. 1: 25–32. <https://doi.org/10.1177/1066480719887498>.
- Lafontaine, M. F., A. Brassard, Y. Lussier, P. Valois, P. R. Shaver, and S. M. Johnson. 2016. "Selecting the Best Items for a Short-Form of the Experiences in Close Relationships Questionnaire." *European Journal of Psychological Assessment* 32, no. 2: 140–154. <https://doi.org/10.1027/1015-5759/a000243>.
- Landolt, S. A., K. Weitkamp, M. Roth, N. M. Sisson, and G. Bodenmann. 2023. "Dyadic Coping and Mental Health in Couples: A Systematic Review." *Clinical Psychology Review* 106: 102344. <https://doi.org/10.1016/j.cpr.2023.102344>.
- Lawrance, K., E. S. Byers, and J. N. Cohen. 2020. "Interpersonal Exchange Model of Sexual Satisfaction Questionnaire." In *Handbook of Sexuality-related Measures*, edited by R. R. Milhausen, J. K. Sakaluk, T. D. Fisher, C. M. Davis, and W. L. Yarber, 497–503. Routledge.
- Ledermann, T., G. Bodenmann, S. Gagliardi, et al. 2010. "Psychometrics of the Dyadic Coping Inventory in Three Language Groups." *Swiss Journal of Psychology* 69, no. 4: 201–212. <https://doi.org/10.1024/1421-0185/a000024>.
- MacDermott, S. T., E. Gullone, J. S. Allen, N. J. King, and B. Tonge. 2010. "The Emotion Regulation Index for Children and Adolescents (ERICA): A Psychometric Investigation." *Journal of Psychopathology and Behavioral Assessment* 32, no. 3: 301–314. <https://doi.org/10.1007/s10862-009-9154-0>.
- Markestad, C. L., L. M. Montgomery, and R. A. Bartsch. 1998. "Infertility and Length of Medical Treatment Effects on Psychological, Marital, and Sexual Functioning." *International Journal of Rehabilitation and Health* 4, no. 4: 233–243. <https://doi.org/10.1023/A:1022966829561>.
- Martin, J. R., J. G. Bromer, D. Sakkas, and P. Patrizio. 2011. "Insurance Coverage and In Vitro Fertilization Outcomes: A U.S. Perspective." *Fertility and Sterility* 95, no. 3: 964–969. <https://doi.org/10.1016/j.fertnstert.2010.06.030>.
- Maxwell, J. A., A. Muise, G. MacDonald, L. C. Day, N. O. Rosen, and E. A. Impett. 2017. "How Implicit Theories of Sexuality Shape Sexual and Relationship Well-Being." *Journal of Personality and Social Psychology* 112, no. 2: 238–279. <https://doi.org/10.1037/pspi0000078>.
- McGrath, C., A. Unsal, and N. y O'Hare. 2020. "A Systematic Review of the Grief, Loss and Associated Psychological Outcomes in Women and Men Experiencing Infertility." *Journal of Psychosomatic Obstetrics & Gynecology* 41, no. 4: 241–254. <https://doi.org/10.1080/0167482X.2020.1732913>.
- McMullan, R. D., D. Berle, S. Arnáez, and V. Starcevic. 2019. "The Relationships Between Health Anxiety, Online Health Information Seeking, and Cyberchondria: Systematic Review and Meta-Analysis." *Journal of Affective Disorders* 245: 270–278. <https://doi.org/10.1016/j.jad.2018.11.037>.
- Molgora, S., V. Fenaroli, C. Acquati, A. de Donno, M. P. Baldini, and E. Saita. 2019. "Examining the Role of Dyadic Coping on the Marital Adjustment of Couples Undergoing Assisted Reproductive Technology (ART)." *Frontiers in Psychology* 10: 415, 1–14. <https://doi.org/10.3389/fpsyg.2019.00415>.
- Monirian, F., B. Khodakarami, L. Tapak, F. Kimiaei Asadi, and S. Aghababaei. 2022. "The Effect of Couples Coping Enhancement Counseling on Stress and Dyadic Coping on Infertile Couples: A Parallel Randomized Controlled Trial Study." *International Journal of Fertility & Sterility* 16, no. 4: 275–280. <https://doi.org/10.22074/ijfs.2022.540919.1203>.
- Moreno-Rosset, C., R. Antequera Jurado, and C. Jenaro Río. 2009. "Validation of the Questionnaire of Emotional Maladjustment and Adaptive Resources in Infertility (DERA)." *Psicothema* 21, no. 1: 118–123.
- Murray, D., and J. L. Cox. 1990. "Screening for Depression During Pregnancy With the Edinburgh Depression Scale (EDDS)." *Journal of Reproductive and Infant Psychology* 8, no. 2: 99–107. <https://doi.org/10.1080/02646839008403615>.
- Neff, K. D. 2003. "The Development and Validation of a Scale to Measure Self-Compassion." *Self and Identity* 2: 223–250. <https://doi.org/10.1080/15298860390209035>.
- Newman, A. M. 2019. "Mixing and Matching: Sperm Donor Selection for Interracial Lesbian Couples." *Medical Anthropology* 38, no. 8: 710–724. <https://doi.org/10.1080/01459740.2019.1655737>.

- Newton, C. R., W. Sherrard, and I. Glavac. 1999. "The Fertility Problem Inventory: Measuring Perceived Infertility Related Stress." *Fertility and Sterility* 72, no. 1: 54–62. [https://doi.org/10.1016/s0015-0282\(99\)00164-8](https://doi.org/10.1016/s0015-0282(99)00164-8).
- Norton, R. 1983. "Measuring Marital Quality: A Critical Look at the Dependent Variable." *Journal of Marriage and the Family* 45, no. 1: 141–151. <https://doi.org/10.2307/351302>.
- Olson, D. H., D. G. Fournier, and J. M. Druckman. 1983. *Counselor's Manual for PREPARE/ENRICH*. Rev. ed. Prepare-Enrich Incorporate.
- Olson, D. H., D. H. Sprenkle, and C. S. Russell. 1979. "Circumplex Model of Marital and Family Systems: I. Cohesion and Adaptability Dimensions, Family Types, and Clinical Applications." *Family Process* 18, no. 1: 3–28. <https://doi.org/10.1111/j.1545-5300.1979.00003.x>.
- Page, M. J., J. E. McKenzie, P. M. Bossuyt, et al. 2021. "The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews." *BMJ* 372, no. 71: 1–9. <https://doi.org/10.1136/bmj.n71>.
- Pedrabissi, L., and M. Santinello. 1989. *Nuova versione italiana dello S.T.A.I.-Forma Y [New Italian Version of the S.T.A.I.-Form Y]*. Organizzazioni Speciali.
- Peigné, M., and S. Epelboin. 2018. "Reproducción asistida." *EMC-Tratado de Medicina* 22, no. 4: 1–11. [https://doi.org/10.1016/S1636-5410\(18\)41302-5](https://doi.org/10.1016/S1636-5410(18)41302-5).
- Péloquin, K., S. Boucher, Z. Benoit, et al. 2023. "We're in This Together": Attachment Insecurities, Dyadic Coping Strategies, and Relationship Satisfaction in Couples Involved in Medically Assisted Reproduction." *Journal of Marital and Family Therapy* 49, no. 1: 92–110. <https://doi.org/10.1111/jmft.12608>.
- Relvas, A. P., L. Lacomba-Trejo, A. Portugal, et al. 2023. "YES, WE COPE: Dyadic Coping as a Mediator Between Perceived Relationship Quality and Emotional Representation of COVID-19." *Cognitive Therapy and Research* 47: 563–573. <https://doi.org/10.1007/s10608-023-10379-4>.
- Reynolds, W. M. 1982. "Development of Reliable and Valid Short Forms of the Marlowe–Crowne Social Desirability Scale." *Journal of Clinical Psychology* 38, no. 1: 119–125. [https://doi.org/10.1002/1097-4679\(198201\)38:1](https://doi.org/10.1002/1097-4679(198201)38:1).
- Ridenour, A. F., J. B. Yorgason, and B. Peterson. 2009. "The Infertility Resilience Model: Assessing Individual, Couple, and External Predictive Factors." *Contemporary Family Therapy* 31, no. 1: 34–51. <https://doi.org/10.1007/s10591-008-9077-z>.
- Roger, D., G. Jarvis, and B. Najarian. 1993. "Detachment and Coping: The Construction and Validation of a New Scale for Measuring Coping Strategies." *Personality and Individual Differences* 15, no. 6: 619–626. [https://doi.org/10.1016/0191-8869\(93\)90003-L](https://doi.org/10.1016/0191-8869(93)90003-L).
- Rohner, R. P., A. Khaleque, and D. E. Courmoyer. 2005. "Parental Acceptance–Rejection: Theory, Methods, Cross-Cultural Evidence, and Implications." *Ethos (Berkeley, CA)* 33, no. 3: 299–334. <https://doi.org/10.1525/eth.2005.33.3.299>.
- Rosen, R., C. Brown, J. Heiman, et al. 2000. "The Female Sexual Function Index (FSFI): A Multidimensional Self-Report Instrument for the Assessment of Female Sexual Function." *Journal of Sex & Marital Therapy* 26, no. 2: 191–208. <https://doi.org/10.1080/009262300278597>.
- Rosen, R. C., A. Riley, G. Wagner, I. H. Osterloh, J. Kirkpatrick, and A. Mishra. 1997. "The International Index of Erectile Function (IIEF): A Multidimensional Scale for Assessment of Erectile Dysfunction." *Urology* 49, no. 6: 822–830. [https://doi.org/10.1016/s0090-4295\(97\)00238-0](https://doi.org/10.1016/s0090-4295(97)00238-0).
- Rosenberg, M., C. Schooler, C. Schoenbach, and F. Rosenberg. 1995. "Global Self-Esteem and Specific Self-Esteem: Different Concepts, Different Outcomes." *American Sociological Review* 60, no. 1: 141–156. <https://doi.org/10.2307/2096350>.
- Rossi, M. A., K. Péloquin, D. B. Allsop, et al. 2023. "Sexual Growth and Destiny Beliefs: Longitudinal Associations With Dyadic Coping Among Couples Seeking Medically Assisted Reproduction." *Journal of Sexual Medicine* 20, no. 10: 1241–1251. <https://doi.org/10.1093/jsxmed/qdad098>.
- Rust, J., and S. Golombok. 1986. "The GRISS: A Psychometric Instrument for the Assessment of Sexual Dysfunction." *Archives of Sexual Behavior* 15, no. 2: 157–165. <https://doi.org/10.1007/BF01542223>.
- Sabourin, S., P. Valois, and Y. Lussier. 2005. "Development and Validation of a Brief Version of the Dyadic Adjustment Scale With a Non-parametric Item Analysis Model." *Psychological Assessment* 17, no. 1: 15–27. <https://doi.org/10.1037/1040-3590.17.1.15>.
- Santa-Cruz, D., S. Chamorro, and R. A. Caparros-Gonzalez. 2023. "Optimism, Resilience, and Infertility-Specific Stress During Assisted Reproductive Technology." *Clínica y Salud* 34, no. 2: 79–84. <https://doi.org/10.5093/clysa2023a19>.
- Santos, C. M. C., C. A. M. Pimenta, and M. R. C. Nobre. 2007. "The PICO Strategy for the Research Question Construction and Evidence Search." *Revista Latino-Americana de Enfermagem* 15, no. 3: 508–511. <https://doi.org/10.1590/s0104-11692007000300023>.
- Santos-Iglesias, P., S. Bergeron, L. A. Brotto, N. O. Rosen, and L. M. Walker. 2020. "Preliminary Validation of the Sexual Distress Scale-Short Form: Applications to Women, Men, and Prostate Cancer Survivors." *Journal of Sex & Marital Therapy* 46, no. 6: 542–563. <https://doi.org/10.1080/0092623X.2020.1761494>.
- Schaefer, M. T., and D. H. Olson. 1981. "Assessing Intimacy: The PAIR Inventory." *Journal of Marital and Family Therapy* 7, no. 1: 47–60. <https://doi.org/10.1111/j.1752-0606.1981.tb01351.x>.
- Schmitt, D. P., and J. Allik. 2005. "Simultaneous Administration of the Rosenberg Self-Esteem Scale in 53 Nations: Exploring the Universal and Culture-Specific Features of Global Self-Esteem." *Journal of Personality and Social Psychology* 89, no. 4: 623–642. <https://doi.org/10.1037/0022-3514.89.4.623>.
- Seeman, M. V. 2018. "Single Men Seeking Adoption." *World Journal of Psychiatry* 8, no. 3: 83–87. <https://doi.org/10.5498/wjp.v8.i3.83>.
- Sica, C., C. Magni, M. Ghisi, et al. 2008. "Coping Orientation to Problems Experienced–Nuova Versione Italiana (COPE-NVI): uno strumento per la misura degli stili di coping." *Psicoterapia Cognitiva e Comportamentale* 14, no. 1: 27–53.
- Spanier, G. B. 2017. *DAS. Escala de Ajuste Diádico [DAS. Dyadic Adjustment Scale—Spanish Adaptation]*. TEA Ediciones.
- Spanier, G. B. 1976. "Measuring Dyadic Adjustment: New Scales for Assessing the Quality of Marriage and Similar Dyads." *Journal of Marriage and the Family* 38, no. 1: 15–28. <https://doi.org/10.2307/350547>.
- Spielberger, C. D. 1972. *Anxiety: Current Trends in Research*. Academic Press.
- Spielberger, C. D. 1983. *Manual for the State-Trait Anxiety Inventory: STAI (Form Y)*. Consulting Psychologists Press.
- Stanhiser, J., and A. Z. Steiner. 2018. "Psychosocial Aspects of Fertility and Assisted Reproductive Technology." *Obstetrics and Gynecology Clinics of North America* 45, no. 3: 563–574. <https://doi.org/10.1016/j.ogc.2018.04.006>.
- Steel, P., H. Fariborzi, and R. Hendijani. 2023. "An Application of Modern Literature Review Methodology: Finding Needles in Ever-Growing Haystacks." In *Sage Research Methods: Business*. Sage Publications Ltd. <https://doi.org/10.4135/9781529667417>.
- Tang, N., Y. Jia, Q. Zhao, et al. 2022. "Influencing Factors of Dyadic Coping Among Infertile Women: A Path Analysis." *Frontiers in Psychiatry* 13: 1–11. <https://doi.org/10.3389/fpsy.2022.830039>.
- Tang, N., M. Pei, L. Xie, X. Liang, J. Hu, and Y. Gao. 2023. "Relationship Between Dyadic Coping With Anxiety and Depression in Infertile Couples: Gender Differences and Dyadic Interaction." *Psychology Research and Behavior Management* 16: 4909–4919. <https://doi.org/10.2147/PRBM.S437808>.

Thomas, H. 2003. *Quality Assessment Tool for Quantitative Studies. Effective Public Health Practice Project*. BMJ Publishing Group. <https://www.ehphpp.ca/quality-assessment-tool-for-quantitative-studies/>.

Thompson, J. 2021. "The Effectiveness of Couple Therapy on Psychological and Relational Variables and Pregnancy Rates in Couples With Infertility: A Systematic Review." *Australian and New Zealand Journal of Family Therapy* 42, no. 2: 120–144. <https://doi.org/10.1002/anzf.1446>.

Van Der Merwe, E., and A. P. Greeff. 2015. "Infertility-Related Stress Within the Marital Relationship." *International Journal of Sexual Health* 27, no. 4: 522–531. <https://doi.org/10.1080/19317611.2015.1067275>.

Weitkamp, K., F. Feger, S. A. Landolt, M. Roth, and G. Bodenmann. 2021. "Dyadic Coping in Couples Facing Chronic Physical Illness: A Systematic Review." *Frontiers in Psychology* 12: 722740. <https://doi.org/10.3389/fpsyg.2021.722740>.

Wermelinger-Ávila, M. P., A. L. G. Lucchetti, and G. Lucchetti. 2017. "Association Between Depression and Resilience in Older Adults: A Systematic Review and Meta-Analysis." *International Journal of Geriatric Psychiatry* 32, no. 3: 237–246. <https://doi.org/10.1002/gps.4619>.

Wischmann, T. 1998. *Heidelberger Kinderwunsch-Sprechstunde: Eine Studie zu psychosozialen Aspekten ungewollter Kinderlosigkeit*. Verlag Peter Lang.

Wischmann, T. 2020. "Psychological Impact of Infertility and Assisted Reproduction 1." In *Handbook of Perinatal Clinical Psychology: From Theory to Practice*, 1st ed., edited by R. Quatraro and P. Grusso, 61–81. Routledge. <https://doi.org/10.4324/9780429351990>.

Zani, B., and E. Kirchler. 1993. "Come influenzare il partner: processi decisionali nelle relazioni di coppia." *Giornale Italiano di Psicologia* 20: 247–281.

Zhang, L., W. Gu, X. Jing, et al. 2023. "Predicting the Dyadic Coping Through Self-Esteem Among Infertile Couples Undergoing In Vitro Fertilization and Embryo Transfer: An Actor–Partner Interdependence Model." *Frontiers in Psychology* 14: 1–10. <https://doi.org/10.3389/fpsyg.2023.1127464>.

Zigmond, A. S., and R. P. Snaith. 1983. "The Hospital Anxiety and Depression Scale." *Acta Psychiatrica Scandinavica* 67: 361–370. <https://doi.org/10.1111/j.1600-0447.1983.tb09716.x>.

Zung, W. W. K. 1965. "A Self-Rating Depression Scale." *Archives of General Psychiatry* 12, no. 1: 63–70. <https://doi.org/10.1001/archpsyc.1965.01720310065008>.

Zung, W. W. K. 1971. "A Rating Instrument for Anxiety Disorders." *Psychosomatics* 12, no. 6: 371–379. [https://doi.org/10.1016/S0033-3182\(71\)71479-0](https://doi.org/10.1016/S0033-3182(71)71479-0).

Zurlo, M. C., M. F. Cattaneo Della Volta, and F. Vallone. 2017. "Factor Structure and Psychometric Properties of the Fertility Problem Inventory-Short Form." *Health Psychology Open* 4, no. 2: 1–11. <https://doi.org/10.1177/2055102917738657>.

Zurlo, M. C., M. F. Cattaneo, and F. Vallone. 2019. "The Association Between Stressful Life Events and Perceived Quality of Life Among Women Attending Infertility Treatments: The Moderating Role of Coping Strategies and Perceived Couple's Dyadic Adjustment." *BMC Public Health* 19, no. 1: 1–8. <https://doi.org/10.1186/s12889-019-7925-4>.

Zurlo, M. C., M. F. Cattaneo Della Volta, and F. Vallone. 2020. "Infertility-Related Stress and Psychological Health Outcomes in Infertile Couples Undergoing Medical Treatments: Testing a Multi-Dimensional Model." *Journal of Clinical Psychology in Medical Settings* 27, no. 4: 662–676. <https://doi.org/10.1007/s10880-019-09653-z>.

Zurlo, M. C., M. F. Cattaneo Della Volta, and F. Vallone. 2018. "Predictors of Quality of Life and Psychological Health in Infertile Couples: The Moderating Role of Duration of Infertility." *Quality of Life Research* 27, no. 4: 945–954. <https://doi.org/10.1007/s11136-017-1781-4>.

Exploring Attachment Dynamics in Surrogacy: A Systematic Review

Rebeca Santamaría-Gutiez¹, Eva María González-Albors², Francisco González-Sala² y Laura Lacomba-Trejo^{2*}

¹ Clinical Psychology and Health Unit Service, General Universitary Hospital of Valencia, Valencia, Spain

² Department of Developmental and Educational Psychology, Faculty of Psychology and Speech Therapy, Universitat de València, Valencia, Spain

* Correspondence: laura.lacomba @uv.es

Journal: *Psychiatry International*

Year: 2025

Volume: 6(4)

DOI: <https://doi.org/10.3390/psychiatryint6040145>

Journal Impact Factor (ESCI): 1,1 (Q4)

Reference

Santamaría-Gutiez, R., González-Albors, E. M., González-Sala, F., & Lacomba-Trejo, L. (2025). Exploring attachment dynamics in surrogacy: A systematic review. *Psychiatry International*, 6(4), 145. <https://doi.org/10.3390/psychiatryint6040145>

Exploring Attachment Dynamics in Surrogacy: A Systematic Review

Rebeca Santamaría-Gutiez ^{1,2}, Eva María González-Albors ¹, Francisco González-Sala ³ and Laura Lacomba-Trejo ^{3,*}

¹ Faculty of Psychology and Speech Therapy, Universitat de València, Blasco Ibáñez Avenue, 21, 46010 Valencia, Spain; sangure@alumni.uv.es (R.S.-G.); emagonal@alumni.uv.es (E.M.G.-A.)

² Clinical Psychology Resident, General University Hospital of Valencia, Avenida Tres Cruces, 2, 46014 Valencia, Spain

³ Developmental and Educational Psychology Department, Faculty of Psychology and Speech Therapy, Universitat de València, Blasco Ibáñez Avenue, 21, 46010 Valencia, Spain; francisco.gonzalez-sala@uv.es

* Correspondence: laura.lacomba@uv.es

Abstract

Surrogacy involves a surrogate carrying a baby to transfer to the intended parents after birth. This study examines how surrogacy impacts attachment patterns compared to traditional pregnancies or assisted reproductive technologies. Using PRISMA guidelines, a systematic review of databases like Scopus and PubMed identified nine relevant studies from 806 initial records, involving 1317 participants (115 pregnant women and 118 children). Key variables included maternal-fetal attachment, depression, anxiety, and somatization in surrogates, alongside intended parents' support and children's exploration of their origins. Findings reveal the complexity of attachment dynamics in surrogacy, emphasizing the need for psychological support and preparation to foster secure attachments among surrogates, children, and intended parents.

Keywords: attachment; maternal-fetal attachment; psychological support; surrogacy; systematic review

Academic Editor: Roger C.M. Ho

Received: 27 June 2025

Revised: 31 August 2025

Accepted: 29 October 2025

Published: 16 November 2025

Citation: Santamaría-Gutiez, R.; González-Albors, E.M.; González-Sala, F.; Lacomba-Trejo, L. Exploring Attachment Dynamics in Surrogacy: A Systematic Review. *Psychiatry Int.* **2025**, *6*, x. <https://doi.org/10.3390/xxxxx>

Copyright: © 2025 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Surrogacy is a controversial reproductive method often employed in cases of infertility to establish biological ties with offspring [1]. It can be categorized into traditional and gestational types. In traditional surrogacy, the gestational carrier's eggs are used, making her genetically related to the child. In gestational surrogacy, an egg donor is involved, resulting in no genetic link between the carrier and the embryo [2]. Although both traditional and gestational surrogacy aim to achieve parenthood through assisted reproduction, they differ substantially in their psychological implications. In traditional surrogacy, the genetic link between the surrogate and the child may heighten emotional complexity, making the separation process more difficult and increasing the risk of emotional distress [3]. Gestational surrogacy, by contrast, tends to facilitate emotional distancing due to the absence of a genetic connection, which some surrogates perceive as helpful in preparing for relinquishment [4]. Nonetheless, positive emotions may still emerge during pregnancy regardless of genetic ties, particularly when surrogates feel involved in the pregnancy or connected to the intended parents [5]. These

psychological nuances underscore the importance of considering the type of surrogacy when analyzing attachment patterns and emotional outcomes for all parties involved.

For this reason, surrogacy practices vary considerably across countries, both culturally and legally, and these differences can profoundly influence the relational dynamics between gestational carriers, intended parents, and children. While some countries have adopted clear regulations, others prohibit surrogacy altogether or operate in a legal vacuum, leading to widely heterogeneous experiences and degrees of protection for the parties involved.

In many European countries—including Austria, France, Germany, Italy, Portugal, and Spain—surrogacy is explicitly banned. Others, such as Belgium, the Netherlands, Greece, and the United Kingdom, allow only altruistic surrogacy under strict regulation, excluding any form of commercial agreement. Still, in countries like Poland or the Czech Republic, no specific laws regulate surrogacy, which creates legal uncertainty for all involved [6,7].

Outside Europe, legal frameworks diverge even further. Commercial surrogacy is legal in countries such as Georgia, Ukraine, Russia, Israel, India, and some U.S. states (notably California), while others—including Canada, Australia, and New Zealand—only permit altruistic arrangements [8]. In Spain, the gestational carrier is always considered the legal mother at birth, and intended parents must go through an adoption process after the surrogate formally renounces her maternal rights in court, even when there is no genetic link between the surrogate and the child [9]. This legal approach discourages the domestic use of surrogacy and pushes Spanish citizens to seek such services abroad, often under different legal and ethical standards.

Cultural and legal contexts also shape how surrogacy is experienced, negotiated, and emotionally processed. In societies where surrogacy is stigmatized or framed as morally problematic, both gestational carriers and intended parents may experience higher psychological distress, secrecy, or lack of social support, potentially interfering with the development of secure attachment [10]. Moreover, the presence or absence of regulatory frameworks impacts informed consent, access to psychological support, and the legal certainty of parenthood—all factors that are central to fostering secure emotional bonds.

In this sense, little attention has been given to the psychological well-being of surrogacy on both the gestational carrier and the child [11]. Research indicates that surrogates may develop less attachment to the developing embryo [12]. This emotional detachment might serve as a coping mechanism to avoid forming bonds with the embryo, thereby reducing the emotional impact of relinquishing the child [3].

Attachment theory suggests that the attachment formed during pregnancy generally transfers to the child after birth [13]. According to Bowlby, attachment is an enduring emotional bond that forms in early childhood and guides the individual's expectations in close relationships. Ainsworth later identified different types of attachment based on early caregiver-child interactions: secure, anxious-ambivalent, avoidant, and later, disorganized. These early attachment patterns are considered foundational for socio-emotional development across the lifespan.

In the context of surrogacy, it is important to distinguish between attachment and prenatal bonding. While the term fetal attachment is often used, it has been argued that a more accurate term would be prenatal bond or gestational bonding, as attachment, strictly speaking, refers to a postnatal behavioral system between child and caregiver [14,15]. Prenatal bonding refers to the emotional connection developed by the gestational carrier toward the fetus during pregnancy. This bond may influence later caregiving behaviors and affect the gestational carrier's psychological well-being. Surrogates who do not bond with the embryo may use emotional distancing or avoidance as coping strategies, potentially mitigating feelings of loss when the baby is born [3].

Additionally, it is important to conceptually differentiate between maternal–fetal bonding, parental attachment representations, and child attachment, as each refers to different psychological and developmental constructs. Maternal–fetal bonding describes the emotional experience of the gestational individual during pregnancy and is not considered part of the attachment system as defined in attachment theory. Parental attachment representations refer to the internal models adults develop about close relationships, often based on their own early attachment experiences, which in turn influence their caregiving behavior and sensitivity toward their children [16]. Finally, child attachment refers to the behavioral and emotional strategies infants develop to seek proximity and safety from caregivers, typically classified into secure, avoidant, ambivalent, or disorganized categories.

These three levels—maternal–fetal bonding, parental attachment representations, and child attachment—interact in complex ways, particularly in surrogacy contexts where the gestational carrier and primary caregiver are not the same person. Current research often examines these dimensions separately, but future work should aim to integrate them more coherently to understand how prenatal, parental, and child-level processes jointly contribute to early relational development in surrogacy settings.

Observations indicate that surrogates with a commercial perspective may experience psychological detachment as preparation for emotional separation, though this may lead to long-term difficulties [17,18].

Regarding children born via surrogacy, a longitudinal study found that most do not report negative impacts on their relationships with their parents due to the lack of a genetic or gestational connection [19]. Many parents and children perceive surrogacy positively, with children expressing pride and gratitude for their mothers' roles as surrogates. However, some children have shown ambivalence, anxiety, and sadness about the experience [20].

Recent reviews suggest that gestational carriers might face long-term psychological effects, such as anxiety, depression, or feelings of insecurity [21]. The varying degrees of attachment formed during pregnancy could contribute to these psychological challenges upon relinquishing the child [22].

Considering these complexities, surrogacy presents significant ethical, legal, and psychological implications [21]. It constitutes a multifaceted phenomenon that raises important questions regarding identity, bodily autonomy, and the definition of parenthood. Beyond its legal and biomedical dimensions, understanding attachment dynamics between surrogate carriers and newborns is crucial, as these early bonds can influence both maternal and infant physical and mental health [16]. As surrogacy becomes more prevalent in contemporary society [23], examining its impact on emotional bonding, caregiving representations, and long-term relational adjustment becomes essential [20]. For this reason, this study aims to analyze attachment patterns in surrogacy through a systematic review, exploring its psychological and social implications. The research question guiding this study is: How does surrogacy affect attachment patterns between children born through this method and their intended parents compared to children born through conventional pregnancies or assisted reproductive techniques [24]?

2. Materials and Methods

2.1. Procedure & Ethical Considerations

A qualitative systematic review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines [25]. The corresponding checklist is provided as supplementary material (Table S1). The protocol for this review was registered with PROSPERO (CRD42024534262).

Databases searched included Web of Science, Scopus, PubMed, and ProQuest. The search was conducted in March 2024. Boolean expressions used were as follows: (TS =

(surrogacy OR surrogate motherhood OR assisted reproduction OR gestational carrier OR surrogate mother OR gestational surrogacy) AND TS = (attachment OR bonding OR bond * OR mother attachment OR child attachment)) in Web of Science; (TITLE-ABS-KEY (surrogacy OR surrogate motherhood OR assisted reproduction OR gestational carrier OR surrogate mother OR gestational surrogacy) AND TITLE-ABS-KEY (attachment OR bonding OR bond * OR mother attachment OR child attachment)) in Scopus; noft (surrogacy OR surrogate motherhood OR assisted reproduction OR gestational carrier OR surrogate mother OR gestational surrogacy) AND noft (attachment OR bonding OR bond * OR mother attachment OR child attachment) in ProQuest; and in PubMed using the [Title/Abstract] field (surrogacy OR surrogate motherhood OR assisted reproduction OR gestational carrier OR surrogate mother OR gestational surrogacy) AND (attachment OR bonding OR bond * OR mother attachment OR child attachment).

Inclusion criteria were: (a) studies evaluating factors related to attachment in surrogacy, (b) published in peer-reviewed scientific journals, (c) published in any language, and (d) published from 1959 to 2024.

Exclusion criteria included: (a) grey literature such as conference papers, (b) doctoral theses, (c) narrative reviews, (d) single-case studies, (e) articles not reporting results specific to surrogacy, (f) articles not evaluating attachment, (g) studies analyzing only the epidemiology or prevalence of surrogacy, and (h) articles not primarily focusing on surrogacy. Studies published before 1959 were excluded because this is the earliest year for which indexed records are available in the Web of Science database, which was used as one of the core sources in our systematic search. Additionally, surrogacy as a formalized medical and legal practice did not emerge until the late 1970s, and gestational surrogacy using assisted reproductive technology was first documented in the mid-1980s. Therefore, it is highly unlikely that studies published before 1959 would meet the conceptual and methodological criteria relevant to the current review.

Retrieved articles were uploaded to HubMeta [26], an online platform for screening and data extraction in systematic reviews and meta-analyses. Duplicates were automatically removed. Two researchers (E.M.G.-A. and L.L.-T.) independently reviewed titles and abstracts to exclude studies that did not meet the inclusion criteria. Articles with discrepancies in the blind evaluations of the two researchers underwent detailed individual blind reading and re-evaluation to ensure adherence to the inclusion and exclusion criteria.

To assess inter-rater reliability, Cohen's Kappa (κ) was calculated [27]. Values between -1 and 0.40 are considered unsatisfactory, values between 0.41 and 0.75 are considered satisfactory, and values of 0.76 or greater are considered very satisfactory [28].

Databases searched included Web of Science, Scopus, PubMed, and ProQuest. The search was conducted in July 2025. Boolean expressions used were as follows: (TS = (surrogacy OR surrogate motherhood OR assisted reproduction OR gestational carrier OR surrogate mother OR gestational surrogacy) AND TS = (attachment OR bonding OR bond * OR mother attachment OR child attachment)) in Web of Science; (TITLE-ABS-KEY (surrogacy OR surrogate motherhood OR assisted reproduction OR gestational carrier OR surrogate mother OR gestational surrogacy) AND TITLE-ABS-KEY (attachment OR bonding OR bond * OR mother attachment OR child attachment)) in Scopus; noft (surrogacy OR surrogate motherhood OR assisted reproduction OR gestational carrier OR surrogate mother OR gestational surrogacy) AND noft (attachment OR bonding OR bond * OR mother attachment OR child attachment) in ProQuest; and in PubMed using the [Title/Abstract] field (surrogacy OR surrogate motherhood OR assisted reproduction OR gestational carrier OR surrogate mother OR gestational surrogacy) AND (attachment OR bonding OR bond * OR mother attachment OR child attachment).

2.2. Quality Assessment

The quality of the included studies was independently and blindly assessed by the authors (E.M.G.-A. and L.L.-T.) using an adapted version of the “Quality Assessment Tool for Quantitative Studies” developed by the Effective Public Health Practice Project [29]. This assessment was based on seven criteria: study design, selection bias, withdrawals and dropouts, confounders, data collection, data analysis, and results.

Each study was rated on 4 to 8 components based on these criteria, and an overall score was determined from these ratings. Studies were classified as “strong” if there were no “weak” ratings and at least three “moderate” ratings; “moderate” if there was one “weak” rating or fewer than three “strong” ratings; and “weak” if there were two or more “weak” ratings [30].

The total score was derived by averaging the ratings across the criteria and was categorized as weak, moderate, or strong. Scores ranged from 1 to 5, with 1 indicating low risk and high methodological quality, and 5 indicating high risk and low methodological quality [30].

2.3. Study Selection and Screening

Figure 1 illustrates the study selection process. After conducting the literature search and applying the search criteria, duplicate articles ($n = 1079$) were removed, resulting in 804 articles for initial analysis. During the first selection stage, 778 studies were excluded based on title and abstract evaluation for not meeting the inclusion and exclusion criteria.

The full texts of the remaining 24 articles were then reviewed. The inter-rater reliability between the two independent evaluators (E.M.G.-A. and L.L.-T.) for screening titles and abstracts was excellent ($\kappa = 0.89$).

In the second selection phase, 15 papers were excluded: 7 for not providing the evaluated measures or variables, 7 for being theoretical articles or reviews, and 1 for being a case report. Consequently, 11 studies were selected for final analysis. The agreement between evaluators at this stage was also excellent ($\kappa = 0.90$).

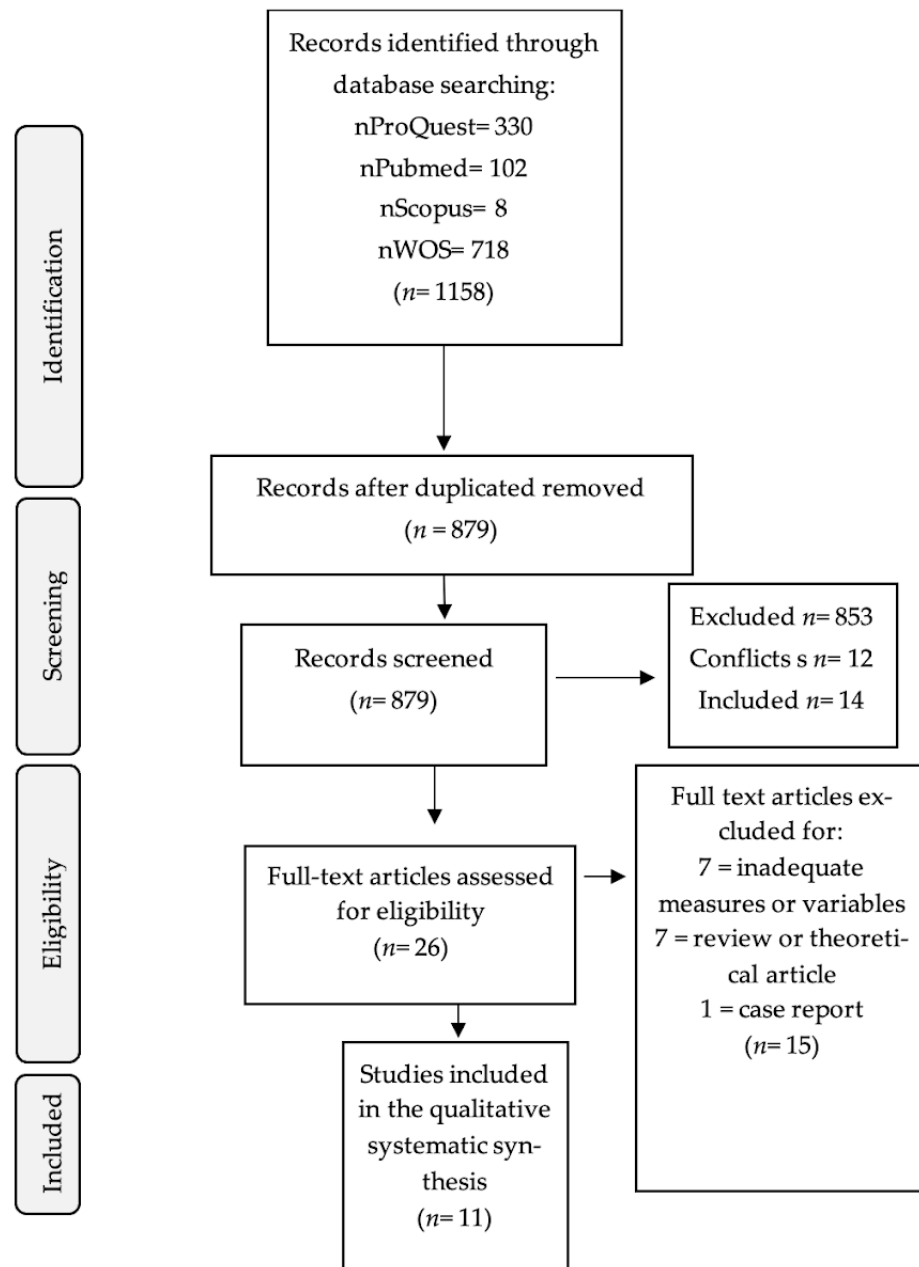


Figure 1. Flowchart for study selection.

3. Results

3.1. Study Characteristics

3.1.1. Participants

Participant characteristics are summarized in Table 1. The eleven selected articles included a total of 1767 participants, comprising women, men, and children. Among the women ($n = 528$), 115 (6.50%) were gestational carriers [12, 31, 32], 143 (8.09%) were mothers who did not conceive through surrogacy [12,31–33], and 270 (15.28%) were lesbian mothers who conceived through assisted reproductive techniques, specifically donor insemination [33–36].

Table 1. Main Results.

Author and Year	Country and Participants	Variables	Design	Main Results
Fischer & Gillman (1991) [12].	USA 42 women (21 GS; 21 pregnant but not through GS)	- Sociodemographic and clinical variables: age, place of birth, marital status, educational level, socioeconomic status, religious affiliation, duration of pregnancy, and average number of children born. - Psychological variables: number of interpersonal resources and perceived support level, maternal–fetal attachment, maternal attitudes, self-perception, and pregnancy-related behavior.	Observational, descriptive, cross-sectional, comparative.	Non-gestational mothers through surrogacy were more bonded to the unborn baby in: differentiation of the “self” from the fetus ($t(40) = 8.14, p < 0.05$), interaction with the baby ($t(40) = 6.91, p < 0.05$), and attribution of characteristics and intentions to the baby ($t(40) = 2.07, p < 0.05$). Surrogate mothers had more positive attitudes towards body image ($t(40) = 2.07, p < 0.05$) and attitudes towards sex ($t(40) = 2.82, p < 0.05$). They had more negative attitudes towards pregnancy and the baby ($t(40) = 11.58, p < 0.05$).
Lorceau et al. (2015) [32].	France N = 76 (44 GS; 32 mothers but not through GS)	- Sociodemographic and clinical variables: age, nationality, age at first GS/pregnancy (comparison group), type of GS, number of children by type of GS, number of biological children, number of children by non-gestating parents’ sex, desire to repeat GS experience, and previous losses before GS. - Psychological variables: empathy (personal distress, empathic concern, perspective taking, and fantasy scale), emotional state (depression and anxiety), desirability scale (social desirability), and attachment (attachment quality and attachment quantity).	Observational, cross-sectional.	Anglo-Saxon and European surrogate mothers had lower maternal–fetal attachment ($AGEST \delta = 0.95$) and quality ($AGEST \delta = 1.52$), and less empathy ($AGEST \delta = 1.04, p < 0.05$). The type of surrogacy had effects on the number of gestational or traditional children born ($H(2) = 13.833, p < 0.001$), as well as on the quality of maternal–fetal attachment.
Lamba et al. (2018) [31].	India 119 women (50 GS; 69 pregnant but not through GS)	- Sociodemographic variables: age, educational level, marital status, number of children, income level, religious affiliation. - Psychological variables: anxiety, depression, stress, emotional and instrumental prenatal bond, GS experiences including concealment, criticism, living situation, perceived support, satisfaction with payment, meeting the newborn, and meeting the intended parents.	Correlational, longitudinal (T1 between 4–9 months of pregnancy; T2 between 4–6 months after birth).	Surrogate mothers had more depression before ($\chi^2(1) = 12.9, p < 0.001$) and after ($\chi^2(1) = 6.12; p = 0.01$) childbirth than non-surrogate mothers ($p < 0.02$), lower maternal–fetal attachment ($F(1, 116) = 4.19, p = 0.04$) but higher attention and care towards the unborn baby ($F(1, 116) = 4.27, p = 0.04$).
Carone, Baiocco et al. (2020) [35].	Italy 387 children (33 born via GS; 37 children born via insemination; 317 control group) and their families (66 same-sex parents; 74 lesbian parents;	- Sociodemographic and clinical variables: child’s sex, number of siblings, parents’ ethnic background, parents’ residence, parents’ educational level, parents’ occupation, parents’ employment status, duration of the couple’s relationship, marital status, genetic parenthood, child’s age at the visit, parents’ age, and household income. - Psychological variables: Identification of children’s primary/secondary attachment figures, attachment, support seeking and affiliative proximity seeking, parenting practices and beliefs.	Observational, cross-sectional.	The security of children’s attachment did not differ by family type (gay fathers or lesbian mothers) ($F(1, 135) = 2.04, p = 0.16, \eta^2 = 0.02, d = 0.30$). Significant associations between attachment security and positive parental control ($b = 0.04, t(117) = 1.96, p = 0.053$), parental warmth ($b = 0.09, t(99) = 4.69, p < 0.001$), parental responsiveness ($b = 0.10, t(130) = 4.43, p < 0.001$), negative parental control ($b = -0.08, t(106) = -2.80, p < 0.01$), parental rejection ($b = -0.10, t(122) = -3.18, p < 0.01$) and willingness to serve as an attachment figure ($b = 0.19, t(127) = 4.97, p < 0.001$). The willingness of parents to serve as an attachment figure and parental behaviors predicted children’s attachment security better than family type ($b = 0.03, t(66) = 0.74, p = 0.46$).

	634 heterosexual families).			
Carone (2022) [37].	Italy 59 single-parent families (31 same-sex and 28 heterosexuals via GS).	- Sociodemographic and clinical variables: child's gender, number of siblings, family residence, father's ethnic background, father's educational level, father's employment status, father's marital status, non-parental caregivers involved in shared parenting, child's age, father's age, and annual household income. - Psychological variables: coparenting, child attachment.	Observational, cross-sectional.	There are no significant differences in: co-parenting quality in families of origin between single gay fathers and single heterosexual fathers ($F(1, 57) = 0.257, p = 0.614, \eta^2 = 0.004$); children's attachment security between children of single gay and heterosexual fathers ($F(1, 55) = 0.317, p = 0.860, \eta^2 = 0.001$), nor between boys and girls ($F(1, 55) = 0.586, p = 0.447, \eta^2 = 0.011$); family alliance by family type ($Wilks' \lambda(16, 40) = 0.727, p = 0.536, \eta^2 = 0.273$), nor the child's gender ($Wilks' \lambda(16, 40) = 0.739, p = 0.590, \eta^2 = 0.261$), nor their interaction ($Wilks' \lambda(16, 40) = 0.784, p = 0.787, \eta^2 = 0.216$). Significant relationship between co-parenting quality in the family of origin and children's attachment security, through conflict observed during family interactions (LTP) (<i>estimated point</i> = 0.561, <i>SE</i> = 0.269, 95% <i>CI</i> [0.084, 1.121], $p = 0.037$). No relationship between co-parenting quality in the family of origin and children's attachment security through support observed during family interactions.
Carone et al. (2021) [38].	Italy 80 same-sex parents with GS children (30 during COVID-19 and 50 before).	- Sociodemographic and clinical variables: parents' age, gender, sexual orientation, country of residence, annual household income, education and employment, number, gender, age, and conception method of the child(ren), the country where GS took or is taking place and expected birth date of the baby. - Psychological variables: parent-child bond, parents' mental health, social support, and stressful events.	Observational, cross-sectional.	A lower father-child bond was observed during the COVID-19 pandemic ($SE = 15.45, CI\ 2.5-97.5\% = 10.20, 73.43, p = 0.010$), more depression ($SE = 5.53, CI\ 2.5-97.5\% = 4.89, 25.66, p = 0.004$), somatization ($SE = 6.06, CI\ 2.5-97.5\% = 4.91, 30.96, p = 0.006$) and anxiety ($SE = 5.92, CI\ 2.5-97.5\% = 7.70, 31.10, p = 0.001$), than previously.
Carone, Manzi et al. (2024) [39].	Italy 30 children born via GS and their 60 same-sex parents.	- Sociodemographic and clinical variables: child's gender assigned at birth, number of siblings, family residence, locations where surrogacy agreements were made, egg donors' identity status at t1, disclosure level at t1, annual household income, duration of the couple's relationship, father's ethnicity, father's education, father's occupation, father's employment status, child's age at t1, child's age at t2, and father's age. - Psychological variables: information about GS, parents' AAI mental coherence, and children's exploration of their surrogacy origins.	Observational, longitudinal (T1 mean age of 8 years and 3 months ($SD = 1.68$). T2 mean age of 9 years ($SD = 1.69$)).	No significant differences were found between boys and girls in the exploration of their surrogacy origins ($F(1, 28) = 0.308, p = 0.583, \eta^2 = 0.011$), nor in mind coherence between genetic parents, non-genetic parents, and parents who did not disclose their (non) genetic status ($\chi^2(2) = 0.443, p = 0.801, \varepsilon^2 = 0.008$). The interaction between disclosure and parents' mind coherence at t1 predicted greater exploration in children ($\beta = 0.296, p = 0.013$). Parents' mind coherence at t1 ($\beta = 0.220, p = 0.065$), and children's age at t2 ($\beta = 0.213, p = 0.096$), were not significant. Parents with greater coherence in their interviews (with an AAI range between 1.78 and 6.30) had children who explored their surrogacy origins more deeply.
Carone, Barone et al. (2020) [40].	Italy 30 children born via GS aged 7 to 13 years and their 66 same-sex parents.	- Sociodemographic and clinical variables: age, child's sex, number of siblings, parents' ethnicity, family residence, parents' education, parents' occupation, parents' employment status, duration of the couple's relationship, child's age at t1, child's age at t2, parents' age, and annual household income. - Psychological variables: children's attachment and exploration of their surrogacy origins.	Observational, longitudinal (T1 mean age of children was 8.3 years, T2 was 18 months later). Observational, cross-sectional, non-experimental.	The age of the children, main and interactive effects of parental support, and children's attachment security as predictors explained children's exploration of their origins, with high variance (TCD = 0.34) and low BIC (163.22). Parental scaffolding * and attachment security are interrelated ($\beta = 0.23, p = 0.048$) and affect how children explore their origins. Children with greater attachment security reported more exploration of their surrogacy origins ($\beta = 0.30, p = 0.009$), but only when there were higher levels of parental scaffolding ($\beta = 0.20, p = 0.072$). Along with the child's age factor ($\beta = 0.02, p < 0.001$), these predicted greater exploration.

Carone, Mirabella et al. (2023) [34].	30 lesbian mother dyads via donor insemination, 25 same-sex father dyads via GS, 21 heterosexual father dyads via gamete donation, and 76 children.	- Sociodemographic and clinical variables: child's gender assigned at birth, parents' relationship duration, child's age, number of children, parents' ethnic background, parents' educational level, employment status, parents' age, and net annual income. - Psychological variables: parents' attachment and reflective functioning. Children's attachment and verbal abilities.	Observational, cross-sectional.	Children of lesbian mothers ($\beta = 0.46$, $SE = 0.34$, $p = 0.180$), gay fathers ($\beta = -0.01$, $SE = 0.36$, $p = 0.970$), and heterosexual parents showed similar levels of attachment security. However, there were no differences based on the parents' gender ($\beta = -0.15$, $SE = 0.20$, $p = 0.450$), sexual orientation ($\beta = 0.22$, $SE = 0.26$, $p = 0.399$), or their interaction ($\beta = -0.38$, $SE = 0.36$, $p = 0.289$) in mind coherence. Mothers and fathers showed similar levels of reflective functioning (RF) ($\beta = 0.19$, $SE = 0.17$, $p = 0.258$). There were no differences in the parents' sexual orientation ($\beta = 0.43$, $SE = 0.21$, $p = 0.040$), with gay fathers and lesbian mothers showing higher levels of RF than heterosexual parents (<i>main difference</i> = 0.77, $SE = 0.27$, $p = 0.027$). There was a significant interaction between parents' gender and sexual orientation ($\beta = 0.69$, $SE = 0.33$, $p = 0.039$). There were no differences between family types in the distribution of secure and insecure attachment patterns in children according to the FFI, nor in comparisons with international and national data. There is a significant indirect effect of parents' mind coherence on children's attachment security, mediated by parents' reflective functioning. Parents with greater mind coherence achieved higher levels of RF, and higher RF levels were associated with greater children's attachment security according to the FFI.
Carone, Quintigliano, Benzi & Brumariu (2025) [36].	Italy 148 parent-child dyads (38 lesbian mother families through sperm donation and 36 gay father families through surrogacy, all with children).	- Sociodemographic and clinical variables: child's gender assigned at birth, length of couples' relationship duration, child's age, number of children, parents' ethnic background, parents' educational level, biological parenthood, parents' age, and net annual income. - Psychological variables: Identification of the Primary and Secondary Attachment Figures, Observed Parental Sensitivity, Child-Parent Attachment Security.	Observational, longitudinal (T1 mean age 36 months (SD = 9.16). T2 mean age of 48.38 months (SD = 9.22).	Mixed model analyses showed that child gender was not associated with parental sensitivity ($p = 0.679$) or attachment security ($p = 0.888$). Additionally, most parents—approximately 79% of lesbian mothers and 75% of gay fathers—exceeded the alternative sensitivity threshold of 0.30. Using a threshold of 0.32, most children in both family types were classified as securely attached (67.11% in lesbian mother families and 68.06% in gay father families). Analyses examining the role of parent gender and attachment figure role (primary vs. secondary) indicated that all groups scored above the sensitivity and attachment security thresholds. Children showed greater attachment security with, and parents demonstrated greater sensitivity in, the context of the primary attachment figure. However, no significant effects emerged for parent gender or for the interaction between parent gender and attachment figure role. Structural equation modeling (SEM) analyses explored the longitudinal associations between parental sensitivity at Time 1 and child-parent attachment security at Time 2. Across all models, parental sensitivity was positively associated with later attachment security. When stratified by parent gender, the association was moderate in lesbian mother families (estimate = 0.34, $p < 0.001$) and small in gay father families (estimate = 0.25, $p < 0.001$). Analyses stratified by attachment figure role found a small but significant association between parental sensitivity and attachment security for both primary (estimate = 0.29, $p < 0.001$) and secondary attachment figures (estimate = 0.25, $p = 0.005$), with no significant difference in strength between the two roles. When further stratifying by both parent gender and attachment figure role, the strongest association was observed for primary lesbian mothers (estimate = 0.39, $p = 0.001$), followed by secondary lesbian mothers (estimate

			= 0.27, $p = 0.035$), primary gay fathers (estimate = 0.24, $p = 0.001$), and secondary gay fathers (estimate = 0.22, $p = 0.072$). Despite these variations, chi-square difference testing indicated that the strength of the association did not differ significantly across groups.	
Quintiliano, Carone, Speranza & Lingiardi (2025) [33].	Italy 152 parents (i.e., 60 lesbian mothers, 50 gay fathers, 42 heterosexual parents) and their 76 children	- Sociodemographic and clinical variables: child's gender assigned at birth, parent biological (un)relatedness. - Psychological variables: Identification of the Primary and Secondary Attachment Figures, Parents' Attachment state of mind, Parents' Reflective Functioning, Parenting Stress, Parent-Child relation self-efficacy, Parental Acceptance-Rejection, Parent Positivity, Social Desirability.	Observational, cross-sectional.	There were no significant differences in children's choice of one or both parents as a primary attachment figure based on child gender ($\chi^2(1) = 0.03$, $p = 0.854$) or parental biological relatedness ($\chi^2(1) = 1.10$, $p = 0.293$). Mothers were more likely than fathers to be chosen as a primary attachment figure ($\beta = 56.74$, $p = 0.019$). Gay fathers were more likely to be selected than heterosexual parents ($\beta = 36.29$, $p = 0.024$). Parental reflective functioning (RF) was positively associated with being identified as a primary attachment figure ($\beta = 15.47$, $p = 0.019$). This association was moderated by parent gender. RF was a significant predictor only for fathers ($\beta = 15.47$, $p = 0.019$), but not for mothers ($p = 0.113$). The interaction between family type and RF showed that RF significantly predicted children's choice only in lesbian mother families ($\beta = 23.14$, $p = 0.002$). Gay fathers who reported lower levels of parental rejection were more likely to be identified as primary attachment figures ($\beta = 0.12$, $p = 0.024$), while this association was not significant for lesbian mothers or heterosexual parents. The final model accounted for a substantial proportion of variance in children's choice of primary attachment figure ($R^2_{conditional} = 0.55$), highlighting the relevance of parents' psychological functioning, especially RF and acceptance-rejection patterns, over demographic or structural factors like gender or biological relatedness.

Note: * Parental scaffolding (the parents' efforts to accept, encourage, and emotionally support the expression of children's thoughts and feelings).

Among the men ($n = 566$), 475 (26.88%) were gay fathers who used surrogacy [33–36,38–40], and 91 (5.15%) were heterosexual fathers, with 28 through surrogacy [37] and 63 through assisted reproductive techniques, specifically gamete donation [33,34].

Children ($n = 673$) participated in the studies, comprising 38.09% of the sample. Specifically, 179 (26.60% of 673) were born through surrogacy [33–40], 67 (9.96% of 673), through donor insemination [33–35], 21 (3.12% of 673) through gamete donation [34], and the remaining 317 (47.10% of 673) were a control group of children born conventionally [35] and 21 (3.12% of 673) from not specified ART [33].

Three of the eleven articles included gestational carriers [12,31,32], six included both parents and children born through assisted reproductive methods [33–36,39,40], and two included only parents through assisted reproduction [37,38].

3.1.2. Sample Selection and Research Design

For sample selection, participants in five studies were recruited through internet forums [32,35,37,39,40]. Additionally, nine studies used surrogacy contact associations [32–40]. Specifically, five studies involved “Rainbow Families,” the primary association of LGBTQ+ parents using assisted reproduction in Italy [33–36,38–40]. Three studies recruited through surrogacy agencies [12,31,32], four through same-sex parenting events [35,36,38,40], and eight used snowball sampling [33–40].

Regarding research designs, four studies were longitudinal, with two evaluations each [31,36,39,40]. One study evaluated during gestation and after birth [31], while two studies evaluated years after birth [36,40]. The average evaluation period was 16 months, with a range of 13 to 18 months between evaluations.

The remaining seven studies were cross-sectional [12,32–35,37,38].

3.1.3. Validity and Reliability of the Assessment Tools

Multiple instruments with varying degrees of validity and reliability were used, many of which were adapted or validated for the specific cultural and linguistic contexts of the samples analyzed.

Attachment

Adult Attachment Interview (AAI; [16,41]). The instrument was applied in studies by Carone et al., (2023) [34], Carone et al. (2023) [39] and Quintigliano et al. (2025) [33]. In both cases, the procedure for transcribing and coding responses is detailed, which involves the participation of two independent and trained coders who used the coding scheme proposed by Main et al. (2002) [16]. It is reported that, in the three studies, the agreement between evaluators was $\kappa = 0.86$ ($p < 0.001$) for the three main classifications, and $\kappa = 0.81$ ($p < 0.001$) for the unresolved status/CC category.

Maternal–Fetal Attachment Scale (MFAS; [42]). Fischer & Gillman (1991) [12] reported that the original scale had validity coefficients between 0.61 and 0.83 for the subscales and the overall scale, as well as validity coefficients between 0.29 and 0.60 between the subscales and Cronbach’s alphas between 0.52 and 0.73 for the subscales and 0.85 for the overall scale in the study by Cranley (1981) [42]. A modified version of the MFAS with yes/no response options to aid understanding by the participants was applied by Lambda et al. (2018) [31], reporting Cronbach’s alphas of 0.74 and 0.59 for Emotional Prenatal Bonding and Instrumental Prenatal Bonding, respectively.

Interview for the Identification of the Primary and Secondary Attachment Figures. Carone et al. (2025) [36] applied an interview which was adapted from the original version created by Hazan and Zeifman (1994) [43] and administered individually to each parent, following the sensitivity task.

Attachment Q-Set (AQS; [44]). It was applied in Carone et al. (2025) [36], reporting an interrater reliability (rICC, absolute agreement) on 25% of the videos ($n = 37$) was 0.81.

The Attachment Figure Interview [45]. The authors [33] did not report any information about the reliability of the instrument in their study.

Security Scale Questionnaire [46]. Carone (2022) [37] and Carone et al. (2020) [35] applied this instrument, providing references about moderate stability over time and convergence with observations of children's interactions with parents in child and adolescent samples. Carone et al. (2020) [35] applied the Italian validation [47,48]. Cronbach's alpha was 0.78 in Carone et al. (2020) [40] study, 0.80 and 0.78 for children of gay and heterosexual single fathers, respectively, in Carone (2022) [37] and 0.85, 0.71, and 0.80 for safe haven support, secure base support, and total attachment security, respectively, in Carone et al. (2020) [35] study.

Paternal Antenatal Attachment Scale (PAAS; [49,50]). Carone et al. (2021) [38] and Carone et al. (2023) [39] applied the Italian validation of this scale, reporting Cronbach's alpha of 0.81.

Psychopathology

Patient Health Questionnaire (PHQ-9; [51,52]). Carone et al. (2021) [38] reported a Cronbach's alpha of 0.79 in their study.

Patient Health Questionnaire (PHQ-15; [53]). In Carone et al. (2021) [38] study, Cronbach's alpha was 0.83.

General Anxiety Disorder scale (GAD-7; [54]). A Cronbach's alpha of 0.81 was reported in Carone et al. (2021) [38] study.

Anxiety, Depression and Stress Scale (ADSS; [55]). Lambda et al. (2018) [31] applied this instrument, developed in India and the standardization included participants from illiterate and marginalized groups. The internal consistency of the original scale was 0.81 and >0.85 in Lambda's study [31].

Hospital Anxiety and Depression Scale (HADS; [56]). The authors [32] did not report any information about the reliability of the instrument in their study.

Other Variables

Personal Resource Questionnaire (PRQ; [57]). The authors [12] report that Brandt and Weinert's (1981) [57] study found an internal consistency of 0.89 for part 2 of the scale and between 0.61 and 0.77 for its subscales. In addition, validity coefficients between 0.21 and 0.23 ($p < 0.004$) were found for part 1, and between 0.30 and 0.44 ($p < 0.001$) when correlating the PRQ with measures of family functioning and marital adjustment. However, they do not report data on the internal consistency or validity of the instrument in their study.

Reflective Functioning Scale (RFS; [58]). In the studies conducted by Carone et al. (2023) [34], as well as by Quintigliano et al. (2025) [33], the instrument following the AAI-RF system proposed by Fonagy et al. (1998) [58] was applied by two independent and certified coders. Both studies reported interrater reliability according to the intraclass correlation coefficient of $\kappa = 0.83$ ($p < 0.001$).

Friends and Family Interview (FFI; [59]). It was administered by Carone et al. (2023) [34], by two certified coders, resulting in interrater reliability of $\kappa = 0.84$ ($p < 0.001$) for categorical agreement on FFI patterns. The authors mentioned that the FFI has demonstrated good interrater reliability and construct validity across studies and has also been applied to diverse samples of children younger than 8 years, although it was originally developed for children older than 8 years.

Verbal Comprehension Index of the Wechsler Intelligence Scale for Children, IV version (VCI-WISC-IV; [60,61]). The authors [34] did not report any information about the reliability of the instrument in their study.

Parenting Stress Index–Short Form (PSI; [62,63]). Cronbach's alpha was 0.92 in Quintigliano et al. (2025) [33] study.

Parent–Child Relational Self-Efficacy questionnaire (PCRSE; [64,65]). Quintigliano et al. (2025) [33] reported that the composite reliability of the PCRSE was 0.88 in their study.

The Parental Acceptance-Rejection Questionnaire–Short Form (PARQ–SF; [66]). Cronbach’s alpha was 0.77 in Quintigliano et al. (2025) [33] study. Furthermore, authors pointed that it has been found to have good reliability coefficients, homogenous effect sizes [67], and good convergent and discriminant validity [66].

The Positivity Scale (POS; [68]). Cronbach’s alpha was 0.81 in Quintigliano et al. (2025) [33] study.

Maternal Adjustment and Maternal Attitudes Questionnaire [69]. In Fischer & Gillman’s (1991) [12] study, pointed out that criterion-related validity reported by Kumar et al. (1984) [69] with student’s was t of 3.03 to 6.69, $p < 0.001$ and $p < 0.005$, for four of the subscales, test retest reliability coefficients ranged from 0.81 to 0.95, and split-half reliability coefficients ranged from 0.72 to 0.82 for the subscales.

25-item short version [70] of the Maternal Behavior Q-Sort (MBQS; [71]). In Carone et al. (2025) [36] study, the instrument has a threshold of 0.30 for sensitivity predicting attachment security and the interrater reliability (rICC, absolute agreement) on 25% of the videos ($n = 37$) was 0.86.

Coparenting in the Family of Origin [72]. In Carone’s study (2022) [37], Cronbach’s alphas were 0.87 and 0.89 for gay and heterosexual single fathers, respectively.

Family Alliance Assessment Scale (FAAS), version 6.3 [73]. This instrument was applied in Carone’s (2022) [37] study by a single reliable coder. To test interrater reliability, 25% of the videos were coded by a second reliable coder, reporting *Cohen’s* $\kappa = 0.81$ and 0.72 for the family alliance; overall, 15 scale scores, respectively, $p < 0.001$.

Parental Scaffolding During Surrogacy-Related Discussions [74,75]. Carone et al. (2020) [40] reported applying this instrument by two independent coders, resulting in an interrater reliability of $\kappa = 0.79$.

Interview about Children’s Exploration of Their Surrogacy Origins. An adaptation of Minnesota/Texas Adoption Project [76,77] interview was applied by Carone et al. (2020) [40] and Carone et al. (2023) [39]. In their study, a second coder rated 30% of the interviews ($n = 9$), resulting in an interrater reliability of $\kappa = 0.7$.

Multidimensional Scale of Perceived Social Support [78,79]. In the Carone et al. (2021) [38] study, Cronbach’s alpha was 0.90.

Life Events Inventory [80]. The authors [38] did not report any information about the reliability of the instrument in their study.

Interpersonal Reactivity Index (IRI; [81]). No data about the reliability of the instrument was reported by Lorenceau et al. [32]

Important People Interview (IPI; [82,83]). No data about the reliability of the instrument was reported by Carone et al. (2020) [35].

Childrearing Practices Q-set (CRP; [84]). Carone et al. (2020) [35] reported that Cronbach’s alphas were 0.72 and 0.71 for mothers and fathers, respectively, in their study.

Etch-A-Sketch task [85] and Co-Construction task [86]. Carone et al. (2020) [35] coded the sessions using the Parent–Child Interaction System (PARCHISY; [87]) that has been widely used with children with typical behavior as well as those with behavioral and/or emotional problems. The intraclass correlations (ICC, single measure) for positive control, negative control, warmth, rejection, and parent’s responsiveness to child were 0.84, 0.79, 0.81, 0.72, and 0.86, respectively.

In general terms, the instruments mentioned showed satisfactory evidence of validity and reliability in the various linguistic and cultural contexts of the studies analyzed. When necessary, linguistic and cultural adaptations were made, such as translation and back-translation processes, elimination of irrelevant items, and the use of certified and trained coders, to ensure the accuracy and consistency of the measurements. However, some studies did not provide complete information on cultural adaptation or specific

psychometric properties for their samples, which represents a limitation to be considered when interpreting the results. Furthermore, several of the instruments used in the studies analyzed do not have specific psychometric validation in surrogates.

3.1.4. Variables: Attachment Evaluation

The studies evaluated a range of dependent variables, with a focus on attachment evaluation. Six studies assessed child attachment [34,35,37–40] using the modified SS Questionnaire [47,48,88], the Paternal Prenatal Attachment Scale (PAAS; [49,50]), and interviews with friends and family (FFI; [59]). One study [33] assessed child–parent attachment by applying Attachment Figure Interview [45]. One study [36] assessed child–parent Attachment Security using Attachment Q-Set (AQS; [44]).

Maternal–fetal attachment was evaluated in three studies [12,31,32] using the Maternal–Fetal Attachment Scale [42] and the Maternal Prenatal Attachment Scale (MAAS; [49]). Additionally, parental attachment states were measured using the Adult Attachment Interview (AAI; [16,41]) in four studies [33,34,39]. Parental identification of attachment figures and their willingness to act as a reference figure were also assessed [33,35,36].

3.2. Main Results

3.2.1. Attachment

Two studies [12,31] reported that surrogate gestational carriers exhibited a lower maternal–fetal bond compared to the control group. This diminished bond was characterized by reduced emotional connection, less interaction, fewer attributions of characteristics and intentions to the unborn baby, and less differentiation between the “self” and the unborn baby.

Another study [32] found that the type of surrogacy influenced the quality of maternal–fetal attachment, and the bond with the intended parents affected the number of gestational babies born. Attachment security was found to impact children’s exploration of their origins through surrogacy [40]. It did not differ by family type or surrogacy method, whether for gay fathers or lesbian mothers [35]. Additionally, attachment security was predicted by parents’ willingness to act as attachment figures and their parenting behaviors [35]. Furthermore, another study found a positive relationship between the quality of co-parenting experienced by single parents in their families of origin and attachment security in their own surrogacy families [37], indicating that co-parenting influences the attachment between parents and children in surrogacy [38].

In contrast, other studies [33,34,36] found no significant differences in the distribution of attachment patterns among children born through surrogacy compared to those born through other assisted reproductive methods or from the general population. One study [36] found that over 60% of children were securely attached in both types of family: 67.11% of children born through assisted reproductive methods in lesbian mother families and 68.06% of children through surrogacy in gay father families.

A positive relationship (moderate in lesbian families and small in gay families) between parental sensitivity and later attachment security was found across different parent genders and attachment figure role [36].

3.2.2. Pregnancy Experience and Support

Gestational surrogates exhibited more positive attitudes toward their body image and sexual health [12] and demonstrated higher levels of attention and care for the unborn baby [31]. However, they also reported more negative attitudes toward pregnancy and the baby compared to the control group [12].

Regarding support, surrogates perceived less social support compared to non-surrogate mothers [12].

3.2.3. Psychopathology

Three studies assessed depression, anxiety, and somatization. One study found that the nationality of surrogate mothers influenced their levels of depression [32]. Lamba and colleagues (2018) [31] observed that surrogate gestational carriers exhibited higher levels of depression compared to the control group of mothers during pregnancy and after childbirth. Additionally, surrogate fathers experienced higher levels of depression during the pandemic compared to gay fathers who had children before the pandemic [38].

Regarding anxiety, one study found no significant differences between surrogate carriers and other types of mothers during pregnancy or after childbirth [31].

3.2.4. Influential Variables

Age was found to affect both gestational and traditional surrogacy, as well as the number of gestational children and surrogacy for gay couples [32]. Similarly, the type of surrogacy influenced the number of gestational or traditional children born [32].

3.2.5. Process of Exploring Origins

The age of the children, attachment security, and parental scaffolding and support [40] were significant predictors of greater exploration, the interaction between information disclosure and parental mental coherence predicted higher levels of exploration in children [39].

3.2.6. Cultural Context

In terms of cultural context, Anglo-Saxon and European surrogate mothers showed lower levels of maternal–fetal attachment, attachment quality, and empathy [32].

3.2.7. Contextual Factors

Carone and colleagues [38] observed that the COVID-19 pandemic significantly affected the father-child bond in surrogacy families. Surrogate fathers experienced higher levels of anxiety and increased somatization compared to those who had children before the pandemic [38].

3.3. Quality Assessment

Table 2 presents the quality ratings assigned to the studies. The average quality score was 1.98, indicating generally moderate quality across all evaluated studies. Quality scores range from 1 to 5, with 1 representing the highest quality (lowest risk of bias) and 5 representing the lowest quality (highest risk of bias). The quality assessment was conducted by one evaluator (E.M.G.-A.).

Table 2. Quality Assessment.

Overall Rating	Data Reporting	Data Analysis	Data Collection	Confounding Factors	Representativeness ii	Representativeness ss	Design	First Author
Low-moderate	1	1	1	2	N/A	4	4	Fischer & Gillman (1991) [12].
Low-moderate	1	1	1	2	N/A	3	4	Lorenceanu et al. (2015) [32].
Low-moderate	1	1	1	2	2	3	2	Lamba et al. (2018) [31].
Low-moderate	1	1	1	2	2	3	2	Carone, Baiocco et al. (2020) [40].
Low-moderate	1	1	1	2	N/A	2	4	Carone, Barone et al. (2020) [35].
Low-moderate	2	1	1	2	N/A	3	4	Carone et al. (2021) [38].
Low-moderate	2	1	1	2	N/A	3	4	Carone (2022) [37].
Low-moderate	2	1	1	2	2	3	2	Carone, Manzi et al. (2023) [39].
Low-moderate	2	1	1	2	N/A	3	4	Carone, Mirabella et al. (2023) [34].
Low-moderate	1	1	1	2	2	3	2	Carone, Quintigliano et al. (2025) [36].
Low-moderate	1	1	1	2	N/A	3	4	Quintiliano et al. (2025) [33].

Although the “Quality Assessment Tool for Quantitative Studies” does not provide a numerical scoring system, the classification of studies followed established guidelines based on the presence of weak, moderate, or strong ratings across key domains. The most commonly lacking criteria among the included studies were the absence of randomized controlled designs, limited use of control or comparison groups, and the cross-sectional nature of many designs, which reduces the ability to assess temporal and causal relationships. Additionally, some studies did not clearly report strategies to control for confounders or had limited reporting of dropout rates. For future research, we recommend employing standardized and validated instruments, adopting longitudinal designs when feasible, and increasing the use of comparison groups to improve internal validity and interpretability of results.

4. Discussion

This study aims to understand how surrogacy affects attachment patterns between children born through this technique and their intended parents compared to children born through conventional pregnancies or assisted reproductive methods. The main findings indicate that maternal–fetal attachment and attachment security are influenced by various factors, including the type of surrogacy, the quality of the bond with intended parents, the parents’ willingness to act as attachment figures, their parenting behaviors, the stressful experience of the COVID-19 pandemic, and the quality of co-parenting.

Firstly, surrogate mothers show a weaker maternal–fetal bonding compared to women with their own pregnancies. This weaker bonding is characterized by reduced emotional connection, less interaction and little attribution of characteristics or intentions to the baby [12,31,32]. This phenomenon could be understood as an adaptive psychological mechanism to protect against the planned separation from the baby. This adaptive strategy also carries risks, as evidenced by previous studies suggesting that this type of emotional distancing can lead to difficulties in emotional regulation and risky behaviors [89]. Likewise, the type of surrogacy (traditional vs. gestational) and the relationship with the intended parents have been found to significantly influence the quality of attachment during gestation, underscoring the importance of the pre-birth context in shaping early emotional bonding [32]. Importantly, recent studies highlight that prenatal bonding not only influences maternal well-being during pregnancy but also predicts the quality of mother–infant bonding after birth, underscoring the continuity between pre- and postnatal processes [90,91]. Evidence suggests that maternal prenatal anxiety can undermine bonding during pregnancy, which subsequently predicts poorer maternal–infant bonding in the first months of life and, in turn, is linked to toddlers’ externalizing and emotional difficulties [90]. This highlights the mediating role of postnatal bonding in the relationship between maternal prenatal distress and later child socio-emotional outcomes. Likewise, maternal–infant bonding after birth has been shown to be influenced by a range of psychological and social factors. Depressive and post-traumatic stress symptoms, sleep disturbances, and delivery-related complications are consistently

associated with weaker bonding, whereas partner satisfaction, social support, and previous parenting experience emerge as protective factors [92]. Therefore, it seems advisable to monitor throughout pregnancy for possible medium- and long-term psychological complications in the pregnant mother.

In relation to infant attachment, the evidence collected suggests that children born by surrogacy do not present significant differences in attachment security compared to those born by other types of assisted reproductive techniques or by conventional methods [33,34,36]. Some studies [36] point out that more than 60% of children were classified as securely attached in both lesbian and gay-parent surrogated families. Children's attachment security was associated with variables such as parental sensitivity, parents' willingness to serve as attachment figures, and with the quality of co-parenting, both in single-parent and same-parent families [34-37,40]. Thus, this finding emphasizes that it is not the reproductive technique itself, but the relational dynamics and the quality of the family environment that seem to determine the psychological well-being of children. Therefore, it would be advisable to orient the clinical and social approach towards the support and strengthening of parenting skills and co-parenting to favor healthy child development.

The COVID-19 pandemic was presented as a contextual stressor that exacerbated levels of anxiety, somatization and difficulties in parental bonding in surrogate parents to a greater extent than other gay parents [38], suggesting a vulnerability in coping with crisis situations. Thus, fostering specific support systems in adverse situations could prevent negative impacts on family psychological well-being and protect the quality of the bond.

In relation to psychopathological symptoms, surrogate mothers reported higher levels of depression during pregnancy and postpartum compared to women pregnant by conventional methods [31,32]. Likewise, surrogate parents, especially those who went through the process during the pandemic, presented higher levels of anxiety and somatization compared to those who were parents before this global event [38]. These findings again underscore the need to implement psychological support interventions throughout the entire surrogacy process for both intended parents and intended families.

Longitudinal studies provided evidence for the importance of attachment security and parental support in children's exploration of their surrogate origins [40]. Factors such as transparency in communication and parental emotional consistency favored a safe environment for children to integrate their birth story, whereas attempts to withhold information or avoid the topic may limit such an exploratory process [39,40]. Thus, in the case where children explore their origins, it would be beneficial to encourage open communication through family interventions in a way that promotes healthy psychological development and an integrated identity.

Despite the relevant contributions of this review, several limitations must be acknowledged. First, the total number of included studies ($n = 11$) remains small, which limits the generalizability of the findings. In addition, many studies have small sample sizes, nonrandom sampling, and lack of geographic representativeness, which reduces their external

validity. Most of the studies had a cross-sectional design, which prevents the establishment of causal relationships. Methodological heterogeneity in terms of design, samples and assessment tools also made it difficult to compare studies. A meta-analysis was not feasible given the heterogeneity of study designs and the limited sample sizes. A relevant limitation is that several of the instruments used in the studies analyzed do not have specific psychometric validation in surrogates. This absence can generate biases and limit the reliability of the results. The lack of large, multicenter longitudinal studies limits the understanding of the dynamic processes of attachment and mental health in this context. At the cultural level, most of the research was conducted in Western contexts, without addressing in depth the implications of diverse cultural regulations and values surrounding surrogacy. Another limitation to consider is the quality of the instruments used to assess the variables analyzed. In some studies, the instruments used showed only moderate internal consistency, especially in initial research. Furthermore, in several cases, the psychometric properties of the tools were not reported, which makes it difficult to assess the validity and reliability of the results obtained.

For future research, it is recommended to increase the number and diversity of the samples, use longitudinal methodologies, apply cross-culturally validated instruments and explore additional variables relevant to the development of attachment, such as the history of adult attachment of the intended parents and surrogates, family cohesion and adverse early experiences. It would be advisable for future research to adapt or develop tools that guarantee their suitability for this population. It is also relevant to compare different models of surrogacy and to analyze how the experience varies in contexts where surrogacy is legal, ambiguous or prohibited, as well as to investigate the motivations that lead people to participate as surrogates, considering socioeconomic factors that could influence this process. In relation to this last point, there is also a need to consider variables such as autonomy and informed consent of all parties involved.

Practical Implications

Clinically, these results highlight the importance of incorporating psychological care into surrogacy support programs. Health professionals should be empathetically trained to understand the unique psychological, emotional, and relational dynamics of surrogacy to provide comprehensive support to all parties involved, including intended parents, surrogate carriers, and, ultimately, the children. Psychological preparation and follow-up should be integrated into the care plan before, during, and after the gestational process, addressing topics such as emotional attachment, expectations, coping strategies, and potential grief or identity concerns. For example, given that surrogates often engage in emotional distancing as a protective strategy, preparatory sessions could explicitly address healthy ways of managing emotional attachment (e.g., guided imagery, journaling, and open discussions about anticipated separation) while also promoting adaptive coping strategies to mitigate grief after birth.

In addition, the findings support the development of clear psychological screening protocols for both surrogate carriers and intended parents to assess motivations, emotional readiness, and potential vulnerabilities that may affect bonding and mental well-being. Such screenings could include standardized tools to detect depressive or post-traumatic symptoms, anxiety, and relationship stressors, which have been shown to predict poorer bonding. Based on our results, interventions should include, at a prenatal stage, elements like psychoeducation for surrogates on the normal range of emotions during pregnancy, stress management workshops, and mindfulness-based interventions to reduce anxiety. For intended parents, it would be important to include in interventions counseling on realistic expectations, stress management, and structured guidance on how and when to communicate with their children about their origins (e.g., narrative therapy, age-appropriate disclosure strategies). With respect to family structure, evidence shows that children's attachment security did not differ by parental sexual orientation, family type, or gender. Children's outcomes were more strongly linked to parental behaviors and psychological functioning, such as sensitivity, warmth, and reflective functioning. These results highlight that interventions should prioritize enhancing parental scaffolding and reflective capacities, regardless of family configuration. At a postnatal stage, structured debriefing sessions with surrogates to process separation and prevent unresolved grief or PTSD, as well as early parenting support for intended parents could help prevent and mitigate potential psychological distress. Cultural differences also emerged as relevant: Anglo-Saxon and European surrogate mothers presented lower levels of maternal-fetal attachment and empathy, which suggests that screening and support protocols should be culturally adapted and sensitive to the social narratives and expectations surrounding surrogacy in each country.

Although surrogacy is subject to ethical, moral, and legal controversy, and is prohibited in many countries, in those contexts where the practice is legal, it is crucial to ensure it takes place in a framework of maximum safety, dignity, and protection for the surrogate. The aim should not be to ignore or simplify the ethical dilemmas, but to guarantee that, if surrogacy is pursued, it is done under strict regulation that prevents exploitation, ensures full informed consent, and safeguards the rights and mental health of all involved—particularly the gestational carrier, who may be exposed to complex emotional and social pressures.

Recently, the United Nations Special Rapporteur on violence against women and girls (Reem Alsalem) issued a report calling for the total ban of surrogacy worldwide. The report highlights that surrogacy, regardless of whether it is framed as "altruistic" or commercial, often entails multiple forms of violence and exploitation, including economic coercion, reproductive and psychological harm to women, and risks to children's rights. This international stance emphasizes the urgent need for governments and professional bodies to critically examine the practice and to develop binding ethical and legal safeguards. In this sense, our findings align with the broader call for careful regulation and the provision of psychological assessment and follow-up whenever

surrogacy occurs, to minimize harm and to protect the well-being of all parties involved [93].

From a policy perspective, these results emphasize the urgency of implementing legal frameworks that protect all stakeholders, ensuring that both surrogate and intended parents are fully informed and voluntarily consenting. Regulations should include ethical guidelines to avoid exploitation, as well as standardized informed consent procedures and access to independent legal and psychological counseling. The creation of multidisciplinary teams in fertility clinics and maternity services—composed of psychologists, social workers, legal advisors, and medical staff—would foster more holistic and ethical surrogacy practices. Finally, raising social awareness and promoting education on the psychosocial aspects of surrogacy may help reduce stigma and ensure that children's rights and well-being remain at the center of all decisions.

5. Conclusions

Clinically, these results highlight the importance of incorporating psychological care into surrogacy support programs. Health professionals should be empathetically trained to understand the context and consequences of surrogacy to better support all parties involved.

In conclusion, this review highlights that factors such as the type of surrogacy, the COVID-19 pandemic, and the sexual orientation of intended families may significantly influence attachment patterns between parents and children in surrogacy contexts. The reviewed findings suggest that attachment security, crucial for children's psychological development, can be affected by family dynamics and external conditions. Both surrogates and intended parents should receive psychological support and preparation to foster a stable environment that promotes secure attachment. Furthermore, the evidence reviewed supports the need to adapt policies and clinical practices to safeguard the well-being of all parties involved in surrogacy.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/doi/s1>, Table S1: PRISMA 2020 Checklist for the systematic review.

Author Contributions: Conceptualization, E.M.G.-A. and L.L.-T.; writing—original draft preparation, E.M.G.-A. and L.L.-T.; writing—review and editing, L.L.-T., R.S.-G. and F.G.-S.; supervision, L.L.-T.; project administration, L.L.-T. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data that support the findings of this study are available from the corresponding author, [L.L.-T.], upon reasonable request.

Conflicts of Interest: The authors declare no conflicts of interest.

AI-Assisted Technology Statement: Portions of the English language editing and phrasing in this manuscript were supported using OpenAI's ChatGPT (version GPT-5). The tool was employed exclusively to improve grammar, clarity, and academic style after the authors had produced the original scientific content. All

intellectual and analytical contributions, study design, data interpretation, and conclusions are entirely the authors' own. The authors take full responsibility for the integrity and accuracy of the manuscript.

References

1. Taebi, M.; Alavi, N.; Ahmadi, S. The experiences of surrogate mothers: A qualitative study. *Nurs. Midwifery Stud.* **2020**, *9*, 51. https://doi.org/10.4103/nms.nms_19_19.
2. Gunnarsson Payne, J.; Korolczuk, E.; Mezinska, S. Surrogacy relationships: A critical interpretative review. *Ups. J. Med. Sci.* **2020**, *125*, 183–191. <https://doi.org/10.1080/03009734.2020.1725935>.
3. Van Den Akker, O.B.A. Separation and Parenting a Surrogate Baby. In *Surrogate Motherhood Families*; Springer International Publishing: Cham, Switzerland, 2017; pp. 147–168. https://doi.org/10.1007/978-3-319-60453-4_6.
4. Teman, E. *Birthing a Mother: The Surrogate Body and the Pregnant Self*; University of California Press: Oakland, CA, USA, 2010. Available online: <https://academic.oup.com/california-scholarship-online/book/17848> (accessed on 15 March 2024).
5. Imrie, S.; Jadvá, V. The long-term experiences of surrogates: Relationships and contact with surrogacy families in genetic and gestational surrogacy arrangements. *Reprod. Biomed. Online* **2014**, *29*, 424–435. <https://doi.org/10.1016/j.rbmo.2014.06.004>.
6. Brunet, L.; Carruthers, J.; Daviki, K.; King, D.; Marzo, C.; McCandless, J. *A Comparative Study on the Regime of Surrogacy in EU Member States*; Policy Department C: Citizens' Rights and Constitutional Affairs: Brussels, Belgium, 2013. Available online: [https://www.europarl.europa.eu/RegData/etudes/STUD/2013/474403/IPOL-JURI_ET\(2013\)474403_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2013/474403/IPOL-JURI_ET(2013)474403_EN.pdf) (accessed on 15 March 2024).
7. Deomampo, D. Defining Parents, Making Citizens: Nationality and Citizenship in Transnational Surrogacy. *Med. Anthropol.* **2015**, *34*, 210–225. <https://doi.org/10.1080/01459740.2014.890195>.
8. Hobzová, H. Surrogate motherhood: The contradicitons in terminology. *Ceska Gynekol.* **2018**, *83*, 464–467.
9. Alkorta, I. Surrogacy in Spain: Vindication of the *Mater Semper Certa Est* Rule. *New Bioeth.* **2020**, *26*, 298–313. <https://doi.org/10.1080/20502877.2020.1829288>.
10. Frati, P.; La Russa, R.; Santurro, A.; Fineschi, B.; Di Paolo, M.; Scopetti, M.; Turillazzi, E.; Fineschi, V. Bioethical issues and legal frameworks of surrogacy: A global perspective about the right to health and dignity. *Eur. J. Obstet. Gynecol. Reprod. Biol.* **2021**, *258*, 1–8. <https://doi.org/10.1016/j.ejogrb.2020.12.020>.
11. Jadvá, V.; Imrie, S. Children of surrogate mothers: psychological well-being, family relationships and experiences of surrogacy. *Hum. Reprod.* **2014**, *29*, 90–96. <https://doi.org/10.1093/humrep/det410>.
12. Fischer, S.; Gillman, I. Surrogate motherhood: Attachment, attitudes and social support. *Psychiatry* **1991**, *54*, 13–20.
13. Rubin, R. *Maternal Identity and the Maternal Experience*; Springer: New York, NY, USA, 1984.
14. Ettenberger, M.; Bieleninik, L.; Epstein, S.; Elefant, C. Defining Attachment and Bonding: Overlaps, Differences and Implications for Music Therapy Clinical Practice and Research in the Neonatal Intensive Care Unit (NICU). *Int. J. Environ. Res. Public Health* **2021**, *18*, 1733. <https://doi.org/10.3390/ijerph1804173>.
15. Santamaría-Gutierrez, R.; González-Sala, F.; Lacomba-Trejo, L. The Role of Attachment in Perinatal Loss: A Systematic Review. *J. Loss Trauma* **2025**, *30*, 813–850. <https://doi.org/10.1080/15325024.2025.2471817>.
16. Main, M.; Kaplan, N.; Cassidy, J. Security in Infancy, Childhood, and Adulthood: A Move to the Level of Representation. *Monogr. Soc. Res. Child Dev.* **1985**, *50*, 66. <https://doi.org/10.2307/3333827>.
17. Baslington, H. The Social Organization of Surrogacy: Relinquishing a Baby and the Role of Payment in the Psychological Detachment Process. *J. Health Psychol.* **2002**, *7*, 57–71. <https://doi.org/10.1177/1359105302007001652>.
18. Berk, H. L. The legalization of emotion: Managing risk by managing feelings in contracts for surrogate labor. *Law & Society Review*, **2015**, *49*(1), 143–177. <https://doi.org/10.1111/lasr.12125>.
19. Jadvá, V.; Jones, C.; Hall, P.; Imrie, S.; Golombok, S. 'I know it's not normal but it's normal to me, and that's all that matters': Experiences of young adults conceived through egg donation, sperm donation, and surrogacy. *Hum. Reprod.* **2023**, *38*, 908–916. <https://doi.org/10.1093/humrep/dead048>.
20. Riddle, M.P. The psychological impact of surrogacy on the families of gestational surrogates: Implications for clinical practice. *J. Psychosom. Obstet. Gynecol.* **2022**, *43*, 122–127. <https://doi.org/10.1080/0167482X.2020.1814729>.
21. Dumitru, A.E.; Gică, C.; Iordăchescu, D.A.; Panaitescu, A.M.; Peltecu, G.; Botezatu, R.; Gică, N. Gestational Surrogacy. Medical, Psychological and Legal Aspects. *Romanian J. Leg. Med.* **2021**, *29*, 323–327. <https://doi.org/10.4323/rjlm.2021.323>.

22. Edelmann, R.J. Surrogacy: The psychological issues. *J. Reprod. Infant Psychol.* **2004**, *22*, 123–136. <https://doi.org/10.1080/0264683042000205981>.
23. Yau, A.; Friedlander, R.L.; Petrini, A.; Holt, M.C.; White, D.E.; Shin, J.; Kalantry, S.; Spandorfer, S. Medical and mental health implications of gestational surrogacy. *Am. J. Obstet. Gynecol.* **2021**, *225*, 264–269. <https://doi.org/10.1016/j.ajog.2021.04.213>.
24. Mamédio, C.; Pimenta, C.A.D.M.; Nobre, M.R.C. The PICO strategy for the research question construction and evidence search. *Rev. Lat. Am. Enfermagem* **2007**, *15*, 508–511. <https://doi.org/10.1590/S0104-11692007000300023>.
25. Page, M.J.; McKenzie, J.E.; Bossuyt, P.M.; Boutron, I.; Hoffmann, T.C.; Mulrow, C.D.; Shamseer, L.; Tetzlaff, J.M.; Akl, E.A.; Brennan, S.E.; et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Syst. Rev.* **2021**, *10*, 89. <https://doi.org/10.1186/s13643-021-01626-4>.
26. Steel, P.; Fariborzi, H.; Hendijani, R. *An Application of Modern Literature Review Methodology: Finding Needles in Ever-Growing Haystacks*; SAGE Publications Ltd.: London, UK, 2023. Available online: <https://methods.sagepub.com/case/application-literature-methodology-finding-needles-haystacks> (accessed on 15 March 2024).
27. Orwin, R.G. Evaluating coding decisions. In *The Handbook of Research Synthesis*; Russell Sage Foundation: New York, NY, USA, 1994; pp. 139–162.
28. Hernández-Nieto, R.A. *Contribuciones al Análisis Estadístico: Sensibilidad, Estabilidad y Consistencia de Varios Coeficientes de Variabilidad Relativa y el Coeficiente de Variación Proporcional (CVP)*; CreateSpace Independent Publishing Platform: Seattle, WA, USA, 2002.
29. Thomas, H. *Quality Assessment Tool for Quantitative Studies*; Effective Public Health Practice Project: Hamilton, ON, Canada, 2003. Available online: <https://www.ephpp.ca/quality-assessment-tool-for-quantitative-studies/> (accessed on 15 March 2024).
30. Glonti, K.; Gordeev, V.S.; Goryakin, Y.; Reeves, A.; Stuckler, D.; McKee, M.; Roberts, B. A Systematic Review on Health Resilience to Economic Crises. *PLoS ONE* **2015**, *10*, e0123117. <https://doi.org/10.1371/journal.pone.0123117>.
31. Lamba, N.; Jadva, V.; Kadam, K.; Golombok, S. The psychological well-being and prenatal bonding of gestational surrogates. *Hum. Reprod.* **2018**, *33*, 646–653. <https://doi.org/10.1093/humrep/dey048>.
32. Lorenceau, E.S.; Mazzucca, L.; Tisseron, S.; Pizitz, T.D. A cross-cultural study on surrogate mother's empathy and maternal-foetal attachment. *Women Birth* **2015**, *28*, 154–159. <https://doi.org/10.1016/j.wombi.2014.11.006>.
33. Quintigliano, M.; Carone, N.; Speranza, A.M.; Lingiardi, V. Factors associated with children's attachment hierarchy in lesbian, gay, and heterosexual parent families through assisted reproduction. *Curr. Psychol.* **2025**, *44*, 2114–2124. <https://doi.org/10.1007/s12144-024-07248-y>.
34. Carone, N.; Mirabella, M.; Innocenzi, E.; Quintigliano, M.; Antonucci, C.; Manzi, D.; Fortunato, A.; Giovanardi, G.; Speranza, A.M.; Lingiardi, V. The intergenerational transmission of attachment during middle childhood in lesbian, gay, and heterosexual parent families through assisted reproduction: The mediating role of reflective functioning. *Attach. Hum. Dev.* **2023**, *25*, 1–27. <https://doi.org/10.1080/14616734.2023.2292053>.
35. Carone, N.; Baiocco, R.; Lingiardi, V.; Kerns, K. Child attachment security in gay father surrogacy families: Parents as safe havens and secure bases during middle childhood. *Attach. Hum. Dev.* **2020**, *22*, 269–289. <https://doi.org/10.1080/14616734.2019.1588906>.
36. Carone, N.; Quintigliano, M.; Benzi, I.M.A.; Brumariu, L.E.; Speranza, A.M.; Lingiardi, V. Parental sensitivity and child–parent attachment security in lesbian and gay parent families through assisted reproduction. *J. Fam. Psychol.* **2025**, *39*, 429–442. <https://doi.org/10.1037/fam0001324>.
37. Carone, N. Family Alliance and Intergenerational Transmission of Coparenting in Gay and Heterosexual Single-Father Families through Surrogacy: Associations with Child Attachment Security. *Int. J. Environ. Res. Public Health* **2022**, *19*, 7713. <https://doi.org/10.3390/ijerph19137713>.
38. Carone, N.; Manzi, D.; Barone, L.; Lingiardi, V.; Baiocco, R.; Bos, H.M.W. Father–child bonding and mental health in gay fathers using cross-border surrogacy during the COVID-19 pandemic. *Reprod. Biomed. Online* **2021**, *43*, 756–764. <https://doi.org/10.1016/j.rbmo.2021.05.023>.
39. Carone, N.; Manzi, D.; Barone, L.; Mirabella, M.; Speranza, A.M.; Baiocco, R.; Lingiardi, V. Disclosure and child exploration of surrogacy origins in gay father families: Fathers' Adult Attachment Interview coherence of mind matters. *J. Reprod. Infant Psychol.* **2024**, *42*, 977–992. <https://doi.org/10.1080/02646838.2023.2214583>.
40. Carone, N.; Barone, L.; Manzi, D.; Baiocco, R.; Lingiardi, V.; Kerns, K. Children's Exploration of Their Surrogacy Origins in Gay Two-Father Families: Longitudinal Associations With Child Attachment Security and Parental Scaffolding During Discussions About Conception. *Front. Psychol.* **2020**, *11*, 112. <https://doi.org/10.3389/fpsyg.2020.00112>.

41. George, C., Main, M. & Kaplan, N. Adult Attachment Interview (AAI) [Database record]. APA PsycTests. **1985** <https://doi.org/10.1037/t02879-000>
42. Cranley, M.S. Development of a tool for the measurement of maternal attachment during pregnancy. *Nurs. Res.* **1981**, 30, 281–284.
43. Hazan, C.; Zeifman, D. Sex and the psychological tether. In *Advances in Personal Relationships*; Perlman, D., Bartholomew, K., Eds.; Kingsley: London, UK, 1994; pp. 151–180.
44. Waters, E.; Deane, K.E. Defining and Assessing Individual Differences in Attachment Relationships: Q-Methodology and the Organization of Behavior in Infancy and Early Childhood. *Monogr. Soc. Res. Child Dev.* **1985**, 50, 41. <https://doi.org/10.2307/3333826>.
45. Seibert, A.C.; Kerns, K.A. Attachment figures in middle childhood. *Int. J. Behav. Dev.* **2009**, 33, 347–355. <https://doi.org/10.1177/0165025409103872>.
46. Kerns, K.A.; Klepac, L.; Cole, A. Peer relationships and preadolescents' perceptions of security in the child-mother relationship. *Dev. Psychol.* **1996**, 32, 457–466. <https://doi.org/10.1037/0012-1649.32.3.457>.
47. Calvo, V. Aspetti di validazione della Security Scale in ambito italiano: Consistenza interna e distribuzione dei punteggi. Università degli Studi di Padova. 2008, *Unpublished Manuscript*.
48. Marci, T.; Lionetti, F.; Moscardino, U.; Pastore, M.; Calvo, V.; Altoé, G. Measuring attachment security via the Security Scale: Latent structure, invariance across mothers and fathers and convergent validity. *Eur. J. Dev. Psychol.* **2018**, 15, 481–492. <https://doi.org/10.1080/17405629.2017.1317632>.
49. Condon, J.T. The assessment of antenatal emotional attachment: Development of a questionnaire instrument. *Br. J. Med. Psychol.* **1993**, 66, 167–183. <https://doi.org/10.1111/j.2044-8341.1993.tb01739.x>.
50. Della Vedova, A.M.; Burro, R. Surveying prenatal attachment in fathers: The Italian adaptation of the Paternal Antenatal Attachment Scale (PAAS-IT). *J. Reprod. Infant Psychol.* **2017**, 35, 493–508. <https://doi.org/10.1080/02646838.2017.1371284>.
51. Rizzo, R.; Piccinelli, M.; Mazzi, M.A.; Bellantuono, C.; Tansella, M. The Personal Health Questionnaire: A new screening instrument for detection of ICD-10 depressive disorders in primary care. *Psychol. Med.* **2000**, 30, 831–840. <https://doi.org/10.1017/S0033291799002512>.
52. Spitzer, R.L. Validation and Utility of a Self-report Version of PRIME-MD The PHQ Primary Care Study. *JAMA* **1999**, 282, 1737. <https://doi.org/10.1001/jama.282.18.1737>.
53. Kroenke, K.; Spitzer, R.L.; Williams, J.B.W. The PHQ-15: validity of a new measure for evaluating the severity of somatic symptoms. *Psychosom. Med.* **2002**, 64, 258–266. doi:10.1097/00006842-200203000-00008
54. Spitzer, R.L.; Kroenke, K.; Williams, J.B.W.; Löwe, B. A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Arch. Intern. Med.* **2006**, 166, 1092. <https://doi.org/10.1001/archinte.166.10.1092>.
55. Bhatnagar, P.; Singh, M.; Pandey, M.; Sandhya, A. *Manual for Anxiety, Depression and Stress Scale*; National Psychological Corporation: Agra, India, 2011.
56. Zigmond, A.S.; Snaith, R.P. The Hospital Anxiety and Depression Scale. *Acta Psychiatr. Scand.* **1983**, 67, 361–370. <https://doi.org/10.1111/j.1600-0447.1983.tb09716.x>.
57. Brandt, P.A.; Weinert, C. The PRQ—a social support measure. *Nurs. Res.* **1981**, 30, 277–280.
58. Fonagy, P.; Target, M.; Steele, H.; Steele, M. *Reflective-Functioning Manual Version 5.0 (Updated 2012) for Application to Adult Attachment Interviews*; University College London: London, UK, 1998. <https://doi.org/10.1037/t03490-000>
59. Steele, H.; Steele, M.; Kriss, A. The friends and family interview (FFI) rating and classification system. 2015, *Unpublised manuscript*.
60. Orsini, A.; Pezzuti, L.; Picone, L. *Wechsler Intelligence Scale for Children*, 4th ed.; Italian Adaptation. Giunti OS: Firenze, Italy, 2021. <https://doi.org/10.1037/t74943-000>.
61. Wechsler, D. *Wechsler Intelligence Scale for Children*, 4th ed.; The Psychological Corporation: San Antonio, TX, USA, 2012. <https://doi.org/10.1037/t15174-000>.
62. Abidin, R.R. *The Parenting Stress Index*; Pediatric Psychology Press: Charlottesville, VA, USA, 1983.
63. Guarino, A.; Di Blasio, P.; D'Alessio, M.; Camisasca, E.; Serantoni, M. *Parenting Stress Index Short Form: Adattamento Italiano*; Giunti OS: Firenze, Italy, 2008.
64. Bandura, A. Toward a Psychology of Human Agency. *Perspect. Psychol. Sci.* **2006**, 1, 164–180. <https://doi.org/10.1111/j.1745-6916.2006.00011.x>.
65. Pastorelli, C.; Gerbino, N. Autoefficacia genitoriale [Parental self-efficacy]. In *La Valutazione Dell'autoefficacia [Self-Efficacy Assessment]*; Caprara, G.V., Ed.; Erickson: Portland, OR, USA, 2001; pp. 105–120.
66. Rohner, R.P.; Khaleque, A.; Cournoyer, D.E. Parental Acceptance-Rejection: Theory, Methods, Cross-Cultural Evidence, and Implications. *Ethos* **2005**, 33, 299–334. <https://doi.org/10.1525/eth.2005.33.3.299>.

67. Khaleque, A.; Rohner, R.P. Perceived Parental Acceptance-Rejection and Psychological Adjustment: A Meta-Analysis of Cross-Cultural and Intracultural Studies. *J. Marriage Fam.* **2002**, *64*, 54–64. <https://doi.org/10.1111/j.1741-3737.2002.00054.x>.
68. Caprara, G.V.; Alessandri, G.; Eisenberg, N.; Kupfer, A.; Steca, P.; Caprara, M.G.; Yamaguchi, S.; Fukuzawa, A.; Abela, J. The Positivity Scale. *Psychol. Assess.* **2012**, *24*, 701–712. <https://doi.org/10.1037/a0026681>.
69. Kumar, R.; Robson, K.M.; Smith, A.M.R. Development of a self-administered questionnaire to measure material adjustment and material attitudes during pregnancy and after delivery. *J. Psychosom. Res.* **1984**, *28*, 43–51. [https://doi.org/10.1016/0022-3999\(84\)90039-4](https://doi.org/10.1016/0022-3999(84)90039-4).
70. Tarabulsky, G.M.; Provost, M.A.; Bordeleau, S.; Trudel-Fitzgerald, C.; Moran, G.; Pederson, D.R.; Trabelsi, M.; Lemelin, J.-P.; Pierce, T. Validation of a short version of the maternal behavior Q-set applied to a brief video record of mother–infant interaction. *Infant Behav. Dev.* **2009**, *32*, 132–136. <https://doi.org/10.1016/j.infbeh.2008.09.006>.
71. Pederson, D.R.; Moran, G. A Categorical Description of Infant-Mother Relationships in the Home and Its Relation to Q-Sort Measures of Infant-Mother Interaction. *Monogr. Soc. Res. Child Dev.* **1995**, *60*, 111. <https://doi.org/10.2307/1166174>.
72. Stright, A.D.; Bales, S.S. Coparenting Quality: Contributions of Child and Parent Characteristics. *Fam. Relat.* **2003**, *52*, 232–240. <https://doi.org/10.1111/j.1741-3729.2003.00232.x>.
73. Favez, N.; Scaiola, C.L.; Tissot, H.; Darwiche, J.; Frascarolo, F. The Family Alliance Assessment Scales: Steps Toward Validity and Reliability of an Observational Assessment Tool for Early Family Interactions. *J. Child Fam. Stud.* **2011**, *20*, 23–37. <https://doi.org/10.1007/s10826-010-9374-7>.
74. Gentzler, A.L.; Contreras-Grau, J.M.; Kerns, K.A.; Weimer, B.L. Parent–Child Emotional Communication and Children’s Coping in Middle Childhood. *Soc. Dev.* **2005**, *14*, 591–612. <https://doi.org/10.1111/j.1467-9507.2005.00319.x>.
75. Leibowitz, J.; Ramos-Marcuse, F.; Arsenio, W.F. Parent-child emotion communication, attachment, and affective narratives. *Attach. Hum. Dev.* **2002**, *4*, 55–67. <https://doi.org/10.1080/14616730210123157>.
76. Grotevant, H.D.; McRoy, R.G. The Minnesota/Texas Adoption Research Project: Implications of Openness in Adoption for Development and Relationship. *Appl. Dev. Sci.* **1997**, *1*, 168–186. https://doi.org/10.1207/s1532480xads0104_2.
77. Wrobel, G.M.; Grotevant, H.D.; Samek, D.R.; Korff, L.V. Adoptees’ curiosity and information-seeking about birth parents in emerging adulthood: Context, motivation, and behavior. *Int. J. Behav. Dev.* **2013**, *37*, 441–450. <https://doi.org/10.1177/0165025413486420>.
78. Prezza, M.; Giuseppina Pacilli, M. Perceived social support from significant others, family and friends and several socio-demographic characteristics. *J. Community Appl. Soc. Psychol.* **2002**, *12*, 422–429. <https://doi.org/10.1002/casp.696>.
79. Zimet, G.D.; Dahlem, N.W.; Zimet, S.G.; Farley, G.K. The Multidimensional Scale of Perceived Social Support. *J. Pers. Assess.* **1988**, *52*, 30–41. https://doi.org/10.1207/s15327752jpa5201_2.
80. Abidin, R. *Parenting Stress Index Fourth Edition (PSI-4)*; Psychological Assessment Resources: Odessa, FL, USA, 2012.
81. Davis, M.H. Measuring individual differences in empathy: Evidence for a multidimensional approach. *J. Pers. Soc. Psychol.* **1983**, *44*, 113–126. <https://doi.org/10.1037/0022-3514.44.1.113>.
82. Kobak, R.; Rosenthal, N.; Serwik, A. The attachment hierarchy in middle childhood: Conceptual and methodological issues. In *Attachment in Middle Childhood*; Kerns, K., Richardson, R., Eds.; Guilford Press: New York, NY, USA, 2005; pp. 71–88.
83. Kobak, R.; Rosenthal, N. The important people interview. Department of Psychology, University of Delaware. 2003, *Unpublished manuscript*.
84. Block, J.H. *Child-Rearing Practices Report*; 1965. Available online: <https://doi.apa.org/doi/10.1037/t00815-000> (accessed on 15 March 2024).
85. Stevenson-Hinde, J.; Shouldice, A. Maternal Interactions and Self-Reports Related to Attachment Classifications at 4.5 Years. *Child Dev.* **1995**, *66*, 583. <https://doi.org/10.2307/1131936>.
86. Steele, M.; Steele, H. Co-Construction Coding Scheme Manual (Updated version). 2007, *Unpublished manuscript*.
87. Deater-Deckard, K.; Pylas, M.V.; Petrill, S. *Parent-Child Interaction System (PARCHISY)*; Institute of Psychiatry: London, UK, 1997.
88. Kerns, K.A.; Mathews, B.L.; Koehn, A.J.; Williams, C.T.; Siener-Ciesla, S. Assessing both safe haven and secure base support in parent–child relationships. *Attach. Hum. Dev.* **2015**, *17*, 337–353. <https://doi.org/10.1080/14616734.2015.1042487>.

89. Grabow, A.; Becker-Blease, K. Acquiring Psychopathy and Callousness Traits: Examining the Influence of Childhood Betrayal Trauma and Adult Dissociative Experiences in a Community Sample. *J. Trauma Dissociation* **2023**, *24*, 268–283.
90. Henrichs, J.; de Kroon, M.; Walker, A.; Witteveen, A.; Westerneng, M.; van Baar, A.; de Jonge, A. Maternal prenatal distress, maternal pre- and postnatal bonding and behavioral and emotional problems in toddlers: A secondary analysis of the IRIS study. *J. Child Fam. Stud.* **2023**, *32*, 2113–2126. <https://doi.org/10.1007/s10826-022-02529-1>.
91. Tichelman, E.; Westerneng, M.; Witteveen, A.B.; Van Baar, A.L.; Van Der Horst, H.E.; De Jonge, A.; Berger, M.Y.; Schellevis, F.G.; Burger, H.; Peters, L.L. Correlates of prenatal and postnatal mother-to-infant bonding quality: A systematic review. *PLoS ONE* **2019**, *14*, e0222998. <https://doi.org/10.1371/journal.pone.0222998>.
92. La Rosa, V.L.; Alparone, D.; Commodari, E. Psychological and social factors influencing mother–child bonding in the first year after birth: A model for promoting infant and maternal well-being. *Front. Psychol.* **2025**, *16*, 1588433. <https://doi.org/10.3389/fpsyg.2025.1588433>.
93. Alsalem, R. *Report of the Special Rapporteur on Violence Against Women and Girls, Its Causes and Consequences*; (A/80/158); United Nations: New York, NY, USA, 2025. Available online: <https://documents.un.org/doc/undoc/gen/n25/187/89/pdf/n2518789.pdf> (accessed on 15 March 2024).

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.

The Role of Attachment in Perinatal Loss: A Systematic Review

Rebeca Santamaría-Gutiez¹, Francisco González-Sala² y Laura Lacomba-Trejo^{2*}

¹ Clinical Psychology and Health Unit Service, General Universitary Hospital of Valencia, Valencia, Spain

² Department of Developmental and Educational Psychology, Faculty of Psychology and Speech Therapy, Universitat de València, Valencia, Spain

* Correspondence: laura.lacomba@uv.es

Journal: *Journal of Loss y Trauma*

Year: 2025

Volume: 30

DOI: <https://doi.org/10.1080/15325024.2025.2471817>

Journal Impact Factor: 2,1 (Q3)

Reference

Santamaría-Gutiez, R., González-Sala, F., & Lacomba-Trejo, L. (2025). The Role of Attachment in Perinatal Loss: A Systematic Review. *Journal of Loss and Trauma*, 30(6), 813–850. <https://doi.org/10.1080/15325024.2025.2471817>



The Role of Attachment in Perinatal Loss: A Systematic Review

Rebeca Santamaría-Gutiez^{a,b} , Francisco González-Sala^a  and Laura Lacomba-Trejo^a 

^aDevelopmental and Educational Psychology Department, Faculty of Psychology and Speech Therapy, Universitat de València, València, Spain; ^bClinical Psychology and Health Unit Service, General University Hospital of Valencia, Valencia, Spain

ABSTRACT

Perinatal loss (PL) disrupts maternal-fetal attachment (MFA) and poses significant emotional challenges for parents and their future children. The attachment style of parents prior to the loss is crucial for their adjustment to PL. This systematic review examines “How does parental attachment (including prior maternal attachment and attachment to the deceased infant) affect bereavement outcomes (grief intensity, duration, and psychological well-being) in parents who have experienced PL, and the emotional development and attachment in their subsequent children?”. A bibliographic search was conducted following PRISMA guidelines in Web of Science, PubMed, and ProQuest Central. Screening through Hubmeta included 33 studies based on set criteria. Two independent evaluators conducted the search, selection, data extraction, and quality evaluation, with excellent agreement (κ values between 0.77 and 0.90). The sample included 6,283 women (mean age = 29.08 years), 937 men (mean age = 34.16 years), and 11,569 children. Studies assessed attachment, perinatal grief, and psychopathology (depression, anxiety, PTSD symptoms, and event impact). Individuals with insecure attachment showed poorer psychological adjustment and a higher likelihood of unresolved grief. Additionally, there is an increased tendency toward disorganized attachment, as well as behavioral issues and ADHD in one-year-old children born after pregnancies following PL. However, no differences were found in MFA to future children between mothers who have experienced PL and those who have not. This review highlights the complexity of perinatal grief, its effects on parental mental health and child development, and emphasizes the need for personalized, multi-disciplinary support for affected families.

ARTICLE HISTORY

Received 25 July 2024
Accepted 19 February 2025

KEYWORDS

Perinatal loss; grief; attachment; systematic review

Introduction

The perinatal period refers to the time surrounding pregnancy, childbirth, and the first weeks after birth (Isobel, 2023). During this period, mothers

CONTACT Laura Lacomba-Trejo  laura.lacomba@uv.es  Developmental and Educational Psychology Department, Faculty of Psychology and Speech Therapy, Universitat de València, Blasco Ibáñez Avenue, 21, 46010 Valencia, Spain.

© 2025 Taylor & Francis Group, LLC

develop maternal-fetal attachment (MFA), an emotional connection with the unborn child, expressed through behaviors like verbal communication with the baby, physical interactions such as touching the abdomen and considering the future child in planning (Cranley, 1981; Muller, 1993). This bi-directional relationship between unborn babies and their mothers is crucial for maternal well-being, prenatal care adherence, and optimized infant development (Brandon et al., 2009; da Rosa et al., 2021).

However, this deeply ingrained connection faces significant threats from perinatal losses (PL), which include spontaneous and induced abortions, ectopic pregnancies, selective reductions, twin deaths in gestation, fetal deaths in utero or intrapartum, premature or neonatal deaths, and children placed for adoption (Álvarez et al., 2012). PL, occurring from gestation through the infant's first year or relinquishment for adoption, affects 10–20% of all pregnancies (Delgado et al., 2023; Fenstermacher & Hupcey, 2013; Hennessy & O'Donoghue, 2024; Kersting & Wagner, 2012).

Grief itself is a multifaceted emotional response to loss, shaped by individual, social, and cultural contexts. It encompasses a range of emotional, cognitive, physical, and behavioral reactions, including sadness, anger, disbelief, longing, and physical symptoms like fatigue and sleep disturbances (Ivers et al., 2024). While Freud (1964) emphasized the importance of “grief work” in detaching from the deceased, contemporary theories such as the dual process model (Stroebe & Schut, 1999) and the construction of meaning (Neimeyer & Sands, 2011) recognize the oscillation between emotional pain and practical adaptation, as well as the importance of integrating the loss into one's life narrative.

Complicated grief or Prolonged grief disorder (American Psychiatric Association, 2022) is an intense and persistent form of emotional distress that exceeds the expected duration by social norms when a person experiences a loss. It is characterized by intense and persistent longing, desire and sadness, which are often accompanied by recurrent thoughts or images of the deceased, as well as a sense of disbelief or an inability to accept the painful reality of their death (Shear, 2015). These symptoms can last for months or even years, significantly interfering with the affected person's daily life. A substantial number of parents who experience PL go through complicated grief (Eisma & Stroebe, 2021).

Perinatal grief is defined as the emotional and adaptive process that parents and family go through when a baby is lost during pregnancy, childbirth or shortly after birth (Benavides & Guerra, 2024). In the case of PL, individuals not only experience the profound sorrow associated with the death of a desired child but also contend with a range of additional, often less recognized, losses. These include the erosion of one's sense of identity, the loss of the anticipated parental role, and profound disruption in the sense of security within the world (Côté-Arsenault & Denney-Koelsch, 2011).

These multifaceted losses complicate the grieving process, often extending its duration and emotional intensity (Kersting & Wagner, 2012).

PL represents disenfranchized grief, marked by societal negation, cultural silence, insufficient medical acknowledgment, and unrealistic societal expectations during recovery (Callister, 2006; Delgado et al., 2023). Individuals experiencing PL are at increased risk of medium and long-term psychological difficulties, including complicated grief, anxiety, depression, suicidal ideation, and PTSD, which can significantly impair daily functioning (Arditi-Arbel et al., 2022; Berry, 2022; Horsch et al., 2024). Despite this, there is a mistaken societal belief that PL is rare and emotionally insignificant (Bellhouse et al., 2018; Zhuang et al., 2023).

Bowlby's attachment theory (1969) is crucial in bereavement studies, highlighting that PL disrupts the attachment formation process between expecting parents and their baby, potentially triggering intense emotional responses and affecting future attachment dynamics with subsequent children (Bowlby, 1980). Humans have an innate biological need to seek secure emotional bonds with primary attachment figures, essential for survival, protection, and satisfaction (Bowlby, 1969). Ainsworth et al. (1978) identified three primary forms of attachment: secure, insecure-avoidant, and insecure-anxious. Main and Solomon (1986) later introduced a fourth type, disorganized-insecure attachment, based on observations of contradictory infant behaviors. Recent studies (e.g., Lacomba-Trejo et al., 2023; Trenado et al., 2009) build on this foundational work, exploring the broader implications of attachment styles for emotional regulation and mental health across the lifespan.

Secure attachment serves as a protective factor throughout life, while insecure and disorganized attachments are linked to risky behaviors and poorer health outcomes (Pace et al., 2023; Steele et al., 2020; Vowels et al., 2023). Secure attachment in mourning processes is associated with adaptive grieving and serves as a protective factor against pathological grief due to a propensity to seek support and regulate emotions effectively (Levi-Belz & Lev-Ari, 2019; Sochos & Aleem, 2022). Conversely, anxious and avoidant attachments hinder grieving and are risk factors for complicated grief (Neimeyer & Burke, 2017; Stroebe et al., 2012). Disorganized attachments is associated with prolonged grief symptoms (Sekowski & Prigerson, 2022) as they might struggle to construct a cohesive story about the loss (Shaver & Tancredy, 2001).

Adult attachment, based on John Bowlby's theory (1969), describes how early experiences with caregivers influence the emotional and behavioral patterns of significant relationships in adulthood. Hazan and Shaver (1987) extended this approach to the context of romantic relationships, identifying attachment styles that affect intimacy, conflict management, and support-seeking in attachments. The mother's attachment style can be passed

to her children, with secure attachment providing significant benefits in emotional, social, and physical development (Meredith & Strong, 2019). Securely attached children have stronger immune systems, better academic performance, cognitive outcomes, problem-solving abilities, and lower anxiety and stress levels (Fagundes et al., 2011; Fonagy et al., 2023; Kent et al., 2020; Mikulincer & Shaver, 2019; Picardi et al., 2020; Sroufe, 2005; Zayde et al., 2021). Research suggests that disruptions in parental attachment following PL may influence not only the emotional well-being of subsequent children but also their physical health outcomes, including immune system function and stress regulation (Fagundes et al., 2011; Mikulincer & Shaver, 2019). Understanding these dynamics is essential to inform interventions aimed at supporting families after a PL.

Investigating the relationship between PL and attachment is crucial due to the high incidence of PL, which affects approximately 10–20% of all pregnancies (Delgado et al., 2023; Fenstermacher & Hupcey, 2013; Hennessy & O'Donoghue, 2024; Kersting & Wagner, 2012), and the lack of research on its clinical and social impacts. Current literature shows significant consequences of attachment disruptions after PL, affecting bereaved parents, their future relationships, and the well-being of subsequent children. Despite Bowlby's (1969) identification of attachment's critical role in grief, the specific dynamics between PL and attachment remain largely unexplored, leaving a gap in evidence-based guidelines for supporting affected families. Efforts have been made to provide recommendations for practice, policy, research, and theory to prevent the consequences of PL (Ayers et al., 2024), but much work remains.

A preliminary search of the literature revealed a significant gap in a systematic exploration of the relationship between PL and attachment. Despite the recognized psychological and relational impacts of PL, no systematic or nonsystematic reviews to date have comprehensively addressed how these two constructs interact. Existing contributions have largely been limited to theoretical discussions or editorials (e.g., Browne, 2022; Nguyen et al., 2019; Robinson et al., 1999), which lack the structured approach necessary to synthesize the current evidence base. Furthermore, a search in the PROSPERO database confirmed that no ongoing systematic reviews on this topic were registered at the time this study was initiated.

This review seeks to address this critical gap by systematically examining the existing literature on PL and attachment. Understanding this relationship is particularly important given the profound emotional and relational challenges associated with PL, which can affect individuals, couples, and families (Côté-Arsenault et al., 2020; Caldwell et al., 2024). To capture the breadth of available evidence, no restrictions were placed on publication date or language, ensuring an inclusive and comprehensive approach. By

organizing and synthesizing the current knowledge, this review aims to provide a valuable foundation for advancing research and clinical understanding in this area.

The following research question, framed using the PICO/PECO strategy (Mamédio et al., 2007), guides this review (Mamédio et al., 2007): *“How does parental attachment (encompassing both prior maternal attachment and attachment to the deceased infant) affect the bereavement process outcomes (such as grief intensity, duration, and psychological well-being) in parents who have experienced perinatal loss, as well as the emotional development and attachment formation in their subsequent children?”*

Method

Search strategy

The present systematic review was defined following the guidelines proposed by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Moher et al., 2016). The following databases were consulted by two independent authors (L.L-T. and R.S-G.) in February 2024: Web of Science, PubMed, and ProQuest Central. The final search combined the proposed key elements, and the following Boolean expressions (using MeSH terms) were used in the databases: (perinatal loss OR perinatal grief OR perinatal mourning OR miscarriage OR perinatal death OR neonatal loss OR stillbirth OR prenatal loss) AND (bonding OR attachment). This study did not require ethical approval, as it is a systematic review of previously published studies. No primary data collection or direct involvement of human participants was conducted. Nevertheless, this systematic review was registered in PROSPERO with code CRD42024506448.

Eligibility criteria

To be included, articles had to meet the following inclusion criteria: (a) all languages; (b) no temporal criterion due to the lack of literature; (c) parents (both father and mother or either parent) who had lost a child due to miscarriage, stillbirth, or neonatal death as participants; (d) reference attachment and PL and grief; (e) mention attachment and its influence on the bereavement process, whether pathological or not; (f) if the article refers to bereavement in general, it was included only if it presented data on perinatal bereavement separately; and (g) include clinical studies, introductory journal articles, or comparative studies (PubMed).

As exclusion criteria, articles could not refer to: (a) topics not focused on PL or attachment; (b) case studies, systematic reviews, descriptive

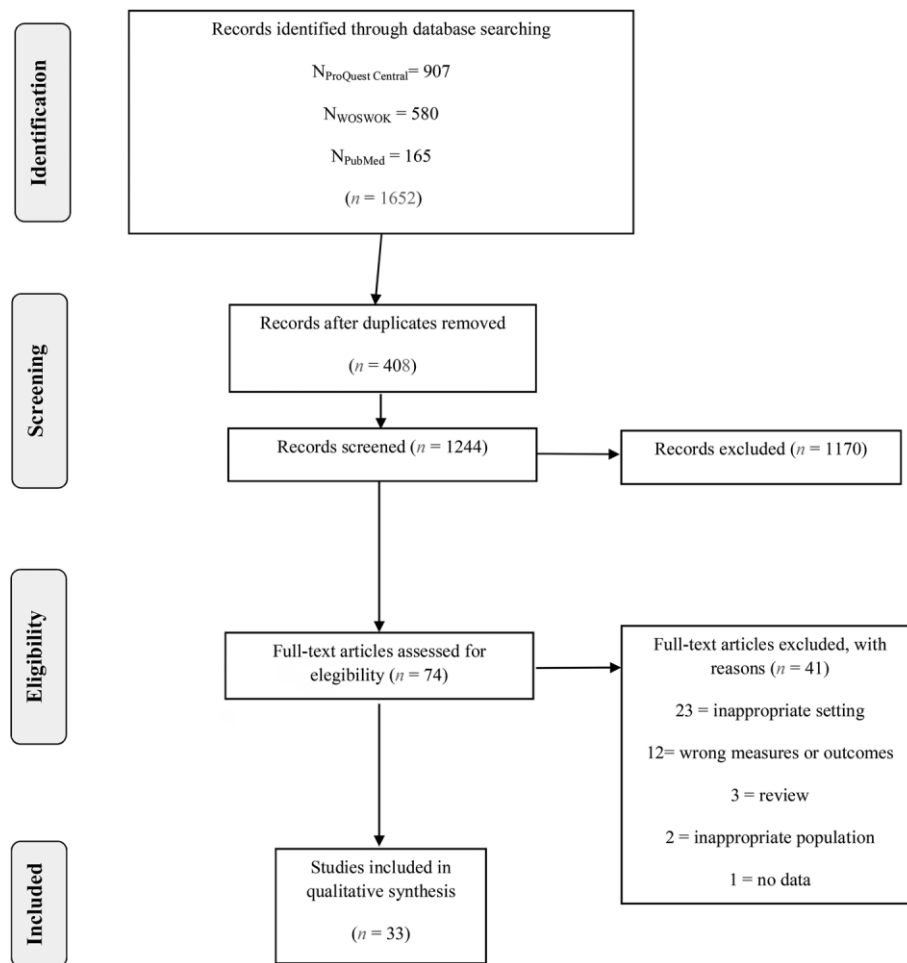


Figure 1. Flowchart of the selection process.

articles, or narrative reviews; and (c) other types of documents such as lectures, books, chapters, dissertations, interviews, conferences or congresses, and grey literature.

Procedure

All records were uploaded to HubMeta (Steel et al., 2023), a web-based data entry system. Duplicate articles were removed. Titles and abstracts were then reviewed, and papers that did not meet the inclusion criteria were eliminated. Articles selected by either of the two authors (L.L-T. and R.S-G.), or those with differences between their blinded decisions, were reviewed in a blinded manner and individually reassessed to ensure they met the inclusion and exclusion criteria. Disagreements between authors were resolved by discussion. Out of 1,652 articles analyzed, 33 were

included in the final study after removing duplicates and excluding articles based on criteria such as study type and relevance. The complete process can be found in [Figure 1](#).

Cohen's Kappa index (κ) was used to evaluate judge agreement. Values between -1 and 0.40 are unsatisfactory, 0.41 to 0.75 are satisfactory, and 0.76 or higher are excellent (Orwin, 1994; Hernández-Nieto, 2002). Agreement among judges in the first ($\kappa = 0.77$) and second ($\kappa = 0.90$) selection was excellent. Due to the high heterogeneity of the results, specifically the differences in the variables considered and the instruments used to assess them, it was not considered appropriate to perform a subsequent meta-analysis.

Results

[Table 1](#) shows in detail the results of the studies selected in this systematic review.

Characteristics of the studies: Sample and design

The sample comprised 6,283 women (weighted mean age = 29.08 years), 937 men (weighted mean age = 34.16 years), and 11,569 living children born after a PL. Only two studies reported the mean age of children (Bakermans-Kranenburg et al., 1999; Price, 2008). The remaining studies assessed children at one year of age, except for Pinto et al. (2006), where children were aged between 6 and 8 years, and Price (2008) and Branjerdporn et al. (2022), where children were evaluated at 9 and 18 months, respectively.

In the sample, there were a total of 33 studies, of which 55% recruited pregnant (Armstrong, 2002, 2004; Armstrong & Hutti, 1998; Beauquier-Maccotta et al., 2022; Branjerdporn et al., 2021, 2022; Caldwell et al., 2024; Gaudet et al., 2010; Hughes et al., 2001, 2002, 2004, 2006; Kelmanson, 2024; Kinsey et al., 2014; Mehran et al., 2013; O'Malley et al., 2020; Tsartsara & Johnson, 2006; Turton et al., 2004; Yilmaz & Beji, 2013). Among the studies that recruited pregnant women, 21% conducted assessments during the second trimester (Caldwell et al., 2024; Kelmanson, 2024; O'Malley et al., 2020; Tsartsara & Johnson, 2006), while 79% conducted assessments during the third trimester (Armstrong, 2002, 2004; Armstrong & Hutti, 1998; Beauquier-Maccotta et al., 2022; Branjerdporn et al., 2021, 2022; Gaudet et al., 2010; Hughes et al., 2001, 2002, 2004, 2006; Kinsey et al., 2014; Mehran et al., 2013; Turton et al., 2004; Yilmaz & Beji, 2013). 18.18% of the studies were longitudinal, with children's measures taken at various time points after birth (Branjerdporn et al., 2022; Hughes et al., 2001, 2002, 2004, 2006; Turton et al., 2004).

Table 1. Characteristics of studies included in the systematic review.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Al-Maharma et al. (2016)	Jordan	190 mothers who experienced a PL once in their life and who subsequently had an uneventful singleton pregnancy resulting in a full-term newborn (currently, the child is 4 to 6 weeks old)	- Sociodemographic Variables: age, religion, socioeconomic status, number of children, gender of the deceased child, level of education, occupation, time between the death of the child and the birth of subsequent child, history of the lost and new child. - Clinical Variables: patient and caregiver medical history, presence of diseases in other children. - Psychological Variables: grief, maternal-child attachment, child behavior.	Cross-sectional study that utilizes a descriptive correlational design.	- Negative relationship between grief intensity and maternal attachment. - Positive relationship between high attachment and positive neonatal perception. - Grief intensity influenced by demographics (higher in high-risk pregnancies and unemployed mothers). - No significant link between high grief intensity and negative neonatal perception. - Perinatal grief is negatively related to attachment with subsequent child. - Overall grief levels were low to moderate; attachment levels were moderate to high - Over half had negative perceptions of the current child. - Lower grief intensity in bereaved women with a male child in Jordanian culture.
Armstrong and Hutti (1998)	U.S.A.	31 women who are in the second half of a subsequent pregnancy (15 primiparae and 16 who previously experienced a late pregnancy miscarriage, stillbirth, or neonatal death)	- Sociodemographic Variables: age, years of education, employment, mean of hours worked per week, income, planned pregnancy. - Psychological Variables: attachment, pregnancy-specific anxiety.	Non-randomized, comparative, descriptive design. Case-control.	- Loss group had higher pregnancy-related anxiety. - Lower prenatal attachment compared to primiparous women. - Loss group reported increased pregnancy-specific anxiety and less prenatal attachment. - Actions needed to reduce anxiety levels. - Nurses should be aware of heightened anxiety and its impact on prenatal attachment.
Armstrong (2004)	U.S.A.	40 expectant couples who experienced a prior PL.	- Sociodemographic Variables: sex, age, race, education, marital status, annual household income, number of previous pregnancies, number of living children or stepchildren, gestational age of the current pregnancy at the time of the interview, number of previous losses, timing and gestational age at loss. - Psychological Variables: influence of loss, depressive symptoms, pregnancy-specific anxiety, prenatal attachment.	Cross-sectional, survey design	- Mothers reported higher levels of depressive symptoms, pregnancy-specific anxiety, and prenatal attachment than fathers. 45% of mothers and 23% of fathers were at high risk for depression. 88% of mothers and 90% of fathers reported elevated stress due to prior loss. - Previous PL impact was moderately correlated with depressive symptoms and pregnancy-specific anxiety. - No relationship between psychological distress in pregnancy after PL and prenatal attachment. - Prior loss increased parents' stress and psychological distress in the current pregnancy. - Healthcare practitioners should advise expectant couples about potential emotional distress following PL.

(Continued)

Table 1. Continued.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Armstrong (2002)	U.S.A.	103 couples in the 2nd trimester of the mother's pregnancy (40 couples with previous PL).	• Sociodemographic Variables: sex, age, race, marital status, educational level, household income, number of previous losses, previous successful pregnancies, gestational age at the time of the loss. • Psychological Variables: depressive symptoms, prenatal attachment, pregnancy-specific anxiety.	Comparative, cross-sectional survey design.	• Couples with a PL history showed more depressive symptoms and pregnancy anxiety than those with only successful pregnancies. • Mothers exhibited more symptoms than fathers across all groups. • Similar levels of prenatal attachment were observed regardless of PL history. • Previous loss experience continued to influence depressive symptoms and pregnancy-specific anxiety in subsequent pregnancies. • Depressive symptoms and pregnancy-specific anxiety did not affect subsequent parent-infant attachment after PL.
Bakermans-Kranenburg (1999)	Netherlands	85 mothers of 1-year-old infants and their children (30 had experienced previous PL).	• Sociodemographic Variables: age and sex of children, number of children, education, hospitalization of the child, hours spent away from home in employment, number of miscarriages, information about miscarriages. • Psychological Variables: attachment, children's attachment	Comparative, cross-sectional survey design.	• Unresolved loss due to miscarriage was related to an infant's disorganized attachment behavior. • The time since miscarriage did not affect mothers' unresolved loss. • Insecurely attached mothers with PL showed a significant association between unresolved loss and infant disorganization, unlike securely attached mothers. • Unresolved loss scores were higher with longer pregnancies before miscarriage. • For insecurely attached mothers, unresolved loss due to miscarriage uniquely predicted infant disorganization. • Securely attached mothers could prevent their unresolved loss from affecting the infant-mother attachment relationship.

Table 1. Continued.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Beauquier-Maccotta et al. (2022)	France	25 women in a subsequent pregnancy after a TOP.	- Sociodemographic Variables: maternal age, paternal age, duration of relationship, eldest child age, second child age. - Previous Pregnancy Characteristics: delay to diagnosis, first abnormality announcement, delay to termination of pregnancy decision, term at termination of pregnancy. - Current Pregnancy Characteristics: delay between pregnancies, first perception of fetal movement. - Psychological Variables: anxiety, post-traumatic stress disorder, postnatal depression, prenatal attachment, perinatal grief.	Longitudinal study (20, 27, and 35 gestational weeks).	- Early pregnancy showed a high prevalence of anxiety (66.7%), depression (30.4%), and PTSD symptoms (25%). - Emotional symptoms decreased in late pregnancy, and prenatal attachment increased. - Prenatal attachment was inversely correlated with grief intensity. - Highlighted the need for early prenatal psychological support and special attention to prenatal attachment during late pregnancy, even if the fetus is healthy.
Kinsey et al. (2014)	U.S.A.	2,798 pregnant women (449 with PL history).	- Sociodemographic Variables: maternal age, marital status, race and ethnicity, education, poverty status, miscarriage history, fertility treatment, mode of delivery, history of depression, postpartum mental health visit, infant hospitalization. - Psychological Variables: postpartum depression, maternal stress, social support, maternal-infant bonding.	Multi-site longitudinal (1, and 12 months postpartum), cohort study.	- Women with a history of PL had similar maternal-infant bonding scores to those without such history during three postpartum moments. - Those with a PL history were more likely to exhibit symptoms of probable postpartum depression. - PL history was not associated with bonding scores during the three postpartum moments. - Bonding scores increased from 1 month to 6 months postpartum, regardless of PL history. - Clinicians should not assume that a history of PL negatively affects the mother-infant relationship.
Black et al. (2022)	U.S.A.	226 parents (83 men, 142 women, and 1 other) who had experienced a miscarriage or stillbirth within the prior year.	- Sociodemographic Variables: participants' relationship to the deceased prior to death (closeness scale), feelings of blame/ regret. - Psychological Variables: continuing bonds, traumatic grief, closeness.	Cross-sectional.	- Higher closeness scores were observed in trimesters 2/3, with increased internalized continuing bonds. - Internalized continuing bond scores slightly decreased by the end of the block. - Internalized continuing bonds positively correlated with grief intensity, closeness, and externalized continuing bonds; externalized continuing bonds positively correlated with grief intensity. - Internalized continuing bonds were predicted by higher grief intensity, externalized continuing bonds, and closeness.

Table 1. Continued.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Branjerdporn et al., (2021)	Australia	108 pregnant women (41 with previous PL).	• Sociodemographic Variables: postal code, age, marital status, number of children, ethnicity, presence of mental health diagnosis, medical history. • Psychological Variables: attachment, sensory patterns, mental health.	Cross-sectional, case-control, observational study.	• Women with previous PL had more distress but similar levels of MFA compared to those without PL history. • Links found between MFA and maternal sensory patterns, as well as between adult attachment and mental health in women with and without previous PL. • Considering maternal sensory patterns, adult attachment, and mental health status antenatally may inform services to improve mother-unborn baby relationships.
Branjerdporn et al., (2022)	Australia	40 pregnant women and their children (15 with PL history).	• Sociodemographic Variables: marital status, ethnicity, mental health diagnosis, date of birth, postal code. • Psychological Variables: attachment, infant development, mental health.	Cohort, case-control, and longitudinal study (Time 1: during pregnancy; Time 2: when infants turned 12 months of age).	• Higher quality of MFA, less anxiety, and distress during pregnancy correlated with more optimal infant behavioral outcomes after 1 year. • Infants of women with PL had lower independent cognitive assessment scores compared to those without PL. • No link was found between prenatal maternal distress and infant development. • Infants of women with PL are more susceptible to suboptimal development. • Increased support during pregnancy and infancy for women with previous PL is important to facilitate optimal infant development.
Caldwell et al. (2024)	Australia	29 pregnant women after a PL.	• Sociodemographic and Clinical Variables: loss variables, previous mental health history, education level, gestation at current pregnancy. • Psychological Variables: attachment styles, shame, self-blame, social connectedness, perinatal grief, psychological distress.	Cross-sectional.	• Adult attachment, shame, self-blame, and social connectedness explained significant portions of difficulty coping (74%), total grief (74%), despair (65%), and active grief (57%). • Avoidant attachment and self-blame predicted greater difficulty coping and higher levels of despair. • Social connectedness predicted lower active grief and mediated relationships between perinatal grief and all three attachment patterns. • Focusing on social connectedness may help prenatal clinicians support pregnant women during subsequent pregnancies and in grief.

Table 1. Continued.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Christiansen et al. (2013)	Denmark	361 mothers and 273 fathers with PL history.	• Sociodemographic Variables: age of parents, age of the child, time since loss, gestational age, number of additional losses, number of living children, type of loss, prenatal loss. • Psychological Variables: traumatization, attachment, coping style, social support.	Cross-sectional.	• PTSD prevalence was 12.30%. Type of loss (pre-, peri-, or postnatal) did not affect PTSD severity, but lower gestational age was associated with more symptoms. • Factors accounting for 42% of the variance in PTSD severity included time since loss, female sex, attachment avoidance, attachment anxiety, emotion-focused coping, rational coping, feeling let down, and social support satisfaction. • The study highlights the long-term impact of infant loss and identifies attachment, coping, and social support as key contributors to PTSD development and maintenance.
Christiansen et al., (2014)	Denmark	361 mothers and 273 fathers who had lost an infant either late in pregnancy, during birth, or in the first year of life.	• Sociodemographic Variables: infertility issues, prior PL, maternal race, children's gender, maternal educational level, age, income-to-needs ratio, socioeconomic status, reproductive history. • Psychological Variables: depressive symptoms, marital satisfaction, maternal sensitivity, infant-mother attachment, maternal attitudes.	Cross-sectional.	• Mothers reported more PTSD symptoms, attachment anxiety, emotion-focused coping, and feeling let down, but lower attachment avoidance than fathers. • Attachment anxiety, attachment avoidance, and emotion-focused coping were more strongly associated with PTSD severity in mothers when examined alone. • No significant moderation effects of sex were found when all variables and time since loss were examined together. • Sex differences exist in PTSD severity and correlates, with some moderation effects for attachment and emotion-focused coping. However, overall associations between PTSD and covariates were more similar than different between mothers and fathers.
Côté-Arsenault et al. (2020)	USA	204 women and their children (58 with previous PL).	• Sociodemographic Variables: infertility issues, prior PL, maternal race, children's gender, maternal educational level, age, income-to-needs ratio, socioeconomic status, reproductive history. • Psychological Variables: depressive symptoms, marital satisfaction, maternal sensitivity, infant-mother attachment, maternal attitudes.	Longitudinal (prenatal, 6 months, and 1 year).	• No differences based on PL and no moderation by maternal race or adult attachment were found. • Within the loss group, later gestational losses led to fewer positive feelings about parenting and less secure child attachment. • Multiple PLs were associated with higher depressive symptoms at 1 year postpartum and less positive attitudes about parenting, regardless of race and socioeconomic status. • Multiple and later PLs may negatively impact maternal well-being and infant attachment type.

Table 1. Continued.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Freedle and Oliveira (2024)	USA	244 women who had experienced PL.	• Sociodemographic Variables: age, ethnicity, educational level, employment status, current income, relationship status. • Psychological Variables: attachment security, dyadic coping, posttraumatic growth.	Cross-sectional.	• PL was perceived as traumatic, especially when the pregnancy/fetus was seen as a person. • Greater trauma was evident in women who experienced a stillbirth or miscarriage plus stillbirth, compared to miscarriage alone. • Attachment security was related to positive couple relational functioning. • Dyadic coping influenced the relationship between attachment anxiety, attachment avoidance, and PTG. • Relational security and partner support after PL contribute to positive psychological change and growth. • Mediation analysis showed dyadic coping as the pathway through which attachment anxiety and avoidance affect PTG.
Gaudet (2010)	France	96 pregnant women, with PL history, and 74 women in the control group.	• Sociodemographic Variables: maternal age, marital status, employment status, number of losses, stage of current pregnancy, time since loss. • Psychological Variables: feelings of perinatal grief, psychological distress, identification with the maternal role, perinatal attachment.	Case-control.	• Women who suffered PL reported significantly higher grief and anxio-depressive symptoms compared to the control group. • Grief and anxio-depressive symptoms were significant predictors of prenatal attachment. • Highlights the intense psychological distress during pregnancy following a PL and the need for extended psychosocial and clinical care up to the birth of the subsequent child

(Continued)

Table 4.1 Continued.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Güçlü et al. (2021)	Turkey	46 women who decided to terminate their pregnancy due to fetal anomaly.	• Sociodemographic Variables: medical and obstetric history, factors affecting the women's decisions to terminate the pregnancy, number of living children at the termination of pregnancy (TOP). • Psychological Variables: perinatal grief, impact of the event, anxiety, postnatal depression symptoms, intimate relationships, adult attachment.	Longitudinal (6 weeks, 6 and 12 months after PL).	• No relationship was found between the severity of grief symptoms and socio-demographic or clinical characteristics. • Perinatal grief symptoms gradually decrease from termination of pregnancy to 6 months but can persist for up to 1 year. • Positive correlation between perinatal grief, anxiety symptoms, and hyperarousal. • Significant changes in mean perinatal grief scores from 6 weeks to 6 months and from 6 weeks to 12 months. • Diagnosis of fetal anomaly and TOP can be traumatic and disruptive. • Perinatal grief is a unique bereavement experience; specific interventions are needed to detect and treat severe perinatal grief.
Heller and Zeanah (1999)	USA	19 mothers with a stillbirth history and their 20 infants.	• Sociodemographic Variables: maternal age, maternal education, ethnicity, marital status, maternal medical history, medical complications, number of previous losses, infant gender, birth information, and gestational age of the deceased infant. • Psychological Variables: perinatal grief, infant attachment.	Longitudinal (two months after the loss and one year after the birth of the next child).	• Maternal responsibility for emotional well-being 2 months after PL predicted disorganized attachment in subsequent infants. • 55% of infants were securely attached; 45% were insecure/disorganized. Securely attached infants' mothers were more likely autonomous, while insecure/disorganized infants' mothers were more likely dependent. • No significant differences in infant attachment were based on mothers' descriptions of support experience. • Mothers of disorganized infants felt overwhelmed by grief and out of control. • Identifying disorganized/insecure dyads is important for prevention, as mothers may expect the next pregnancy to resolve their unresolved grief.

(Continued)

**Table 1.** Continued.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Hughes et al. (2001)	UK	53 women with PL history and their next-born infants; and 53 control dyads.	• Sociodemographic Variables: education, self and partner's employment, income, housing, previous physical and mental illness. • Psychological Variables: attachment, depression, PTSD symptoms, anxiety, infant attachment.	Cohort study, case-control, follow-up (3rd trimester of pregnancy and 12 months after birth).	• Women who held their stillborn infants were more depressed than those who only saw them; those who did not see the infant were the least likely to be depressed. • Seeing stillborn infants was associated with greater anxiety, higher PTSD symptoms, and a higher likelihood of disorganized attachment in subsequent infants. • Having a funeral and keeping mementos did not show associations with additional adverse outcomes. • The study suggests that parents should not be encouraged to see and hold their stillborn baby if they are reluctant, as it may not make mourning more difficult.
Hughes et al. (2002)	UK	64 mothers with previous PL history and 60 without it.	• Sociodemographic Variables: education, self and partner's employment, income, housing, previous physical and mental illness. • Details of the Loss: gestation of a stillborn infant, time since loss, contact with the deceased infant, whether the family had a funeral, family, and partner support, bereavement counseling after loss. • Psychological Variables: attachment, depression, anxiety.	Case-control, cross-sectional.	• Women who suffered PL were more likely to be unresolved compared to control women. • Although similar numbers of PL and control women experienced childhood trauma, only PL women were unresolved regarding this trauma. • Higher unresolved scores related to PL were predicted by childhood trauma, poor family support after the loss, and having a funeral for the infant. • The prevalence of unresolved grief among women with previous PL history is high and can be triggered or retriggered by subsequent traumatic loss.

(Continued)

Table 4.1 Continued.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Hughes et al. (2004)	UK	53 women with PL history and their next-born infants; and 62 control dyads.	- Sociodemographic Variables: ethnic group, age, years with partner, education, years of education, self and partner's work, income, housing, sex of child, previous serious physical illness, previous mental illness, previous miscarriage, same father as stillborn child, duration of stillborn pregnancy, time between stillbirth and infant's birth. - Psychological Variables: adult attachment, postnatal depression symptoms, anxiety, infant attachment.	Longitudinal (third trimester of pregnancy, 6 weeks, 26 weeks, and 12 months after the birth). Case-control.	- Infants born after stillbirth had higher rates of attachment disorganization compared to controls, independent of psychiatric symptoms or demographic factors. - Maternal unresolved loss strongly predicted increased attachment disorganization. Elective termination of pregnancy and seeing the stillborn infant also contributed, but less significantly. - Higher disorganized attachment prevalence in children born after PL, especially in mothers with elective TOP or who saw their stillborn child. - Subsequent pregnancies can evoke thoughts of the lost child, affecting attachment with the current child. - PL's impact on attachment is influenced by maternal unresolved grief, suggesting a potential causal role in intergenerational difficulties.
Hughes et al. (2006)	UK	31 mothers who showed unresolved state of mind about PL and their children.	- Sociodemographic Variables: education, self and partner's employment, income, housing, previous physical and mental illness. - Details of the Loss: gestation of a stillborn infant, time since PL, contact with the deceased infant, funeral, family and partner support, and bereavement counseling. - Psychological Variables: attachment, depression, PTSD symptoms, anxiety, infant attachment.	Longitudinal (third trimester of pregnancy and 12 months after the loss).	55% of infants in the loss group exhibited disorganized attachment at age 1. - Social and attachment factors did not predict infant disorganization among mothers with unresolved mourning. - Mothers of non-disorganized infants had higher levels of depression and intrusive thoughts during pregnancy and at the infant's 1-year mark. - No demographic, social, or stillbirth management differences were associated with disorganized attachment. - Attachment variables did not predict mothers' unresolved state of mind. - Depression and intrusive thoughts during pregnancy were higher in mothers whose infants did not exhibit disorganized attachment.

(Continued)

Table 1. Continued.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Kelmanson, (2024)	Russia	100 pregnant women with PL history and having uncomplicated singleton pregnancy.	• Sociodemographic Variables: maternal age, gestational age, trimester, previous abortions, number of children, marital status, level of education. • Psychological Variables: maternal attachment, anxiety	Cross-sectional.	• Maternal antenatal attachment quality and strength were predicted by maternal age, gestational age, previous PL, parity, maternal education, marital status, and low manifest anxiety. • Women with higher anxiety levels tended to have insecure attachment models. • To prevent negative consequences of poor MFA in women with previous PL, early screening for manifest anxiety is recommended.
Mehran et al. (2013)	Iran	100 pregnant women with (n = 50) and without (n = 50) a history of PL.	• Sociodemographic and Fertility-Related Variables: educational status, occupation, accommodation, income, age. • Fertility History: number of fetal losses, number of infant losses, pregnancies parturitions, and abortions. • Psychological Variables: attachment.	Case-control. with or without PL history.	• No differences in MFA behaviors between mothers. • Mothers with PL history exhibited less “differentiation of self from the fetus.” • PL history was associated only with disturbances in MFA behaviors related to “differentiation of self from fetus” in subsequent pregnancies.
O’Malley et al., (2020)	Ireland	80 pregnant women with PL history.	• Sociodemographic Variables: age, body mass index, Irish-born, married, nulliparous, smoker, age of completion of education, professional occupation, gestational age at the time of ultrasound, planned pregnancy, preconceptional folic acid. • Psychological Variables: MFA, attachment, nicotine addiction, stress perception.	Cross-sectional observational.	• MFA showed no association with maternal age, parity, education, marital status, previous pregnancy loss, or smoking behavior. • Unplanned pregnancy was linked to lower MFA scores and higher stress levels, consistent in multiple regression analysis controlling for maternal age and parity. • In early pregnancy, unplanned pregnancy is associated with lower maternal antenatal attachment and higher stress.

(Continued)

Table 4.1 Continued.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Obst et al., (2021)	Australia	228 men whose partner had experienced within the last 20 years.	• Sociodemographic Variables: age, ethnicity, education, occupation, sexual orientation, marital status, religion, postcode. • Pregnancy and Loss History: time since loss, previous losses, loss type. • Psychological Variables: antenatal attachment, grief pattern, perinatal grief, social support, gender role conformity, masculinity ideology.	Cross-sectional.	• Men experienced profound grief across various losses, often surpassing high grief thresholds. • Grief scores were correlated with loss history, marital satisfaction, social support, acknowledgment from family/friends, bonding during pregnancy, and conflicting supporter roles. • Grief styles varied: intuitive grief was linked to healthcare professional support, while instrumental grief was associated with bonding time, social support, acknowledgment from partners, conflicting supporter roles, and self-reliance tendencies. • Men need validation and support after pregnancy loss and neonatal death, with tailored strategies addressing their unique needs and balancing support roles. Father-inclusive practices should align with their grief styles.
Pinto et al., (2006)	UK	104 children-mother dyads (49 PL-group and 51 control-group) and their teachers.	• Sociodemographic Variables: economic status. • Psychological Variables: psychiatric symptoms, adult attachment, ADHD symptoms, infant attachment.	Case-control study.	• Probable ADHD cases in children were linked to mothers' self-rated retrospective ADHD scores and unresolved mourning. • Mother-rated ADHD in children was associated with low overall maternal psychosocial functioning. • The relationship between unresolved mourning and ADHD symptoms suggests that infant disorganized attachment might be the pathway from a mother's unresolved mourning to ADHD in children.
Price, (2008)	USA	10,688 parents of children enrolled in the Early Childhood Longitudinal Study-Birth Cohort (ECLS-B).	• Sociodemographic Variables: PL history, family members, socioeconomic data, race-ethnicity, age. • Psychological Variables: depression, mother-infant interaction, parenting perceptions and involvement.	Cohort study.	• 25.07% of U.S. mothers have experienced PL. • Multiple loss history contributes to depressive symptoms. • No differences in maternal sensitivity or parenting style based on PL history. • Women with PL history showed more depressive symptoms but demonstrated high resilience and few negative effects. • A large sample study found no differences in parenting styles between families with and without PL.

(Continued)

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Scheidt et al. (2012)	Germany	31 mothers with a previous PL history.	• Sociodemographic Variables: marital status, employment status, education, age, type of PL. • Psychological Variables: attachment, PL, social support, quality of current partnership, grief, psychological distress, PTSD.	Longitudinal (T1: time of hospital admission within 2 weeks following PL; T2: four weeks later; T3: 4 months later; T4: 9-month follow-up), prospective cohort study. Naturalistic follow-up (1st and 3rd trimester of pregnancy), case-control.	• All outcome measures showed significant improvement over time. • Initial psychological distress scores predicted follow-up outcomes. • Preoccupied attachment predicted somatization and PTSD at 9 months follow-up. • Social support, quality of partnership, and secure attachment correlated inversely with grief, anxiety, depression, somatization, psychological distress, and PTSD symptoms. Insecure preoccupied attachment correlated positively with these symptoms. • Attachment, social support, and partnership quality impact bereavement course after PL. • Secondary prevention should focus on these factors for specific counseling and support. • Women who experienced a miscarriage exhibited higher pregnancy-specific anxiety compared to those without any loss, which decreased after the first trimester. • By the 3rd trimester, prenatal MFA feelings significantly increased for the overall group but remained stable for women with PL history.
Tsartsara and Johnson (2006)	UK	35 expectant mothers (10 with PL history).	• Sociodemographic Variables: reproductive history information, age, marital status, obstetric history, experience with the ultrasound scan. • Psychological Variables: pregnancy concerns, MFA.	Cohort study, follow-up, longitudinal (3rd trimester and 12 months-postpartum).	• PL history may not have a long-lasting adverse effect on psychological adaptation during a subsequent pregnancy, but it may intensify pregnancy-specific anxiety and uncertainty in the early stages. • There was no association observed between maternal PTSD and infant disorganization of attachment. • Very little evidence was found to support the hypothesis of correspondence between unresolved grief state and PTSD.
Turton et al. (2004)	UK	60 dyads of mothers in the pregnancy after PL-children born subsequently.	• Sociodemographic Variables: age, occupational status, ethnicity, marital status. • Psychological Variables: PTSD, attachment, infant attachment.		

(Continued)



Table 1. Continued.

First author and year	Country	Sample	Variables and instruments	Design	Main findings and conclusions
Uren and Wastell (2002)	Australia	109 women (78 with stillbirth history and 31 with neonatal death history).	• Sociodemographic Variables: age, type of PL, marital status, level of education, number of months post-loss. • Psychological Variables: attachment, sense of coherence, spiritual beliefs, impact of events, psychopathology symptoms, perinatal grief.	Cross-sectional	• Participants who experienced losses underwent perinatal grief. • A higher sense of coherence and the search for meaning were significant predictors of grief after adjusting for confounding variables. • These findings suggest grief as an interpretive response to losing a primary attachment figure, disrupting core life purposes and emphasizing the need to regain meaning.
Yilmaz and Beji (2013)	Turkey	128 pregnant women with PL history and 214 without it.	• Sociodemographic and Obstetric Variables: education, employment, economic status, type of family, offspring from previous marriage, pregnancies, gestational age, living children, planned pregnancy, consideration of termination of pregnancy. • Psychological Variables: antenatal attachment, depression symptoms, coping with stress.	Cross-sectional,	• Women with a history of PL had higher depression

One study (3.03%) focused exclusively on fathers (Obst et al., 2021), one included measure collected by teachers (Price, 2008), and five studies examined the mother-child dyad (Al-Maharma et al., 2016; Bakermans-Kranenburg et al., 1999; Côté-Arsenault et al., 2020; Heller & Zeanah, 1999; Pinto et al., 2006).

About 9.09% studies did not report explicit inclusion and exclusion criteria (Heller & Zeanah, 1999; Price, 2008; Uren & Wastell, 2002). In 12.12% of cases (Hughes et al., 2001, 2002, 2004; Tsartsara & Johnson, 2006), PLs due to pregnancy termination for fetal abnormality were excluded. In 27.3%, participants with severe physical or mental illnesses or those undergoing treatment were excluded (Beauquier-Maccotta et al., 2022; Branjerdporn et al., 2022; Güçlü et al., 2021; Hughes et al., 2001, 2002, 2004; Mehran et al., 2013; Scheidt et al., 2012; Yilmaz & Beji, 2013). In 9.09% studies (Bakermans-Kranenburg et al., 1999; Branjerdporn et al., 2022; Hughes et al., 2001) children who had been hospitalized for long periods or had serious illnesses or developmental disabilities were excluded. 6.06% studies (Kelmanson, 2024; Tsartsara & Johnson, 2006) required that the present pregnancy be conceived spontaneously.

Nine studies did not explicitly provide information regarding ethnicity, socioeconomic status, employment, or educational background (Beauquier-Maccotta et al., 2022; Christiansen et al., 2013, 2014; Hughes et al., 2002, 2006; Pinto et al., 2006; Price, 2008; Tsartsara & Johnson, 2006; Turton et al., 2004). However, Hughes et al. (2001, 2002, 2004, 2006) noted that their sample was paired on a case-control basis for age, ethnicity, and education.

In relation to ethnicity, the majority of studies reported that over 80% of their sample identified as White or Caucasian (Armstrong, 2002, 2004; Kinsey et al., 2014; Black et al., 2022; Branjerdporn et al., 2021, 2022; Caldwell et al., 2024; Côté-Arsenault et al., 2020; Freedle & Oliveira, 2024; Heller & Zeanah, 1999; Hughes et al., 2001; Obst et al., 2021). An exception is noted in Côté-Arsenault et al. (2020), where the sample consisted of 50% European American and 50% African American participants.

In terms of educational level, variable figures are reported, ranging from 8.7% to 89.9% of people graduated from college (Black et al., 2022; Caldwell et al., 2024; Côté-Arsenault et al., 2020; Güçlü et al., 2021; Hughes et al., 2001; Kinsey et al., 2014; Obst et al., 2021; Uren & Wastell, 2002; Yilmaz & Beji, 2013). Other studies report average years of education between 12 and 20.5 years (Armstrong, 2004; Armstrong & Hutti, 1998; Bakermans-Kranenburg et al., 1999; O'Malley et al., 2020).

Regarding employment, reported rates varied between 56% and 81%. Lower rates, ranging from 2% to 26%, were observed in studies conducted in Arab countries, potentially reflecting the sociocultural and policy-related barriers to women's workforce participation in these regions (Al-Maharma et al., 2016; Güçlü et al., 2021; O'Malley et al., 2020; Yilmaz & Beji, 2013;

Mehran et al., 2013). Across studies, participants were typically described as having a middle socioeconomic status.

Regarding study design, 45% were longitudinal (Beauquier-Maccotta et al., 2022; Branjerdporn et al., 2022; Côté-Arsenault et al., 2020; Güçlü et al., 2021; Heller & Zeanah, 1999; Hughes et al., 2001, 2002, 2004, 2006; Kinsey et al., 2014; Price, 2008; Scheidt et al., 2012; Tsartsara & Johnson, 2006; Turton et al., 2004), including five case-control studies (15.15%) (Branjerdporn et al., 2022; Hughes et al., 2001, 2002, 2004; Tsartsara & Johnson, 2006). The remaining studies (55%) were cross-sectional (Al-Maharma et al., 2016; Armstrong, 2002, 2004; Armstrong & Hutti, 1998; Bakermans-Kranenburg et al., 1999; Black et al., 2022; Branjerdporn et al., 2021; Caldwell et al., 2024; Christiansen et al., 2013, 2014; Freedle & Oliveira, 2024; Gaudet et al., 2010; Kelmanson, 2024; Mehran et al., 2013; Obst et al., 2021; O'Malley et al., 2020; Pinto et al., 2006; Uren & Wastell, 2002; Yilmaz & Beji, 2013), and 21.21% of the studies included a control group (Armstrong, 2004; Armstrong & Hutti, 1998; Bakermans-Kranenburg et al., 1999; Branjerdporn et al., 2021; Gaudet et al., 2010; Mehran et al., 2013; Pinto et al., 2006). Dropout rates in longitudinal studies ranged from 1.89% to 46%, with an average of 21%.

The studies were conducted between 1998 and 2023. Notably, 42.42% of studies were conducted in the last 10 years, reflecting a growing interest in perinatal mental health (Al-Maharma et al., 2016; Beauquier-Maccotta et al., 2022; Black et al., 2022; Branjerdporn et al., 2021, 2022; Caldwell et al., 2024; Christiansen et al., 2014; Côté-Arsenault et al., 2020; Freedle & Oliveira, 2024; Güçlü et al., 2021; Kelmanson, 2024; Kinsey et al., 2014; Obst et al., 2021; O'Malley et al., 2020). 50% of the studies were conducted in Europe, primarily in the UK (21.21%; Hughes et al., 2001, 2002, 2004, 2006; Pinto et al., 2006; Tsartsara & Johnson, 2006; Turton et al., 2004), followed by Denmark (6.06%; Christiansen et al., 2013, 2014), France (6.06%; Beauquier-Maccotta et al., 2022; Gaudet et al., 2010), and Turkey (6.06%; Güçlü et al., 2021; Yilmaz & Beji, 2013). The remaining studies were conducted in the USA (27.27%; Armstrong, 2002, 2004; Armstrong & Hutti, 1998; Black et al., 2022; Côté-Arsenault et al., 2020; Freedle & Oliveira, 2024; Heller & Zeanah, 1999; Kinsey et al., 2014; Price, 2008), Australia (15.15%; Branjerdporn et al., 2021, 2022; Caldwell et al., 2024; Obst et al., 2021; Uren & Wastell, 2002), Iran (3.03%; Mehran et al., 2013), and Jordan (3.03%; Al-Maharma et al., 2016).

Variables assessed

Attachment

In terms of attachment variables, assessments included adult attachment and prenatal or postnatal measures. Adult attachment was assessed using

the following scales, from most to least used: Adult Attachment Interview (AAI) (Bakermans-Kranenburg et al., 1999; Hughes et al., 2001, 2002, 2004, 2006; Pinto et al., 2006; Scheidt et al., 2012; Turton et al., 2004), Revised Adult Attachment Scale (RAAS) (Christiansen et al., 2013, 2014), Adult Attachment Scale (AAS) in its short version (Güçlü et al., 2021), Experiences in Close Relationships (ECR) (Freedle & Oliveira, 2024), and Attachment Style Questionnaire (ASQ) in its long version (Branjerdporn et al., 2022; Caldwell et al., 2024). Of the studies that used the AAI, only Hughes et al. (2006) employed a validated coding system. Studies employing the RAAS used either the maternal self-report version (Güçlü et al., 2021; Kinsey et al., 2014) or the mother-child interaction version (Caldwell et al., 2024). The ECR was employed with both self-report (Freedle & Oliveira, 2024) and interview formats (Al-Maharma et al., 2016).

Prenatal and postnatal attachment measures included various types of scales. The most frequently used scales were the Maternal-Fetal Attachment Scale (MFA) (Armstrong, 2002, 2004; Armstrong & Hutti, 1998; Beauquier-Maccotta et al., 2022; Gaudet et al., 2010; Hughes et al., 2001, 2002, 2004; Pinto et al., 2006), the Maternal Antenatal Attachment Scale (MAAS) (Branjerdporn et al., 2021, 2022; Turton et al., 2004), and the Postnatal Bonding Scale (PBS) (Beauquier-Maccotta et al., 2022; Branjerdporn et al., 2021, 2022; Gaudet et al., 2010; Pinto et al., 2006). Other measures used less frequently included the Perinatal Bonding Questionnaire (PBQ) (Branjerdporn et al., 2021, 2022; Kinsey et al., 2014; Pinto et al., 2006), the Bonding Inventory (BI) (Hughes et al., 2002), and the Postnatal Maternal Bonding Scale (PMBS) (Yilmaz & Beji, 2013). The MFA was administered through both self-report (Armstrong, 2002, 2004; Armstrong & Hutti, 1998; Beauquier-Maccotta et al., 2022; Gaudet et al., 2010; Hughes et al., 2001, 2002, 2004; Pinto et al., 2006) and interviews (Hughes et al., 2006). The MAAS was employed in its complete (Branjerdporn et al., 2021, 2022) and short forms (Turton et al., 2004). The PBQ and BI were also assessed using self-report and interview formats, while the PMBS was employed in its long format (Yilmaz & Beji, 2013).

Other variables

Regarding psychopathology, depression, anxiety, and PTSD symptoms were assessed in 42%, 39%, and 27% of the studies, respectively (Armstrong, 2002, 2004; Armstrong & Hutti, 1998; Beauquier-Maccotta et al., 2022; Côté-Arsenault et al., 2020; Gaudet et al., 2010; Güçlü et al., 2021; Hughes et al., 2001, 2002, 2004, 2006; Kinsey et al., 2014; Price, 2008; Scheidt et al., 2012; Yilmaz & Beji, 2013; Kelmanson, 2024; Tsartsara & Johnson, 2006; Christiansen et al., 2013, 2014; Turton et al., 2004). Fewer studies examined general psychopathology (18%; Branjerdporn et al., 2021,

2022; Caldwell et al., 2024; Pinto et al., 2006; Uren & Wastell, 2002) or the impact of the event (9%; Armstrong, 2002; Güçlü et al., 2021; Uren & Wastell, 2002).

The most common tools for assessing depression were the Center for Epidemiological Studies Depression Scale (CES-D) (Armstrong, 2002, 2004; Côté-Arsenault et al., 2020; Price, 2008; Yilmaz & Beji, 2013) and the Edinburgh Postnatal Depression Scale (EPDS) (Beauquier-Maccotta et al., 2022; Güçlü et al., 2021; Hughes et al., 2004, 2006; Kinsey et al., 2014), both used in 15% of the studies. Anxiety was primarily assessed with the STAI scale (Beauquier-Maccotta et al., 2022; Hughes et al., 2001, 2002, 2004, 2006), and PTSD symptoms with the PTSD-I scale (Hughes et al., 2001, 2002, 2004, 2006; Scheidt et al., 2012; Turton et al., 2004), both in 15–18% of the studies. Additionally, one study (3.03%) assessed children with ADHD using the ADHD-RS (Pinto et al., 2006).

Perinatal grief was assessed in 27.27% of the studies, with the PGS-33 (Al-Maharma et al., 2016; Beauquier-Maccotta et al., 2022; Caldwell et al., 2024; Gaudet et al., 2010; Güçlü et al., 2021; Obst et al., 2021; Uren & Wastell, 2002). Protective factors such as social support were examined in 15% of the studies (Caldwell et al., 2024; Christiansen et al., 2013, 2014; Kinsey et al., 2014; Obst et al., 2021), and coping strategies were considered in 12% of the studies (Christiansen et al., 2013, 2014; Freedle & Oliveira, 2024; Yilmaz & Beji, 2013).

Main results of psychological variables

Individuals who have experienced PL exhibit elevated levels of depressive, anxious, and PTSD symptoms compared to control groups (Armstrong, 2002; Beauquier-Maccotta et al., 2022; Branjerdporn et al., 2021; Gaudet et al., 2010; Price, 2008; Tsartsara & Johnson, 2006; Yilmaz & Beji, 2013), with women showing higher levels of distress compared to their partners (Christiansen et al., 2014). These increased symptoms are associated with lower levels of secure attachment. Greater bereavement intensity correlates with decreased prenatal attachment, particularly noticeable in early pregnancy compared to later stages among women who have experienced previous PL (Al-Maharma et al., 2016; Beauquier-Maccotta et al., 2022). Notably, higher quality MFA in subsequent pregnancies following PL is linked to positive behavioral outcomes in children at age one (Branjerdporn et al., 2022).

However, no significant differences in prenatal attachment were observed between women who have endured PL in subsequent pregnancies and those who have not (Armstrong, 2002; Branjerdporn et al., 2021; Kinsey et al., 2014; Mehran et al., 2013; Price, 2008; Yilmaz & Beji, 2013).

Nonetheless, research suggests that women who have experienced PL often display greater resilience (Price, 2008). Social support, quality of partnership, and secure attachment are inversely correlated with psychological distress and play a crucial role in the perinatal grief process (Caldwell et al., 2024).

Most studies (15.15%) indicate that unresolved loss is associated with an avoidant attachment style in children born after PL, particularly at one year of age (Bakermans-Kranenburg et al., 1999; Heller & Zeanah, 1999; Hughes et al., 2002, 2004, 2006). However, some studies, such as Turton et al. (2004), found no discernible association between unresolved grief and PTSD symptoms, nor between PTSD symptoms and infant attachment disorganization.

Perinatal loss information

More than half of the studies (57.58%; Al-Maharma et al., 2016; Armstrong, 2004; Beauquier-Maccotta et al., 2022; Black et al., 2022; Caldwell et al., 2024; Christiansen et al., 2013; Côté-Arsenault et al., 2020; Freedle & Oliveira, 2024; Gaudet et al., 2010; Güçlü et al., 2021; Heller & Zeanah, 1999; Hughes et al., 2002, 2004, 2006; Mehran et al., 2013; Obst et al., 2021; O'Malley et al., 2020; Tsartsara & Johnson, 2006; Uren & Wastell, 2002) collected multiple pieces of information regarding pregnancy history and PL. The most frequently collected information included the gestational week at the time of loss (42.42%; Al-Maharma et al., 2016; Armstrong, 2004; Black et al., 2022; Caldwell et al., 2024; Christiansen et al., 2013; Côté-Arsenault et al., 2020; Gaudet et al., 2010; Güçlü et al., 2021; Heller & Zeanah, 1999; Hughes et al., 2001, 2004, 2006; O'Malley et al., 2020; Tsartsara & Johnson, 2006), followed by the time elapsed since the loss (30.30%; Black et al., 2022; Caldwell et al., 2024; Christiansen et al., 2013; Freedle & Oliveira, 2024; Gaudet et al., 2010; Heller & Zeanah, 1999; Hughes et al., 2004, 2006; Obst et al., 2021; Uren & Wastell, 2002), the number of losses (30.30%; Armstrong, 2004; Bakermans-Kranenburg et al., 1999; Caldwell et al., 2024; Christiansen et al., 2013; Freedle & Oliveira, 2024; Gaudet et al., 2010; Heller & Zeanah, 1999; Mehran et al., 2013; Tsartsara & Johnson, 2006; Yilmaz & Beji, 2013), and the type of loss (24.24%; Côté-Arsenault et al., 2020; Freedle & Oliveira, 2024; Gaudet et al., 2010; Hughes et al., 2002; Mehran et al., 2013; Obst et al., 2021; Scheidt et al., 2012; Turton et al., 2004). Some studies also collected data on whether any psychological intervention had been attended after the loss (6.06%; Armstrong, 2002; Hughes et al., 2004), as well as information on fertility issues or fertility treatments (6.06%; Côté-Arsenault et al., 2020; Güçlü et al., 2021; Freedle & Oliveira, 2024; Kinsey et al., 2014). Five studies (15%; Branjerdporn et al., 2021; Kelmanson, 2024; Pinto et al.,

2006; Price, 2008; Uren & Wastell, 2002) did not report information on PL beyond its presence or absence.

Confounding factors

Only 21.21% of the studies explicitly controlled for certain confounding variables. For instance, Kinsey et al. (2014) accounted for maternal age, probable postpartum depression, and fertility issues. Kelmanson (2024) considered major demographic and obstetric factors, Hughes et al. (2004) controlled for social disadvantage, Price (2008) adjusted for maternal age, and Mehran (2013) addressed socio-cultural variables.

Quality assessment

Table 2 shows the scores obtained in relation to the quality of the included studies. The quality scores are in the range 1 to 5, with 1 being the highest score (lowest risk of bias and highest quality) and 5 the lowest score (highest risk of bias and lowest quality).

Discussion

The present systematic review aimed to determine whether attachment can be a fundamental variable in the face of PL. Specifically, it sought results regarding the relevance of the adult attachment of the pregnant person or their partner for emotional or physical adjustment to perinatal grief. Additionally, it aimed to understand the implications of the type of attachment of the pregnant person or their partner in the development of affective bonds following PL, as well as for the physical or mental health outcomes of subsequent children. Moreover, the repercussions of the construct of MFA are discussed.

Following an exhaustive literature search conducted according to PRISMA standards (Moher et al., 2016) with two blinded evaluators, this review included results from 33 studies involving more than 6,000 women, fewer than 1,000 men, and more than 11,000 children. The main findings highlight the relevance of adult attachment for adjusting to perinatal grief. Additionally, they reveal how the bond established with the future baby can aid in coping with PL. Furthermore, the significance of adult attachment for predicting physical and mental health outcomes in children born after PL is evident.

The results point to a greater presence of psychological distress in the mother during pregnancy (Heller & Zeanah, 1999) and a greater tendency to disorganized attachment, behavioral problems and ADHD in one-year-old children born after pregnancies subsequent PL if the grief is not resolved (Heller & Zeanah, 1999; Hughes et al., 2004, 2006; Pinto et al.,

Table 2. Article quality assessment.

First author	Study design	Blinding	Selection bias (representativeness)	Withdrawals and dropouts (representativeness)	Confounders	Data collection methods	Overall quality assessment
Al-Maharma	3	3	3	Not applicable	3	1	Weak
Armstrong	3	3	3	Not applicable	3	1	Weak
Armstrong	3	3	3	Not applicable	3	1	Weak
Armstrong	3	3	3	Not applicable	2	1	Weak
Bakermans-Kranenburg	3	3	3	Not applicable	2	2	Weak
Beauquier-Maccott	3	3	3	1	2	1	Weak
Black	3	3	3	Not applicable	3	1	Weak
Branjerdporn	3	3	3	Not applicable	3	1	Weak
Branjerdporn	3	3	3	1	3	1	Weak
Caldwell	3	3	3	Not applicable	3	1	Weak
Christiansen	3	3	3	Not applicable	3	1	Weak
Christiansen	3	3	3	Not applicable	2	1	Weak
Côté-Arsenault	3	3	3	2	2	1	Weak
Freedle	3	3	3	Not applicable	2	2	Weak
Gaudet	3	3	3	Not applicable	3	1	Weak
Güçlü	3	3	3	1	2	1	Weak
Heller	3	1	3	2	3	1	Weak
Hughes	3	3	3	1	1	1	Weak
Hughes	3	2	3	Not applicable	1	1	Weak
Hughes	3	3	3	Not applicable	3	1	Weak
Hughes	3	2	3	2	3	1	Weak
Kinsey	3	3	3	3	1	1	Weak
Mehran	3	3	3	Not applicable	3	1	Weak
O'Malley	3	3	3	Not applicable	1	1	Weak
Orbst	3	3	3	Not applicable	3	1	Weak
Pinto	3	3	3	Not applicable	3	1	Weak
Price	3	3	4	2	1	1	Weak
Scheidt	3	3	1	1	1	1	Weak
Tsartara	3	3	1	1	1	1	Weak
Turton	3	3	2	2	1	1	Weak
Uren	3	3	Not applicable	1	1	1	Weak
Yilmaz	3	3	Not applicable	3	1	1	Weak

2006). Mental health outcomes are directly influenced by the type of attachment exhibited by the individual, with insecure or disorganized attachment predicting poorer adjustment to perinatal grief (Levi-Belz & Lev-Ari, 2019; Sochos & Aleem, 2022). However, it is noteworthy that only a small portion of studies evaluate perinatal grief using standardized questionnaires (Al-Maharma et al., 2016; Beauquier-Maccotta et al., 2022; Caldwell et al., 2024; Gaudet et al., 2010; Güçlü et al., 2021; Obst et al., 2021; Uren & Wastell, 2002).

Although having experienced PL tends to be associated with increased psychological symptoms during pregnancy (Beauquier-Maccotta et al., 2022; Kinsey et al., 2014; Tsartsara & Johnson, 2006; Yilmaz & Beji, 2013), this distress does not appear to affect MFA levels in subsequent pregnancies compared with mothers who have not experienced PL (Armstrong, 2004; Branjerdporn et al., 2022; Mehran et al., 2013; Yilmaz & Beji, 2013). In addition, MFA appears to be protective in the development of attachment and behavioral problems in 1-year-old children born after the loss (Branjerdporn et al., 2022). In adults, previous secure attachment was associated with lower levels of grief and distress symptoms (Freedle & Oliveira, 2024). Moreover, secure attachment was linked to healthier couple relational functioning and overall partnership quality (Scheidt et al., 2012).

Regarding the impact of perinatal grief on future attachment to subsequent children, it has been observed that greater intensity of perinatal grief is associated with less bonding with the unborn baby. This association is especially relevant in the early stages of pregnancy (Al-Maharma et al., 2016; Beauquier-Maccotta et al., 2022). These results could be due to a greater fear of future losses after a PL (Donegan et al., 2023), leading to conscious avoidance of bonding with the next baby, which can even be adaptive at first. Not connecting with the future baby could provide emotional protection against the possibility of a future loss (Grabow & Becker-Blease, 2023). As is known, dissociation is a symptom that can be useful and adaptive in temporary stress situations, but it could become problematic if it persists over time or if symptoms increase drastically (Snyder et al., 2023). However, low bonding with the baby can have consequences for the baby's subsequent development (Branjerdporn et al., 2022). Nonetheless, other studies indicate that when comparing individuals who have experienced PL with those who have not, no differences are found in the quality of prenatal attachment (Armstrong, 2002; Branjerdporn et al., 2021; Kinsey et al., 2014; Mehran et al., 2013; Price, 2008; Yilmaz & Beji, 2013).

Additionally, this review highlights how higher quality MFA during pregnancies following PL is associated with better emotional and behavioral outcomes in future children (Branjerdporn et al., 2022). Consistently,

unresolved loss is associated with an avoidant attachment style in children born after a PL (Bakermans-Kranenburg et al., 1999; Heller & Zeanah, 1999; Hughes et al., 2002, 2004, 2006). The findings suggest that there are no significant differences in MFA levels between individuals who have experienced previous PL and those who have not (Branjerdporn et al., 2022; Kelmanson, 2024; Mehran et al., 2013; O'Malley et al., 2020; Tsartsara & Johnson, 2006). Kelmanson (2024) raises the possibility that MFA remains intact due to increased emotional and affective involvement during pregnancy following the loss. However, Mehran et al. (2013) stress that variables such as cultural context, sociodemographic characteristics and the stage of the grieving process could act as confounding factors that may affect the interpretation of these results.

For this reason, it is necessary to attend to individuals who have experienced PL, helping them process their loss, promoting healthy bonds with their subsequent babies during pregnancy, and raising awareness of the process. Understanding that this can also have consequences for the optimal development of future children (Caldwell et al., 2024). Psychological care should include strategies to reduce pregnancy-specific anxiety and depression, as observed in Armstrong (2004), where it is suggested that reducing anxiety can favor the development of healthier prenatal attachment.

Despite MFA being a well-established construct in the literature, it is pertinent to discuss whether it should be termed “bonding” instead of “attachment.” According to Bowlby’s attachment theory (1969), the mother cannot establish an attachment with the baby, as this concept implies a bidirectional relationship in which both parties seek mutual security and comfort, as well as asymmetry, where theoretically the attachment figure seeks comfort in the other person. Instead, the mother establishes an affective bond during pregnancy, characterized by behaviors and emotions directed toward the unborn baby (Cranley, 1981; Muller, 1993). For this reason, we believe it is pertinent to reflect on this issue.

Despite the strengths of this systematic review, several limitations must be considered when interpreting its results. The studies mostly have convenience samples, selected non-randomly, which could be prone to sampling bias. Therefore, it would be beneficial to increase future research in this regard by conducting longitudinal, multicentric studies with random sample selection and larger samples, as most studies have small and unrepresentative samples. Furthermore, the heterogeneity of the evaluation measures used prevents performing a meta-analysis, which would be relevant in the future. Additionally, the cross-sectional design of most studies does not allow to establish causal relationships between PL and future consequences. However, most studies have two informants and perform robust analyses, which can increase data validity.

Moreover, a significant majority of studies do not report key information about the PL experienced, which could act as a confounding factor. For example, whether the PL is voluntary or involuntary, the number of PLs, the timing of the PL, the time elapsed since the PL and the subsequent pregnancy, or whether the PL occurred in the context of assisted reproduction. Although we recognize the complexity of evaluating these variables in the context of PL, they are fundamental to truly understanding the perinatal grief process and affective bonds during and after pregnancy (Kinsey et al., 2014). It is also crucial to evaluate protective factors in studies on PL and attachment, as research mainly focuses on the negative consequences of PL (Ayers et al., 2024), often neglecting variables that could mitigate its impact. Protective factors such as dyadic coping, resilience, or post-traumatic growth have been highlighted in theoretical frameworks and isolated studies (Beauquier-Maccotta et al., 2022; Freedle & Oliveira, 2024; Price, 2008), but their systematic exploration remains limited. Understanding these variables could not only enhance our theoretical knowledge but also inform the design of interventions aimed at preventing or mitigating the psychological effects of PL. For instance, fostering secure attachment, which serves as a well-documented protective factor, could be a central component of such interventions, promoting better emotional regulation and psychological adjustment for parents and their subsequent children.

Although the review includes a wide variety of studies involving participants from different countries and time periods, some countries are not represented in this research. Additionally, the participants are mostly heterosexual individuals or their sexual orientation is unknown, so the LGBTQ+ community is underrepresented in this review. Cultural, emotional, and socioeconomic differences significantly influence the experience of PL and attachment formation, highlighting the importance of continuing research on these issues and increasing research in countries where it is still emerging. Considering diversity is crucial to design sensitive interventions tailored to the specific needs of each family.

To the best of our knowledge, this is the first systematic review on attachment and PL. The findings of this review suggest the need to implement policies and practices that recognize and validate perinatal grief, providing specific and continuous support at both clinical and social levels. Healthcare professionals need to conduct detailed assessments of attachment and grief in parents who have experienced PL and tailor interventions to individual needs (Freedle & Oliveira, 2024). Training and raising awareness among professionals about the importance of recognizing and adequately managing perinatal grief are also crucial to improving long-term mental health outcomes. Similarly, the inclusion of prevention programs that can foster coping strategies for potential PL is necessary.

In summary, this systematic review underscores the complexity of perinatal grief and its multifaceted impact on the mental health of parents and the development of their children. It advocates for a comprehensive and personalized approach to supporting affected families by fostering healthy attachment bonds and a preventive and multidisciplinary training approach for healthcare professionals in contact with pregnant individuals and families.

Acknowledgments

We are grateful to Dr. María José Cantero, a recognized expert in emotional bonding, for her critical view of this manuscript. We would also like to thank the people who have experienced PL and participated in the research cited here; their contribution is invaluable.

Authors' contributions

R.S-G and L.L-T initially conceived the manuscript, conducted the systematic search, and wrote the first draft. R.S-G, F.G-S and L.L-T reviewed the initial version of the manuscript and contributed to writing the subsequent versions, and L.L-T is the coordinator and manager of the project. All authors have contributed equally to the writing of the manuscript. All authors read and approved the final manuscript.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributors

Rebeca Santamaría-Gutiez is a Ph D. student in research in psychology from the Universitat de València. She is current a resident in Clinical Psychology at the General Hospital of Valencia. Her research interests include Child Development, Cognitive Functions and Perinatal Mental Health.

Dr. Francisco González-Sala is a Full Professor at the Department of Developmental and Educational Psychology, Faculty of Psychology and Speech Therapy, Universitat de València. His research interests include Child and Adolescent Development, Developmental Disabilities, Minors at risk or in the protection system and Family Studies.

Dr. Laura Lacomba-Trejo is currently an assistant professor in the Department of Developmental and Educational Psychology at the same university. Her research and clinical practice focus on psychology of health throughout the life cycle, with a family perspective, perinatal psychology, attachment and children or adolescents at risk or in the protection system.

ORCID

Rebeca Santamaría-Gutiez  <http://orcid.org/0009-0001-1588-1854>

Francisco González-Sala  <http://orcid.org/0000-0003-4124-7459>

Laura Lacomba-Trejo  <http://orcid.org/0000-0002-1990-9711>

References

- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Lawrence Erlbaum Associates.
- Al-Maharma, D. Y., Abujaradeh, H., Mahmoud, K. F., & Jarrad, R. A. (2016). Maternal grieving and the perception of and attachment to children born subsequent to a perinatal loss. *Infant Mental Health Journal*, 37(4), 411–423. <https://doi.org/10.1002/imhj.21570>
- Álvarez, M., Claramunt, M. A., Carrascosa, L. G., & Silvente, C. (2012). *Las voces olvidadas: Pérdidas gestacionales tempranas*. Obstore.
- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). American Psychiatric Publishing.
- Arditi-Arbel, B., Hamdan, S., Winterman, M., & Gvion, Y. (2022). Suicidal ideation and behavior among perinatal women and their association with sleep disturbances, medical conditions, and known risk factors. *Frontiers in Psychiatry*, 13, 987673. <https://doi.org/10.3389/fpsy.2022.987673>
- Armstrong, D., & Hutti, M. (1998). Pregnancy after perinatal loss: The relationship between anxiety and-prenatal attachment. *Journal of Obstetric, Gynecologic, and Neonatal Nursing: JOGNN*, 27(2), 183–189. <https://doi.org/10.1111/j.1552-6909.1998.tb02609.x>
- Armstrong, D. S. (2002). Emotional distress and prenatal attachment in pregnancy after perinatal loss. *Journal of Nursing Scholarship*, 34(4), 339–345. <https://doi.org/10.1111/j.1547-5069.2002.00339.x>
- Armstrong, D. S. (2004). Impact of prior perinatal loss on subsequent pregnancies. *Journal of Obstetric, Gynecologic, and Neonatal Nursing: JOGNN*, 33(6), 765–773. <https://doi.org/10.1177/0884217504270714>
- Ayers, S., Horsch, A., Garthus-Niegel, S., Nieuwenhuijze, M., Bogaerts, A., Hartmann, K., Karlsdottir, S. I., Oosterman, M., Tecirli, G., Turner, J. D., & Lalor, J. (2024). Traumatic birth and childbirth-related post-traumatic stress disorder: International expert consensus recommendations for practice, policy, and research. *Women and Birth*, 37(2), 362–367. <https://doi.org/10.1016/j.wombi.2023.11.006>
- Bakermans-Kranenburg, M. J., Schuengel, C., & Van Ijzendoorn, M. H. (1999). Unresolved loss due to miscarriage: An addition to the adult attachment interview. *Attachment & Human Development*, 1(2), 157–170. <https://doi.org/10.1080/14616739900134211>
- Beauquier-Maccotta, B., Shulz, J., De Wailly, D., Meriot, M. E., Soubieux, M. J., Lisa, O., Grosmaître, C., Salomon, L. J., Golse, B., Ville, Y., & Missonnier, S. (2022). Prenatal attachment, anxiety and grief during subsequent pregnancy after medical termination of pregnancy. Attachment to which child? *Journal of Gynecology Obstetrics and Human Reproduction*, 51(4), 102353. <https://doi.org/10.1016/j.jogoh.2022.102353>
- Bellhouse, C., Temple-Smith, M. J., & Bilardi, J. E. (2018). “It’s just one of those things people don’t seem to talk about.” Women’s experiences of social support following miscarriage: A qualitative study. *BMC Women’s Health*, 18(1), 176. <https://doi.org/10.1186/s12905-018-0672-3>
- Benavides, M. T., & Guerra, C. A. (2024). El duelo perinatal. Un estudio fenomenológico sobre la percepción y el significado desde la perspectiva de los padres. *Enfermería Investiga*, 9(4), 22–30. <https://doi.org/10.31243/ei.uta.v9i4.2661.2024>
- Berry, S. N. (2022). The trauma of perinatal loss: A scoping review. *Trauma Care*, 2(3), 392–407. <https://doi.org/10.3390/traumacare2030032>
- Black, J., Belicki, K., Emberley-Ralph, J., & McCann, A. (2022). Internalized versus externalized continuing bonds: Relations to grief, trauma, attachment, openness to experience,

- and posttraumatic growth. *Death Studies*, 46(2), 399–414. <https://doi.org/10.1080/07481187.2020.1737274>
- Bowlby, J. (1969). *Attachment. Attachment and loss: Vol. 1. Loss* (Vol. 1). Basic Books.
- Bowlby, J. (1980). *Attachment and loss; Sadness and depression* (Vol. 3). Hogarth Press.
- Brandon, A. R., Pitts, S., Denton, W. H., Stringer, C. A., & Evans, H. M. (2009). A history of the theory of prenatal attachment. *Journal of Prenatal & Perinatal Psychology & Health*, 23(4), 201–222.
- Branjerdporn, G., Meredith, P., Wilson, T., & Strong, J. (2021). Maternal–fetal attachment: Associations with maternal sensory processing, adult attachment, distress and perinatal loss. *Journal of Child and Family Studies*, 30(2), 528–541. <https://doi.org/10.1007/s10826-020-01876-1>
- Branjerdporn, G., Meredith, P., Wilson, T., & Strong, J. (2022). Infant developmental outcomes: Influence of prenatal maternal–fetal attachment, adult attachment, maternal well-being, and perinatal loss. *International Journal of Environmental Research and Public Health*, 19(4), 2433. <https://doi.org/10.3390/ijerph19042433>
- Browne, V. (2022). A pregnant pause: Pregnancy, miscarriage, and suspended time. *Hypatia*, 37(2), 447–468. <https://doi.org/10.1017/hyp.2022.5>
- Caldwell, J. M., Meredith, P. J., Whittingham, K., Ziviani, J., & Wilson, T. (2024). Women pregnant after previous perinatal loss: Relationships between adult attachment, shame, and prenatal psychological outcomes. *Journal of Reproductive and Infant Psychology*, 42(4), 653–667. <https://doi.org/10.1080/02646838.2023.2180142>
- Callister, L. C. (2006). Perinatal loss: A family perspective. *The Journal of Perinatal & Neonatal Nursing*, 20(3), 227–234. <https://doi.org/10.1097/00005237-200607000-00009>
- Christiansen, D. M., Elklit, A., & Olf, M. (2013). Parents bereaved by infant death: PTSD symptoms up to 18 years after the loss. *General Hospital Psychiatry*, 35(6), 605–611. <https://doi.org/10.1016/j.genhosppsych.2013.06.006>
- Christiansen, D. M., Olf, M., & Elklit, A. (2014). Parents bereaved by infant death: Sex differences and moderation in PTSD, attachment, coping and social support. *General Hospital Psychiatry*, 36(6), 655–661. <https://doi.org/10.1016/j.genhosppsych.2014.07.012>
- Côté-Arsenault, D., & Denney-Koelsch, E. (2011). “My baby is a person”: Parents’ experiences with life-threatening fetal diagnosis. *Journal of Palliative Medicine*, 14(12), 1302–1308. <https://doi.org/10.1089/jpm.2011.0165>
- Côté-Arsenault, D., Leerkes, E. M., & Zhou, N. (2020). Individual differences in maternal, marital, parenting and child outcomes following perinatal loss: A longitudinal study. *Journal of Reproductive and Infant Psychology*, 38(1), 3–15. <https://doi.org/10.1080/02646838.2019.1579897>
- Cranley, M. S. (1981). Development of a tool for the measurement of maternal attachment during pregnancy. *Nursing Research*, 30(5), 281–284. <https://doi.org/10.1097/00006199-198109000-00008>
- da Rosa, K. M., Scholl, C. C., Ferreira, L. A., Trettim, J. P., da Cunha, G. K., Rubin, B. B., Martins, R. D L., Motta, J. V. D S., Fogaça, T. B., Ghisleni, G., Pinheiro, K. A. T., Pinheiro, R. T., Quevedo, L. D A., & de Matos, M. B. (2021). Maternal-fetal attachment and perceived parental bonds of pregnant women. *Early Human Development*, 154, 105310. <https://doi.org/10.1016/j.earlhumdev.2021.105310>
- Delgado, L., Cobo, J., Giménez, C., Fucho-Rius, G. F., Sammut, S., Martí, L., Lesmes, C., Puig, S., Obregón, N., Canet, Y., & Palao, D. J. (2023). Initial impact of perinatal loss on mothers and their partners. *International Journal of Environmental Research and Public Health*, 20(2), 1304. <https://doi.org/10.3390/ijerph20021304>

- Donegan, G., Noonan, M., & Bradshaw, C. (2023). Parents experiences of pregnancy following perinatal loss: An integrative review. *Midwifery*, 121, 103673. <https://doi.org/10.1016/j.midw.2023.103673>
- Eisma, M. C., & Stroebe, M. S. (2021). Emotion regulatory strategies in complicated grief: A Systematic Review. *Behavior Therapy*, 52(1), 234–249. <https://doi.org/10.1016/j.beth.2020.04.004>
- Fagundes, C. P., Bennett, J. M., Derry, H. M., & Kiecolt-Glaser, J. K. (2011). Relationships and inflammation across the lifespan: Social developmental pathways to disease. *Social and Personality Psychology Compass*, 5(11), 891–903. <https://doi.org/10.1111/j.1751-9004.2011.00392.x>
- Fenstermacher, K., & Hupcey, J. E. (2013). Perinatal bereavement: A principle-based concept analysis. *Journal of Advanced Nursing*, 69(11), 2389–2400. <https://doi.org/10.1111/jan.12119>
- Fonagy, P., Campbell, C., & Luyten, P. (2023). Attachment, mentalizing and trauma: Then (1992) and now (2022). *Brain Sciences*, 13(3), 459. <https://doi.org/10.3390/brain-sci13030459>
- Freedle, A., & Oliveira, E. (2024). Interpersonal and Intrapersonal Factors Contributing to Women's Posttraumatic Growth Following Perinatal Loss. *Psychological Trauma: Theory, Research, Practice and Policy*, 16(2), 193–200. <https://doi.org/10.1037/tra0001395>
- Freud, S. (1964). *The standard edition of the complete psychological works of Sigmund Freud* (J. Strachey, Ed.). Macmillan.
- Gaudet, C., Séjourné, N., Camborieux, L., Rogers, R., & Chabrol, H. (2010). Pregnancy after perinatal loss: Association of grief, anxiety and attachment. *Journal of Reproductive and Infant Psychology*, 28(3), 240–251. <https://doi.org/10.1080/02646830903487342>
- Grabow, A., & Becker-Blease, K. (2023). Acquiring psychopathy and callousness traits: Examining the influence of childhood betrayal trauma and adult dissociative experiences in a community sample. *Journal of Trauma & Dissociation*, 24(2), 268–283. <https://doi.org/10.1080/15299732.2023.2168827>
- Güçlü, O., Şenormancı, G., Tüten, A., Gök, K., & Şenormancı, Ö. (2021). Perinatal grief and related factors after termination of pregnancy for fetal anomaly: One-year follow-up study. *Noro Psikiyatri Arsivi*, 58(3), 221–227. <https://doi.org/10.29399/npa.25110>
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52(3), 511–524. <https://doi.org/10.1037//0022-3514.52.3.511>
- Heller, S. S., & Zeanah, C. H. (1999). Attachment disturbances in infants born subsequent to perinatal loss: A pilot study. *Infant Mental Health Journal*, 20(2), 188–199. [https://doi.org/10.1002/\(SICI\)1097-0355\(199922\)20:2<188::AID-IMHJ6>3.0.CO;2-H](https://doi.org/10.1002/(SICI)1097-0355(199922)20:2<188::AID-IMHJ6>3.0.CO;2-H)
- Hennessy, M., & O'Donoghue, K. (2024). Bridging the gap between pregnancy loss research and policy and practice: Insights from a qualitative survey with knowledge users. *Health Research Policy and Systems*, 22(1), 15. <https://doi.org/10.1186/s12961-024-01103-z>
- Hernández-Nieto, R. (2002). *Contribuciones al análisis estadístico: sensibilidad estabilidad y consistencia de varios coeficientes de variabilidad relativa y el coeficiente de variación proporcional cvp el coeficiente*. CreateSpace Independent Publishing Platform.
- Horsch, A., Garthus-Niegel, S., Ayers, S., Chandra, P., Hartmann, K., Vaisbuch, E., & Lator, J. (2024). Childbirth-related posttraumatic stress disorder: Definition, risk factors, pathophysiology, diagnosis, prevention, and treatment. *American Journal of Obstetrics and Gynecology*, 230(3S), S1116–S1127. <https://doi.org/10.1016/j.ajog.2023.09.089>
- Hughes, P., Turton, P., Hopper, E., & Evans, C. D. (2002). Assessment of guidelines for good practice in psychosocial care of mothers after stillbirth: A cohort study. *Lancet*, 360(9327), 114–118. [https://doi.org/10.1016/s0140-6736\(02\)09410-2](https://doi.org/10.1016/s0140-6736(02)09410-2)
- Hughes, P., Turton, P., Hopper, E., McGauley, G. A., & Fonagy, P. (2001). Disorganised attachment behaviour among infants born subsequent to stillbirth. *Journal of Child*

- Psychology and Psychiatry, and Allied Disciplines*, 42(6), 791–801. <https://doi.org/10.1111/1469-7610.00776>
- Hughes, P., Turton, P., Hopper, E., McGauley, G. A., & Fonagy, P. (2004). Factors associated with the unresolved classification of the Adult Attachment Interview in women who have suffered stillbirth. *Development and Psychopathology*, 16(1), 215–230. <https://doi.org/10.1017/s0954579404044487>
- Hughes, P., Turton, P., McGauley, G. A., & Fonagy, P. (2006). Factors that predict infant disorganization in mothers classified as U in pregnancy. *Attachment & Human Development*, 8(2), 113–122. <https://doi.org/10.1080/14616730600785660>
- Isobel, S. (2023). Trauma and the perinatal period: A review of the theory and practice of trauma-sensitive interactions for nurses and midwives. *Nursing Open*, 10(12), 7585–7595. <https://doi.org/10.1002/nop2.2017>
- Ivers, N. N., Johnson, D. A., Casares, D. R., Lonn, M. R., Duffey, T., & Haberstroh, S. (2024). Understanding prolonged grief from an existential counseling perspective. *Journal of Counseling & Development*, 102(3), 370–381. <https://doi.org/10.1002/jcad.1251>
- Kelmanson, I. A. (2024). Manifest anxiety and maternal–fetal attachment in pregnant women with previous fetal losses. *Journal of Reproductive and Infant Psychology*, 42(1), 45–61. <https://doi.org/10.1080/02646838.2022.2056882>
- Kent, G., Pitsia, V., & Colton, G. (2020). Cognitive development during early childhood: Insights from families living in areas of socio-economic disadvantage. *Early Child Development and Care*, 190(12), 1863–1877. <https://doi.org/10.1080/03004430.2018.1543665>
- Kersting, A., & Wagner, B. (2012). Complicated grief after perinatal loss. *Dialogues in Clinical Neuroscience*, 14(2), 187–194. <https://doi.org/10.31887/dcns.2012.14.2/akersting>
- Kinsey, C. B., Baptiste-Roberts, K., Zhu, J., & Kjerulff, K. H. (2014). Effect of miscarriage history on maternal-infant bonding during the first year postpartum in the First Baby Study: A longitudinal cohort study. *BMC Women's Health*, 14(1), 83. <https://doi.org/10.1186/1472-6874-14-83>
- Lacomba-Trejo, L., Valero-Moreno, S., Montoya-Castilla, I., & Pérez-Marín, M. (2023). Adolescents with and without chronic disease: Emotional skills and emotional distress. *Revista de Psicología de La Salud*, 11(1), 36–47. <https://doi.org/10.21134/pssa.v11i1.315>
- Levi-Belz, Y., & Lev-Ari, L. (2019). Is there anybody out there? Attachment style and interpersonal facilitators as protective factors against complicated grief among suicide-loss survivors. *The Journal of Nervous and Mental Disease*, 207(3), 131–136. <https://doi.org/10.1097/NMD.0000000000000940>
- Main, M., & Solomon, J. (1986). Discovery of an insecure-disorganized/disoriented attachment pattern. In T. B. Brazelton & M. W. Yogman (Eds.), *Affective development in infancy* (pp. 95–124). Ablex Publishing.
- Mamédio, C., Santos, C., Andruccioli De Mattos Pimenta, C., Roberto, M., & Nobre, C. (2007). The pico strategy for the research question construction and evidence search a estratégia pico para a construção da pergunta de pesquisa e busca de evidências. *Revista Latino-Americana de Enfermagem*, 15(3), 508–511. <https://doi.org/10.1590/S0104-11692007000300023>
- Mehran, P., Simbar, M., Shams, J., Ramezani-Tehrani, F., & Nasiri, N. (2013). History of perinatal loss and maternal-fetal attachment behaviors. *Women and Birth: Journal of the Australian College of Midwives*, 26(3), 185–189. <https://doi.org/10.1016/j.wombi.2013.04.005>
- Meredith, P. J., & Strong, J. (2019). Attachment and chronic illness. *Current Opinion in Psychology*, 25, 132–138. <https://doi.org/10.1016/j.copsy.2018.04.018>

- Mikulincer, M., & Shaver, P. R. (2019). A behavioral systems approach to romantic love relationships: Attachment, caregiving, and sex. In R. J. Sternberg & K. Sternberg (Eds.), *The new psychology of love* (2nd ed., pp. 259–279). Cambridge University Press.
- Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., Stewart, L. A., Estarli, M., Barrera, E. S. A., Martínez-Rodríguez, R., Baladia, E., Agüero, S. D., Camacho, S., Buhning, K., Herrero-López, A., Gil-González, D. M., Altman, D. G., Booth, A., ... Whitlock, E. (2016). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Revista Espanola de Nutricion Humana y Dietetica*, 20(2), 148–160. <https://doi.org/10.1186/2046-4053-4-1>
- Muller, M. (1993). Development of the PRENATAL ATTACHMENT INVENTORY. *Western Journal of Nursing Research*, 15(2), 199–215. <https://doi.org/10.1177/019394599301500205>
- Neimeyer, R. A., & Burke, L. A. (2017). Spiritual distress and depression in bereavement: A meaning-oriented contribution. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 35(1), 38–59. <https://doi.org/10.1007/s10942-017-0262-6>
- Neimeyer, R. A., & Sands, D. C. (2011). Meaning reconstruction in bereavement: From principles to practice. In R. A. Neimeyer, D. L. Harris, H. R. Winokuer, & G. F. Thornton (Eds.), *Grief and bereavement in contemporary society: Bridging research and practice* (pp. 9–22). Routledge/Taylor & Francis Group. <https://doi.org/10.4324/9780203840863>
- Nguyen, V., Temple-Smith, M., & Bilardi, J. (2019). Men's lived experiences of perinatal loss: A review of the literature. *The Australian & New Zealand Journal of Obstetrics & Gynaecology*, 59(6), 757–766. <https://doi.org/10.1111/ajo.13041>
- Obst, K. L., Oxlad, M., Due, C., & Middleton, P. (2021). Factors contributing to men's grief following pregnancy loss and neonatal death: Further development of an emerging model in an Australian sample. *BMC Pregnancy and Childbirth*, 21(1), 29. <https://doi.org/10.1186/s12884-020-03514-6>
- O'Malley, E. G., Walsh, M. C., Reynolds, C. M., Kennelly, M., Sheehan, S. R., & Turner, M. J. (2020). A cross-sectional study of maternal-fetal attachment and perceived stress at the first antenatal visit. *Journal of Reproductive and Infant Psychology*, 38(3), 271–280. <https://doi.org/10.1080/02646838.2019.1637516>
- Orwin, R. (1994). Evaluating coding decisions. In H. Cooper & L. Hedges (Eds.), *The handbook of research synthesis* (pp. 139–162). Russell Sage Foundation.
- Pace, C. S., Muzi, S., Morganti, W., & Steele, H. (2023). Attachment Stability and longitudinal prediction of psychotic-like symptoms in community adolescents over four months of COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 20(16), 6562. <https://doi.org/10.3390/ijerph20166562>
- Picardi, A., Giuliani, E., & Gigantesco, A. (2020). Genes and environment in attachment. *Neuroscience and Biobehavioral Reviews*, 112, 254–269. <https://doi.org/10.1016/j.neubiorev.2020.01.038>
- Pinto, C., Turton, P., Hughes, P., White, S., & Gillberg, C. (2006). ADHD and infant disorganized attachment: A prospective study of children next-born after stillbirth. *Journal of Attention Disorders*, 10(1), 83–91. <https://doi.org/10.1177/1087054705286058>
- Price, S. K. (2008). Stepping back to gain perspective: Pregnancy loss history, depression, and parenting capacity in the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B). *Death Studies*, 32(2), 97–122. <https://doi.org/10.1080/07481180701801170>
- Robinson, L., Baker, L., & Nackerud, M. (1999). The relationship of attachment theory and perinatal loss. *Death Studies*, 23(3), 257–270. <https://doi.org/10.1080/074811899201073>
- Scheidt, C. E., Hasenburger, A., Kunze, M., Waller, E., Pfeifer, R., Zimmermann, P., Hartmann, A., & Waller, N. (2012). Are individual differences of attachment predicting

- bereavement outcome after perinatal loss? A prospective cohort study. *Journal of Psychosomatic Research*, 73(5), 375–382. <https://doi.org/10.1016/j.jpsychores.2012.08.017>
- Sekowski, M., & Prigerson, H. G. (2022). Associations between symptoms of prolonged grief disorder and depression and suicidal ideation. *The British Journal of Clinical Psychology*, 61(4), 1211–1218. <https://doi.org/10.1111/bjc.12381>
- Shaver, P. R., & Tancredy, C. M. (2001). Emotion, attachment, and bereavement: A conceptual commentary. In M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. Schut (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp. 63–88). American Psychological Association. <https://doi.org/10.1037/10436-003>
- Shear, M. K. (2015). Complicated grief. *New England Journal of Medicine*, 372(2), 153–160. <https://doi.org/10.1056/NEJMcp1315618>
- Snyder, K. S., Luchner, A. F., & Tantleff-Dunn, S. (2023). Adverse childhood experiences and insecure attachment: The indirect effects of dissociation and emotion regulation difficulties. *Psychological Trauma: Theory, Research, Practice and Policy*, 16(Suppl 1), S20–S27. <https://doi.org/10.1037/tra0001532>
- Sochos, A., & Aleem, S. (2022). Parental attachment style and young persons' adjustment to bereavement. *Child & Youth Care Forum*, 51(1), 161–179. <https://doi.org/10.1007/s10566-021-09621-5>
- Sroufe, L. A. (2005). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment & Human Development*, 7(4), 349–367. <https://doi.org/10.1080/14616730500365928>
- Steel, P., Fariborzi, H., & Hendijani, R. (2023). An application of modern literature review methodology: Finding needles in ever-growing haystacks. In *Sage research methods: Business*. SAGE Publications, Ltd.
- Steele, H., Steele, M., & Fonagy, P. (2020). Infant attachment and adult attachment: A key protective factor. In *The Routledge handbook of attachment: Implications and interventions* (pp. 109–124). Routledge.
- Stroebe, M. S., Abakoumkin, G., Stroebe, W., & Schut, H. (2012). Continuing bonds in adjustment to bereavement: Impact of abrupt versus gradual separation. *Personal Relationships*, 19(2), 255–266. <https://doi.org/10.1111/j.1475-6811.2011.01352.x>
- Stroebe, M., & Schut, H. (1999). The dual process model of coping with bereavement: Rationale and description. *Death Studies*, 23(3), 197–224. <https://doi.org/10.1080/074811899201046>
- Trenado, R., Pons-Salvador, G., & Cerezo, M. A. (2009). Protecting the family: Support and assistance for family. *Papeles Del Psicólogo*, 30(1), 24–32.
- Tsartsara, E., & Johnson, M. P. (2006). The impact of miscarriage on women's pregnancy-specific anxiety and feelings of prenatal maternal–fetal attachment during the course of a subsequent pregnancy: An exploratory follow-up study. *Journal of Psychosomatic Obstetrics and Gynaecology*, 27(3), 173–182. <https://doi.org/10.1080/01674820600646198>
- Turton, P., Hughes, P., Fonagy, P., & Fainman, D. (2004). An investigation into the possible overlap between PTSD and unresolved responses following stillbirth: An absence of linkage with only unresolved status predicting infant disorganization. *Attachment & Human Development*, 6(3), 241–253. <https://doi.org/10.1080/14616730412331281575>
- Uren, T. H., & Wastell, C. A. (2002). Attachment and meaning-making in perinatal bereavement. *Death Studies*, 26(4), 279–308. <https://doi.org/10.1080/074811802753594682>
- Vowels, L. M., Vowels, M. J., Carnelley, K. B., Millings, A., & Gibson-Miller, J. (2023). Toward a causal link between attachment styles and mental health during the COVID-19 pandemic. *The British Journal of Clinical Psychology*, 62(3), 605–620. <https://doi.org/10.1111/bjc.12428>

- Yilmaz, S. D., & Beji, N. K. (2013). Effects of perinatal loss on current pregnancy in Turkey. *Midwifery*, 29(11), 1272–1277. <https://doi.org/10.1016/j.midw.2012.11.015>
- Zayde, A., Prout, T. A., Kilbride, A., & Kufferath-Lin, T. (2021). The Connecting and Reflecting Experience (CARE): Theoretical foundation and development of mentalizing-focused parenting groups. *Attachment & Human Development*, 23(3), 293–309. <https://doi.org/10.1080/14616734.2020.1729213>
- Zhuang, S., Chen, M., Ma, X., Jiang, J., Xiao, G., Zhao, Y., Hou, J., & Wang, Y. (2023). The needs of women experiencing perinatal loss: A qualitative systematic review and meta-synthesis. *Women and Birth: Journal of the Australian College of Midwives*, 36(5), 409–420. <https://doi.org/10.1016/j.wombi.2023.03.007>

Attachment, Adverse Childhood Experiences, Guilt, and Mental Health as Predictors of Dyadic Coping After Perinatal Loss in Women

Rebeca Santamaría'-Gutiez¹, Francisco González-Sala² y Laura Lacomba-Trejo^{2*}

¹ Clinical Psychology and Health Unit Service, General Universitary Hospital of Valencia, Valencia, Spain

² Department of Developmental and Educational Psychology, Faculty of Psychology and Speech Therapy, Universitat de València, Valencia, Spain

* Correspondence: laura.lacomba@uv.es

Journal: *Behavioral Psychology/Psicología Conductual*

Year: 2026

Manuscrito aceptado para su publicación

Journal Impact Factor (JCR): 0,9 (Q4)

Reference

Santamaría-Gutiez, R., González-Sala, F., & Lacomba-Trejo, L. (in press). Attachment, adverse childhood experiences, guilt, and mental health as predictors of dyadic coping after perinatal loss in women. *Behavioral Psychology*.

Attachment, Adverse Childhood Experiences, Guilt, and Mental Health as Predictors of Dyadic Coping After Perinatal Loss in Women

Abstract

Background: Perinatal loss is a highly stressful life event that can profoundly affect women's emotional well-being and couples' functioning. This study examined the role of adverse childhood experiences (ACEs), insecure romantic attachment (anxiety and avoidance), guilt, and mental health problems in predicting positive dyadic coping (PDC) among women who experienced perinatal loss. **Methods:** A total of 162 Spanish women completed online questionnaires assessing attachment (ECR-R), ACEs (ACEQ), and guilt and mental health problems through ad hoc Likert-type items. Data were analysed using correlations, hierarchical regression analyses, fuzzy-set Qualitative Comparative Analysis (fsQCA), and mediation and moderation models (SPSS, PROCESS). **Results:** Hierarchical regression analyses showed that lower attachment anxiety and avoidance were the strongest predictors of PDC, with the final model explaining 69% of the variance in dyadic coping. fsQCA results indicated that no single condition was necessary for high or low levels of PDC. However, several sufficient configurations explained most cases of high PDC, particularly those characterised by low attachment avoidance in combination with low anxiety, low guilt, or the absence of adverse childhood experiences. In contrast, configurations associated with low levels of PDC were mainly characterised by higher attachment avoidance and anxiety, often combined with greater psychological distress or guilt. Finally, mediation analyses showed that insecure attachment, especially attachment anxiety, accounted for the association between ACEs and PDC, with ACEs influencing dyadic coping primarily through indirect pathways rather than through direct effects. **Conclusions:** Overall, these findings highlight the central role of attachment-related processes and emotional regulation in fostering positive dyadic coping following perinatal loss, supporting the usefulness of integrative and non-linear approaches to understanding adjustment after perinatal bereavement.

Keywords: Adverse Childhood Experiences, Attachment, Dyadic Coping, Guilt, Mental Health, Perinatal Loss.

Resumen

Introducción: La pérdida perinatal es un acontecimiento vital altamente estresante que puede afectar de manera profunda al bienestar emocional de las mujeres y al funcionamiento de la pareja. Este estudio examinó el papel de las experiencias adversas en la infancia (ACEs), el apego romántico inseguro (ansiedad y evitación), la culpa y los problemas de salud mental en la predicción del afrontamiento diádico positivo (PDC) en mujeres que experimentaron una pérdida perinatal. **Método:** Un total de 162 mujeres españolas completaron cuestionarios en línea que evaluaban el apego (ECR-R), las ACEs (ACEQ) y la culpa y los problemas de salud mental mediante ítems tipo Likert elaborados ad hoc. Los datos se analizaron mediante correlaciones, análisis de regresión jerárquica, análisis comparativo cualitativo de conjuntos difusos (fsQCA) y modelos de mediación (SPSS, PROCESS). **Resultados:** Los análisis de regresión jerárquica mostraron que niveles más bajos de ansiedad y evitación del apego fueron los predictores más sólidos del PDC, explicando el modelo final el 69 % de la varianza del afrontamiento diádico. Los resultados del fsQCA indicaron que ninguna condición individual fue necesaria para niveles altos o bajos de PDC. No obstante, varias configuraciones suficientes explicaron la mayoría de los casos de PDC elevado, especialmente aquellas caracterizadas por una baja evitación del apego en combinación con baja ansiedad, baja culpa o ausencia de experiencias adversas en la infancia. En contraste, las configuraciones asociadas a bajos niveles de PDC se caracterizaron principalmente por una mayor evitación y ansiedad en el apego, frecuentemente combinadas con un mayor malestar psicológico o culpa. Finalmente, los análisis de mediación mostraron que el apego inseguro, especialmente la ansiedad en el apego, explicó la asociación entre las ACEs y el PDC, de modo que las ACEs influyeron en el afrontamiento diádico principalmente a través de vías indirectas y no mediante un efecto directo. **Conclusiones:** En conjunto, estos hallazgos destacan el papel central de los procesos de apego y de la regulación emocional en la promoción del afrontamiento diádico positivo tras la pérdida perinatal, y apoyan la utilidad de enfoques integradores y no lineales para comprender la adaptación al duelo perinatal.

Palabras clave: Afrontamiento Diádico, Apego, Culpa, Pérdida Perinatal, Experiencias Adversas en la Infancia, Salud Mental.

Attachment, Adverse Childhood Experiences, Guilt, and Mental Health as Predictors of Dyadic Coping After Perinatal Loss in Women

1. Introduction

The Burden and Significance of Perinatal Loss.

Pregnancy and childbirth are typically significant life events, marked by expectations and profound changes. When this process is interrupted by perinatal loss, women and couples may experience a particularly disruptive and often unrecognized form of bereavement, with significant emotional and relational consequences (Fernández-Alcántara et al., 2012).

According to the World Health Organization (WHO, 2022), perinatal loss includes stillbirth (≥ 28 gestational weeks and/or ≥ 1000 g) and early neonatal death (0–7 days after birth), although some definitions extend this range to include early losses before 10 weeks of gestation (Alves et al., 2023) and, in other cases, up to the child's first year of life (Koukopoulos et al., 2019).

Perinatal loss represents major global public health challenge. The Global Burden of Disease Study 2021 estimated that 3.04 million stillbirths occurred globally in 2021 at 20 weeks' gestation or longer, corresponding to a stillbirth rate of 23.0 per 1000 births (GBD 2021 Global Stillbirths Collaborators, 2024). Data indicate that during the first trimester, the incidence of spontaneous abortion occurs in 10–15% of clinically confirmed pregnancies (Baschieri et al., 2019). In the case of Spain, Cassidy (2021) reports that approximately 2,000 deaths occur from 24 weeks of gestation or within the first month of life of the newborn. Globally, the incidence is more than 5 million deaths at the time of delivery or in the first month of life (Akuze et al., 2020), with a disproportionate burden in low- and middle-income countries, particularly in South Asia and sub-Saharan Africa, which together account for 77.4% of the global total (GBD 2021 Global Stillbirths Collaborators, 2024).

Individual Mental Health Consequences

The mental health impact of perinatal loss is substantial and enduring. Recent meta-analytic evidence (Herber et al., 2022) shows that perinatal loss is linked to a significantly increased risk of psychopathology, including anxiety, anger, prolonged grief disorder, and trauma-related symptoms (Bellhouse et al., 2018; Cena et al., 2022).

Women who experience such losses exhibit more than a twofold elevation in depressive disorders and a markedly higher risk of anxiety compared with women without perinatal loss (Heazell et al., 2022). Furthermore, recent longitudinal studies indicate that psychological

distress—especially post-traumatic stress symptoms—can extend into subsequent pregnancies and continue into the postnatal period (Beaumont et al., 2025).

Impact on Couple Relationships and Family Dynamics

Beyond individual suffering, perinatal loss may also strain couple functioning, disrupt communication, and compromise mutual support during a period of heightened vulnerability (Cunen et al., 2013). The period following loss is characterized by extensive relational consequences, with both partners experiencing grief simultaneously, which may overwhelm their capacity for mutual support (Albuquerque et al., 2017). Research indicates that 9% of mothers and 5% of partners report relationship difficulties nine months after stillbirth, with similar proportions experiencing issues with extended family members (Heazell et al., 2022). Perinatal loss often leads to social silencing and a sense that grief is minimized or delegitimized, which increases isolation and complicates the grieving process (Fernández-Sola et al., 2020). Family dynamics are disrupted, with mean Family Assessment Device scores indicating substantial dysfunction in family relationships following loss (Heazell et al., 2022).

Conceptual Framework: Biographical, Relational, and Emotional Determinants of Adaptation to Perinatal Grief

Grief, including perinatal grief, has been conceptualized through multiple theoretical frameworks, such as psychoanalytic perspectives (Freud, 1917), attachment theory (Bowlby, 1978), stage-based models (Kübler-Ross, 2006), task-oriented approaches (Worden, 2018), and dual-process models emphasizing oscillation between loss-oriented and restoration-oriented coping (Stroebe & Schut, 1999).

While these models have substantially advanced the understanding of individual grief responses, they often fall short in capturing the relational and contextual dimensions of perinatal loss, particularly within intimate partnerships. Consequently, adaptation to perinatal grief is increasingly understood as a multifactorial and relational process shaped by prior life experiences, attachment patterns, and emotional vulnerabilities.

Biographical Factors: Adverse Childhood Experiences (ACEs)

Perinatal grief adaptation is shaped by pre-existing factors that influence emotional regulation, notably adverse childhood experiences (ACEs) (Albuquerque et al., 2017; Kersting & Wagner, 2012; Papapetrou et al., 2020; Smith et al., 2016). ACEs are early traumatic events—such as abuse, neglect, exposure to violence, or parental mental illness—that disrupt developmental environments and have long-term effects on physical and mental health (Felitti et al., 1998). From an attachment-based perspective, ACEs may shape internal working models of self and others, influencing emotion regulation, expectations of support, and relational

functioning in adulthood. The cumulative risk model proposes that a higher number of ACEs increases health risks, whereas the critical periods model emphasizes that exposure during sensitive stages may produce persistent neurobiological and psychological alterations (Fonseca-Rondón et al., 2023).

The ACE pyramid (Centers for Disease Control and Prevention, 2021; Felitti et al., 1998) illustrates how these experiences contribute to risk factor development and negatively affect health and well-being across the lifespan (Cabrera et al., 2007; Hughes et al., 2017). Recent evidence shows that women with four or more adverse childhood experiences (ACEs) are at increased risk of depression, anxiety, and post-traumatic stress during pregnancy (Watson et al., 2024). Greater ACE accumulation has been linked to pregnancy complications (Mamun et al., 2023) and poorer adaptation to both pregnancy and perinatal grief, increasing vulnerability to stress and mental health issues such as anxiety and depression (Smith et al., 2016).

Relational Factors: Romantic Attachment

ACEs also influence attachment development (Cooke et al., 2019; Zumdahl et al., 2025). Bowlby's attachment theory (1978) posits that secure, emotionally stable early relationships foster a secure attachment style and adequate socioemotional resources. Ainsworth (1978) identified secure, anxious, and avoidant attachment patterns in infancy. Hazan and Shaver (1987) extended these to adulthood, conceptualizing romantic attachment along two dimensions: anxiety (fear of rejection, emotional reactivity, need for closeness, dissatisfaction with support) and avoidance (desire for autonomy, discomfort with intimacy, emotional suppression) (Alves et al., 2025; Trombetta et al., 2025). Bartholomew and Horowitz (1991) later described disorganized attachment, marked by a contradictory search for closeness and fear of rejection. Insecure and disorganized attachment styles have been associated with greater ACE exposure (Anderson, 2021; Bifulco et al., 2006).

In the context of perinatal loss, secure attachment has been linked to better emotional adjustment, buffering stress, anxiety, and trauma symptoms, while promoting flexible grief processing and receptivity to social support (Scheidt et al., 2012). In contrast, insecure attachment styles hinder adaptation: women with anxious or preoccupied attachment often experience heightened shame and pain, whereas those with avoidant attachment may show greater despair, especially when guilt is also present, potentially intensifying suffering even in subsequent pregnancies (Caldwell et al., 2023; Christiansen et al., 2013; Condon, 1993; Scheidt et al., 2012). In particular, attachment avoidance may undermine dyadic coping by limiting

emotional disclosure and responsiveness to the partner's needs, whereas attachment anxiety may intensify emotional distress while simultaneously increasing support-seeking behaviors (Freedle & Oliveira, 2024; Scheidt et al., 2012).

Emotional Factors: Guilt and Mental Health Problems

Guilt is another emotional factor modulating grief adaptation. Parents often perceive it as their responsibility to care for and protect their children, and may feel a profound sense of failure if their child dies (Gold et al., 2017). Guilt may emerge from this perceived sense of responsibility for the perinatal loss (Kokou-Kpolou et al., 2018). ACEs have been linked to greater proneness to guilt, characterized by negative self-evaluation, sadness, remorse, and low self-esteem (Caldwell et al., 2020; Wojcik et al., 2019). In perinatal grief, guilt exacerbates psychological distress, particularly when there was ambivalence toward the pregnancy or perceived inadequate behaviors (Kersting & Wagner, 2012). Although guilt is recognized as a salient emotional response following perinatal loss, it has been less systematically examined from a relational perspective and is therefore considered here as a potential emotional factor influencing dyadic coping.

Perinatal grief can be intense, prolonged, and associated with difficulties in coping (Reynolds & Grün, 2023). In women, it can lead to prolonged grief disorder, generalized anxiety, agoraphobia, specific phobias, depression, psychosomatic disorders, and post-traumatic stress disorder (Bellhouse et al., 2018; Cena et al., 2022; Salgado et al., 2021). Pre-existing mental health problems (MHP) further hinder grief processing, increasing emotional vulnerability and limiting adaptive and dyadic coping (Albuquerque et al., 2017; Kersting & Wagner, 2012).

Dyadic Coping as Relational Resource

Following a perinatal loss, both partners experience grief simultaneously, which may overwhelm them emotionally and hinder mutual support (Albuquerque et al., 2017). Dyadic coping refers to the individual or joint strategies that couples use to manage stress and maintain the relationship (Bodenmann, 2005; Bodenmann et al., 2019). The systemic-transactional model emphasizes that stress affects both partners, prompting joint appraisals and shared coping efforts (Bodenmann et al., 2017). Dyadic coping is often activated when individual strategies prove insufficient (Falconier & Kuhn, 2019) and is characterized by: (1) interdependence in stress experience, (2) perceiving the partner as the primary support source, and (3) being a dynamic, ongoing process (Landolt et al., 2023).

Dyadic coping may be positive (assertive communication, mutual support, collaboration) or negative (control, hostility, lack of understanding) (Falconier et al., 2015; Landolt et al., 2023). In perinatal grief, adaptive strategies promote resilience (Albuquerque et al., 2017), and are associated with greater relationship satisfaction, emotional regulation, and relief from distress (Bodenmann et al., 2017; Molgora et al., 2019). Positive dyadic coping (PDC) is relevant following perinatal loss, as it reflects the couple's capacity to jointly regulate stress, communicate emotional needs, and maintain relational functioning during a highly destabilizing life event.

Rationale for the Present Study

Although perinatal grief has been studied, there is limited research exploring the predictors of positive dyadic coping (PDC) among women in couples who have experienced one or more perinatal losses, particularly considering biographical factors (ACEs), relational factors (romantic attachment), and emotional factors (guilt and MHP) in Spain. Understanding these relationships can shed light on how a history of adversity shapes women's dyadic coping following perinatal loss.

This integrative perspective was chosen over traditional, linear models of grief as these do not adequately capture the diversity of individual responses or the complex couple dynamics that characterize perinatal grief. Women may reach similar levels of dyadic coping through different combinations of biographical, relational, and emotional factors, which are not fully accounted for by linear approaches alone. Thus, the conceptual framework adopted allows for a broader and more detailed understanding that responds to the complexity inherent in loss during pregnancy and the first year of life.

Most existing studies use linear methodologies that do not account for non-linear relationships. While methods such as hierarchical regression and mediation/moderation analyses allow the examination of direct associations between variables and their predictive contribution, they may be insufficient to capture the phenomenon's complexity. This study incorporated fuzzy set Qualitative Comparative Analysis (fsQCA) to identify combinations of factors that facilitate or hinder PDC. Unlike traditional linear approaches, fsQCA allows the detection of multiple configurations that may lead to the same outcome (Ragin, 2008). By identifying multiple pathways leading to the same outcome, fsQCA offers clinically meaningful insights into different risk and resilience profiles following perinatal loss.

Objectives and hypotheses

Given these considerations, the general objective of this study is to examine predictors of PDC after perinatal loss in women, focusing on ACEs, romantic attachment (anxiety/avoidance), guilt, and MHP. Specifically, SO1 aims to analyze the associations between ACEs, insecure attachment, guilt, and PDC (H1: PDC will be negatively associated with ACEs, insecure attachment, and guilt). SO2 examines whether the presence of MHP is associated with differences in ACEs, insecure attachment, guilt, and PDC (H2: Women with MHP will report higher ACEs, insecure attachment, and guilt, and lower PDC). SO3 seeks to identify the main predictors of PDC from ACEs, insecure attachment, guilt, and MHP (H3: Lower ACEs, insecure attachment, guilt, and fewer MHP will predict higher PDC). SO4 explores combinations of ACEs, insecure attachment, guilt, and MHP that influence PDC (H4: Different combinations of these factors will explain the presence or absence of PDC). SO5 analyses whether insecure attachment mediates the association between ACEs and PDC (H5: Higher ACEs will relate to greater insecure attachment, which in turn will reduce PDC).

2. Method

Participants

The final sample consisted of 162 Spanish women in a romantic relationship. Participants ranged in age from 22 to 59 years ($M = 38.84$; $SD = 5.96$). Most identified as heterosexual, were married or cohabiting, with an average relationship duration of 12.28 years ($SD = 6.24$). The most common relationship durations were 15 (10.90%), 6 (8.00%), and 10 years (7.20%). Most participants had children, lived with two people (partner and children), held a university degree, had a permanent employment contract, and reported an annual income between €20,001 and €30,000.

Regarding clinical, obstetric, and reproductive characteristics (Table 3), 16.70% were pregnant at the time of the study. Most were in their third pregnancy (60%), and 95.45% had singleton pregnancies. The majority had experienced a single perinatal loss (67.90%), most commonly (32.70%) occurring at least three years prior to participation. Most (69.10%) had not had a live birth before their most recent loss, and 11.70% reported medically indicated terminations.

Of the 137 cases with gestational age data, losses occurred mainly during the first trimester (75.48%), followed by the second (19.71%) and third (5.11%). Following the loss,

13.60% of participants reported MHP, primarily anxiety and depression (40.90%). Regarding treatment, 40.90% stated that they were currently receiving it, while 50% had received treatment in the past.

Inclusion criteria were: (1) having experienced a perinatal loss, (2) being of legal age, (3) residing in Spain, (4) having been the pregnant person, (5) providing informed consent, and (6) completing all questionnaires. A total of 36 individuals were excluded for not having experienced a perinatal loss, 3 for not residing in Spain, 6 for not having been the pregnant person, and 171 for incomplete responses.

The resulting sample was relatively homogeneous, consisting predominantly of highly educated women in stable romantic relationships and with perinatal losses occurring mainly during the first trimester. This homogeneity reflects, in part, the recruitment strategy and the characteristics of women more likely to engage in reflective research on perinatal loss.

Instruments

An ad hoc online form was developed to collect a range of sociodemographic (e.g., age, sex assigned at birth, gender identity, place of residence, sexual orientation, marital status, number of children, household composition, educational level, employment status, and income), relational (e.g., presence of a partner in the past year, partner gender identity, relationship duration), and clinical variables. Clinical variables included obstetric and reproductive history (e.g., current pregnancy, pregnancy type, number of pregnancies and perinatal losses, time since last loss, gestational week at loss, type and cause of loss, presence of living children before/after the loss) and mental health (e.g. history of MHP, type of disorder, and treatment received).

Guil related to the perinatal loss was assessed using a single ad-hoc item designed to capture the subjective intensity of guilt associated with the loss experience. Participants rated their agreement on a Likert-type scale. This brief assessment was chosen to reduce participant burden in a highly sensitive population and to facilitate completion of the online survey.

Adverse childhood experiences in childhood and adolescence were assessed using the Adverse Childhood Experiences Questionnaire (ACEQ; WHO, 2012), which evaluates exposure to 10 types of adversity in adults (≥ 18 years) through dichotomous responses (yes/no). Total scores range from 0 to 10, with scores above 3 indicating higher health risk (Felitti et al., 1998). The questionnaire comprises two dimensions: personal adversity (abuse and neglect) and family-related adversity (household dysfunction). The Spanish adaptation

showed moderate reliability (total $\alpha = .68$; abuse $\alpha = .70$; neglect $\alpha = .45$; Mendoza & Meza, 2022). In the present study, Cronbach's alpha values were .59 for the total scale, .63 for abuse, and .31 for neglect. These relatively low coefficients are consistent with previous research and are expected given the cumulative and formative nature of the ACEQ, which assesses exposure to heterogeneous and largely independent adverse events rather than a single latent construct (Centers for Disease Control and Prevention [CDC], 2021; Mendoza & Meza, 2022). Low internal consistency may also reflect weak intercorrelations among less frequent experiences, such as parental loss or incarceration. Internal consistency for the total ACE score was acceptable, although lower reliability coefficients were observed for specific subdimensions, particularly neglect. This finding is consistent with previous research (Finkelhor et al., 2015) suggesting that ACE instruments assess heterogeneous and relatively independent adverse events rather than a single latent construct.

Insecure romantic attachment was measured with the short Spanish version of the Experiences in Close Relationships–Revised Scale (ECR-R; Fraley et al., 2011; Fernández-Fuertes et al., 2011). This self-report scale comprises 18 items rated on a 7-point Likert scale, distributed across two dimensions: anxiety and avoidance. Subscale scores are calculated as item means. The Spanish validation reported adequate reliability ($\alpha = .80$ for anxiety; $\alpha = .86$ for avoidance). In this study, α values were .86 and .92, respectively.

PDC was assessed using the Dyadic Coping Inventory (DCI; Bodenmann, 2008; Ledermann et al., 2010), Spanish adaptation by Falconier et al. (2012), which evaluates how couples manage stress together. It contains 37 Likert-type items across subscales such as stress communication, supportive coping, delegated coping, negative coping, joint coping, and coping evaluation. Negatively keyed items are reverse-coded before computing subscale and total scores. Original cutoffs classify total scores as below average (<111), normative (111–145), or above average (>145) (Bodenmann, 2008). The Spanish validation reported high total reliability ($\alpha = .94$) and adequate subscale reliabilities ($\alpha = .64$ –.92), with some moderate values in women (problem-focused supportive coping $\alpha = .55$; negative coping $\alpha = .60$ self, $\alpha = .59$ partner). In this study, α values were stress communication .69 (self) / .81 (partner); supportive coping .67 / .89; delegated coping .70 / .82; negative coping .73 / .81; joint coping .88; coping evaluation .95; and total score .95.

MHP was treated as a contextual vulnerability factor rather than a diagnostic indicator.

Procedure

This study is part of a broader research project approved by the Ethics Committee of the University of Valencia (2024-PSILOG-3468509). Prior to dissemination, expert consultations were conducted to ensure the sensitivity and appropriateness of the survey, and minor wording adjustments were made following input from the perinatal grief association Umamanita.

The final survey was distributed online through personal contacts, WhatsApp groups, and social media platforms (Instagram and X). In addition, 56 national and provincial associations related to pregnancy, breastfeeding, perinatal grief, and maternal–infant health, as well as professional colleges of gynecology and obstetrics in Spain, were contacted via email and invited to collaborate in dissemination. Further outreach was conducted via Instagram with the support of associations, centers, and 17 healthcare professionals (psychologists, midwives, and gynecologists).

The survey was administered via the Universitat de València's *LimeSurvey* platform. All participants provided electronic informed consent, and data were collected anonymously between October 2024 and January 2025. Completion time ranged from 20 to 35 minutes.

Data Analysis

Data was analyzed in several steps using SPSS v.29.0.2.0 (IBM SPSS Statistics). First, descriptive statistics were computed to characterize the study variables. Second, independent-samples t-tests were used to examine group differences based on the presence of mental health problems, and effect sizes were calculated using Cohen's *d*. Third, correlation analyses were performed to explore associations among ACEs, attachment dimensions, guilt, MHP, and PDC.

Subsequently, a stepwise multiple linear regression analysis was performed to identify predictors of PDC. Adjusted R^2 values were reported to provide a more conservative estimate of explained variance, considering the sample size and number of predictors.

Fuzzy-set Qualitative Comparative Analysis (fsQCA v4.1) was applied to identify configurations of conditions associated with high and low levels of dyadic coping. Variables were calibrated using established cut-off points, and analyses of necessary and sufficient conditions were conducted, with intermediate solutions reported in accordance with established guidelines (Ragin, 2008; Eng & Woodside, 2012; Pappas & Woodside, 2021). FsQCA was conducted following Ragin's (2008) recommendations. Variables were calibrated into fuzzy sets using theoretical and empirical anchors corresponding to full membership, crossover point, and full non-membership. Calibration thresholds were based on sample percentiles (P10, P50, and P90).

A consistency threshold of .74 was adopted to identify sufficient conditions, in line with prior research. Both presence and absence of positive dyadic coping were examined to capture asymmetric causal pathways.

Finally, mediation analyses, including both simple and multiple mediation models, were conducted using the PROCESS macro to examine whether insecure attachment dimensions mediated the association between ACEs and DC. Prior to mediation analyses, continuous predictor variables were mean-centered to reduce multicollinearity and facilitate interpretation of indirect effects.

3. Results

Descriptive analysis: sociodemographic, relational, and clinical variables

A total of 13.60% of participants reported having a MHP, most commonly anxiety and depression (40.90%). Among these, 40.90% were currently receiving psychological treatment, while 50% had received it in the past. Regarding perinatal guilt, most women reported experiencing it sometimes (36.40%), regularly (24.70%), or always (15.40%), with fewer reporting rarely (13.00%) or never (10.50%).

Participants generally scored low on the total number of adverse childhood experiences (ACEs) reported; however, 16.25% had scores above the threshold of three ACEs. In terms of romantic attachment, mean scores for both anxiety and avoidance dimensions were relatively low. Based on these dimensions and following the median split method proposed by Fraley et al. (2000) and Fraley (2013), the predominant attachment style in this sample was secure (39.10%), followed by fearful (28.30%), preoccupied (21.00%), and dismissing/avoidant (11.60%). The mean score for PDC in the sample was moderately high. Applying the cut-off points proposed by Bodenmann et al. (2008) for exploratory purposes, 13.20% of participants fell below the average range, 52.90% within the normative range, and 33.80% above average (Table 1).

Table 1
Sociodemographic and Clinical Characteristics

Variable	Category	<i>n</i>	%
Sexual orientation	Heterosexual	139	85.80
	Homosexual	7	4.30
	Bisexual	15	9.30
	Asexual	1	.60
Marital status	Single	26	16.00
	Married or in a relationship	132	81.50
	Separated or divorced	4	2.50
Number of cohabitants	0	7	4.30
	1	47	29.00
	2	58	35.80
	3	35	21.60
	4	8	4.90
	5	1	0.60
Lives with	Partner	43	26.50
	Parents	2	1.20
	Partner and children	83	51.20
	Parents and children	3	1.90
	Parents, partner and children	1	.60
Education	Primary studies	2	1.20
	Secondary studies	23	14.20
	Higher education	132	81.50
Occupation	Public servant	35	21.60
	Self-employed	23	14.20
	Permanent contract	70	43.20
	Temporary employment contract	8	4.90
	Unemployed	7	4.30
	Household work	5	3.10
	Unemployment benefit/subsidy	2	1.20
	Other	4	2.50
Annual income	Less than €5,000	8	4.90
	€5,001–€10,000	6	3.70
	€10,001–€15,000	19	11.70
	€15,001–€20,000	24	14.80

	€20,001–€30,000	44	27.20
	€30,001–€40,000	32	19.80
	More than €40,000	24	14.80
Pregnancy number	2	8	32.00
	3	15	60.00
	4	2	8.00
Perinatal loss	1	110	67.90
	2	37	22.80
	3	8	4.90
	4	2	1.20
	5	2	1.20
	6	2	1.20
	Tanner 6	1	.60
Time since last loss	Less than 3 months	21	13.00
	Between 3 and 6 months	16	9.90
	Between 6 months and 1 year	19	11.70
	Between 1 and 2 years	35	21.60
	Between 2 and 3 years	18	11.10
	More than 3 years	53	32.70
Perinatal guilt	Never	17	10.50
	Rarely	21	13.00
	Sometimes	59	36.40
	Regularly	40	24.70
	Always	25	15.40
Type of MHP	Anxiety	3	13.64
	Depression	2	9.09
	OCD	1	4.55
	Personality	1	4.55
	Borderline Disorder		
	PTSD	2	9.09
	ADHD	2	9.09
	Generalized Anxiety Disorder	2	9.09
	Anxiety and depression	9	40.90

Mean differences

Mean difference analysis was intended to explore whether MHP function as a vulnerability marker associated with distinct emotional and relational profiles following perinatal loss. After Differences in ACEs, insecure attachment, guilt, and PDC were

examined according to the presence of MHP (Table 2). Significant differences were found for attachment anxiety, ACEs and guilt, with higher mean scores in women with MHP, and moderate to large effect sizes. Importantly, these differences were associated with moderate to large effect sizes, suggesting that the observed group differences are not only statistically significant but also potentially meaningful at a clinical and psychological level. Nevertheless, given the imbalance in group sizes, effect size estimates may be unstable; therefore, findings should be interpreted with caution and are considered exploratory.

Table 2

Group Differences Based on the Presence of MHP in ACEs, Insecure Attachment, Dyadic Coping, and Guilt

	Without MHP	With MHP			
	<i>M (SD)</i>	<i>M (SD)</i>	<i>t</i>	<i>p</i>	<i>d</i>
ACEs	1.44 (1.52)	2.68 (1.99)	-2.79	.010	-0.78
Anxiety	25.44 (10.89)	37.58 (10.50)	-4.52	.000	-1.12
Avoidance	17.45 (9.34)	20.26 (11.89)	-0.98	.168	-0.29
Individual communication	15.22 (2.65)	15.84 (1.92)	-1.24	.113	-0.24
Partner communication	13.07 (3.41)	12.37 (2.22)	1.17	.125	0.21
Individual supportive coping	20.05 (2.52)	19.68 (3.09)	0.49	.314	0.14
Partner supportive coping	19.45 (4.11)	19.42 (4.27)	0.03	.488	0.01
Individual delegated coping	7.88 (1.22)	7.89 (1.24)	-0.05	.479	-0.01
Partner delegated coping	7.24 (1.65)	7.21 (2.07)	0.07	.474	0.02
Individual negative coping	17.02 (2.49)	17.05 (2.91)	-0.05	.480	-0.01
Partner negative coping	16.34 (3.03)	15.68 (3.59)	0.75	.230	0.21
Joint coping	18.43 (4.23)	17.58 (4.68)	0.74	.233	0.20
Individual evaluation of dyadic coping	7.62 (2.10)	7.37 (2.31)	0.44	.332	0.12
PDC	134.97 (19.49)	132.68 (21.43)	0.44	.333	0.12
Guilt over perinatal loss	3.13 (1.15)	3.91 (0.97)	-3.02	.003	-0.70

Note. *M* = Mean; *SD* = Standard Deviation; *t* = *t*-value; *p* = *p*-value; *d* = Cohen's *d*;

Correlational analysis

Correlational analyses examined associations between ACEs, insecure attachment, PDC, and guilt (Table 3). ACEs were positively correlated with avoidance, anxiety and guilt, and negatively with PDC and several of its subscales. Attachment anxiety was positively correlated with avoidance and guilt, and negatively with PDC and its subscales. Avoidance showed a positive correlation with guilt and a negative correlation with PDC and its subscales. Finally, guilt was negatively correlated with PDC and its subscales.

Although the PDC scale includes self- and partner-oriented dimensions, the total PDC score was used in subsequent analyses to capture overall perceived dyadic coping within the relationship. This approach was adopted to reduce model complexity and multicollinearity, given the sample size.

Table 3*Associations among ACEs, Insecure Attachment, PDC, and Guilt*

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ACEs	ACEs	1														
Romantic	Anxiety	.20*	1													
Attachment	Avoidance	.17*	.48**	1												
PDC	Individual communication	-.08	-	-	1											
	Partner communication	-.08	-	-	.19*	1										
	Individual supportive coping	-.10	-	-	.57**	.27**	1									
	Partner supportive coping	-.16	-	-	.52**	.40**	.52**	1								
	Individual delegated coping	-.03	-.16	-.20*	.28**	.27**	.34**	.23**	1							
	Partner delegated coping	-.06	-	-	-	.10	.35**	.58**	.25**	1						
	Individual negative coping	-.12	-	-	-	.01	.41**	.44**	.19*	.45**	1					
	Partner negative coping	-.18*	-	-	.48**	.26**	.47**	.70**	.17	.56**	.53**	1				
	Joint coping	-.20*	-	-	.53**	.41**	.62**	.77**	.34*	.56**	.51**	.66**	1			
	Individual evaluation	-.20*	-	-	.58**	.39**	.57**	.84**	.25**	.64**	.51**	.73**	.79**	1		
	PDC	-.19*	-	-	.69**	.49**	.68**	.88**	.39**	.68**	.62**	.81**	.83**	.90**	1	

Guilt over perinatal loss	Guilt	.20	.25**	.21**	-.17*	-.10*	-.26**	-.18*	.02	-.10	-.16	-.18*	-.20*	-.30*	-.23*	1
---------------------------------	-------	-----	-------	-------	-------	-------	--------	-------	-----	------	------	-------	-------	-------	-------	---

*Note: * $p \leq .05$; ** $p \leq .01$; 1 = ACEs; 2 = anxiety; 3 = avoidance; 4 = individual communication; 5 = partner communication; 6 = individual supportive dyadic coping; 7 = partner supportive dyadic coping; 8 = individual delegated coping; 9 = partner delegated coping; 10 = individual negative coping; 11 = partner negative coping; 12 = joint coping; 13 = individual evaluation of dyadic coping; 14 = total positive dyadic coping; 15 = guilt over perinatal lo*

Linear regression analysis

A stepwise hierarchical regression was conducted to examine predictors of DC. In Step 1, MHP and ACEs were entered, explaining a minimal proportion of the variance in DC ($\Delta R^2 = .00$, $\Delta F = 0.22$, $p = .641$). In Step 2, attachment dimensions (anxiety and avoidance) were added, resulting in a significant increase in explained variance ($\Delta R^2 = .70$, $\Delta F = 99.16$, $p < .001$). Within this model, attachment anxiety ($\beta = -.30$, $t = -5.021$, $p < .001$) and avoidance ($\beta = -.65$, $t = -11.65$, $p < .001$) emerged as significant negative predictors of dyadic coping, while mental health problems showed a small positive effect ($\beta = .04$, $t = 2.91$, $p = .006$), and ACEs were not significant ($\beta = -.04$, $t = 0.88$, $p = .343$).

In Step 3, guilt over perinatal loss was included, which did not significantly improve the model ($\Delta R^2 = .002$, $\Delta F = 0.88$, $p = .349$). In the final model, the significant predictors remained attachment anxiety ($\beta = -.30$, $t = -5.02$, $p < .001$) and avoidance ($\beta = -.65$, $t = -11.65$, $p < .001$), while MHP maintained a small negative association ($\beta = -.04$, $t = -2.91$, $p = .004$). ACEs ($\beta = -.04$, $t = -0.88$, $p = .383$) and guilt ($\beta = -.05$, $t = -0.94$, $p = .349$) were not significant. In the final model, attachment anxiety and avoidance were significant negative predictors of dyadic coping, while MHP had a small positive effect. ACEs and guilt were not significant. The model explained 68.8% of the variance in DC.

Table 4

Hierarchical Stepwise Regression Model Predicting PDC

Predictor	PD				
	ΔR^2	ΔF	β	t	VIF
Step 1	.002	0.22			
Mental health problems			-.041	-2.91	1.26
ACEs			-.044	-0.88	1.10
Step 2	.700***	99.16			
Anxiety			-.30***	-5.02	1.50
Avoidance			-.65***	-11.65	1.34
Step 3	.002***	0.88			
Guilt			-.05	-0.94	1.14
Durbin-Watson	1.70				
Adjusted R^2	.69				

Note. Adjusted R^2 = adjusted coefficient of determination; ΔR^2 = change in R^2 ; ΔF = change in F ; β = standardized regression coefficient; t = t -value; VIF = variance inflation factor; * $p \leq .05$, *** $p \leq .001$

Fuzzy set qualitative comparative analysis (fsQCA)

Necessary analysis

Table 5 presents the descriptive analyses and calibrated values used in the fsQCA. The necessary of each condition (and its negation) for the presence and absence of PDC was examined (Table 6).

Necessary analyses indicated that no condition fully met the conventional $\geq .90$ consistency threshold to be considered strictly necessary for the presence of DC. Although the consistency value for the absence of avoidance was very close to the conventional threshold for necessity (consistency = 0.8989), it did not fully meet the $\geq .90$ criterion and therefore cannot be considered a strictly necessary condition. No condition reached the necessity threshold for the absence of DC.

Table 5

Descriptive Statistics and Calibrated Values for fsQCA

	ACEs	Anxiety	Avoidance	Guilt	PDC
<i>M</i>	1.63	27.41	17.91	3.22	134.25
<i>SD</i>	1.64	11.83	9.64	1.17	19.95
<i>Min</i>	0.00	9.00	9.00	1.00	85.00
<i>Max</i>	7.00	61.00	62.00	5.00	174.00
<i>P10</i>	16.00	12.00	9.00	2.00	104.70
<i>P50</i>	19.00	27.00	16.00	3.00	137.00
<i>P90</i>	20.00	44.00	32.10	5.00	159.00

Note. *M* = Mean; *SD* = Standard Deviation; *Min* = Minimum; *Max* = Maximum; *P10* = 10th percentile; *P50* = Median; *P90* = 90th percentile.

Table 6

Necessary Analysis for High and Low Levels of PDC

	High levels of PDC		Low levels of PDC	
Condition	Consistency	Coverage	Consistency	Coverage
Mental health problems (MHP)	0.14	0.49	0.15	0.51
Absence of MHP	0.86	0.51	0.85	0.49
Adverse childhood experiences (ACEs)	0.63	0.69	0.53	0.56
Absence of ACEs	0.59	0.57	0.70	0.64
Anxiety	0.46	0.49	0.75	0.76
Absence of anxiety	0.77	0.76	0.49	0.47
Avoidance	0.39	0.45	0.79	0.88
Absence of avoidance	0.90	0.82	0.50	0.44
Guilt	0.66	0.60	0.76	0.66
Absence of guilt	0.63	0.73	0.54	0.61

Sufficiency analysis

Sufficiency analyses revealed that five causal configurations explained approximately 92% of cases with high DC. For high levels of DC, three causal pathways were identified. Path 1 consisted of the interaction between the absence of mental health problems and low attachment avoidance, explaining 78% of the coverage. Path 2 combined low attachment avoidance and low guilt, accounting for 58% of the coverage. Path 3 was characterized by the absence of adverse childhood experiences together with low attachment avoidance, explaining 55% of the coverage.

For the absence of DC, four causal configurations accounted for approximately 90% of cases. Path 1 was characterized by high avoidance. Path 2 combined low MHP and high anxiety. Path 3 involved high ACEs together with high anxiety (Table 7).

Table 7

Sufficiency Analysis for High and Low Levels of PDC

	High levels of PDC Consistency threshold: 0.80			Low levels of PDC Consistency threshold: 0.83		
	1	2	3	1	2	3
MHP	○				○	
ACEs			○			●
Anxiety					●	●
Avoidance	○	○	○	●		
Guilt		○				
Raw coverage	0.78	0.58	0.55	0.79	0.61	0.42
Unique coverage	0.07	0.00	0.04	0.22	0.05	0.00
Consistency	0.82	0.90	0.84	0.88	0.79	0.82
Consistency global		0.79			0.79	
Overall coverage		0.90			0.90	

Note. Expected vectors according to Papas & Woodside (2021). For high levels of PDC: 0,0,0,0,0; For low levels: 1,1,1,1,1; Large circles indicate the presence of core conditions, whereas small circles indicate the presence of peripheral conditions; ●, ● circles represent the presence or high level of the condition, and ○, ○ represent the absence or low level of the condition.

Mediation analysis: the role of insecure attachment in the relationship between ACEs and PDC

A mediation analysis was conducted to examine whether insecure attachment dimensions (anxiety and avoidance) mediated the relationship between adverse childhood experiences (ACEs) and positive dyadic coping (PDC). ACEs were significantly and negatively associated with both attachment anxiety ($\beta = -1.44$, $SE = 0.61$, $p = .019$, 95% CI [-2.65, -0.24]) and attachment avoidance ($\beta = -1.00$, $SE = 0.50$, $p = .047$, 95% CI [-1.99, -

0.01]). The full model, including ACEs, anxiety, and avoidance as predictors of PDC, accounted for 68.6% of the variance in PDC ($R^2 = .69$, $F(3,132) = 96.08$, $p < .001$). Both attachment anxiety ($\beta = -0.45$, $SE = 0.09$, $p < .001$, 95% CI $[-0.64, -0.27]$) and attachment avoidance ($\beta = -1.36$, $SE = 0.11$, $p < .001$, 95% CI $[-1.59, -1.13]$) were significantly associated with lower PDC, whereas the direct effect of ACEs on PDC was not significant ($\beta = 0.24$, $SE = 0.60$, $p = .696$, 95% CI $[-0.96, 1.43]$).

Bootstrap analyses (10,000 samples) indicated a significant total indirect effect of ACEs on PDC through the attachment dimensions (effect = 2.01, BootSE = 0.92, 95% CI $[0.28, 3.81]$). When examining the specific indirect effects, the indirect pathway through attachment anxiety was significant (effect = 0.65, BootSE = 0.29, 95% CI $[0.16, 1.31]$), whereas the indirect effect through attachment avoidance was not significant (effect = 1.36, BootSE = 0.77, 95% CI $[-0.10, 2.89]$). Overall, these findings indicate that the association between ACEs and PDC is primarily explained through indirect pathways, particularly via attachment-related anxiety, consistent with an indirect-only (full mediation) model.

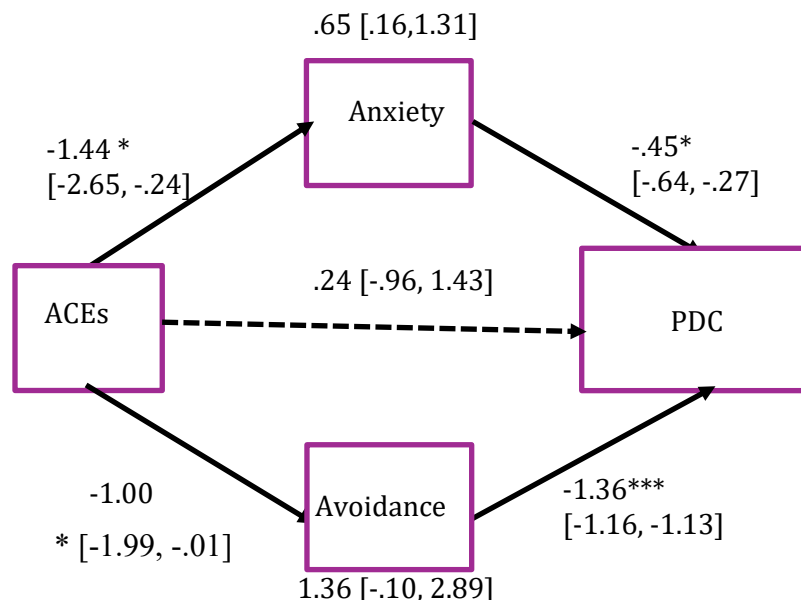
Regarding the individual mediators, the simple mediation analysis showed that ACEs were negatively associated with attachment anxiety ($\beta = -1.44$, $SE = 0.61$, $p = .019$). This model explained approximately 35% of the variance in PDC ($R^2 = .35$, $F(2,133) = 35.78$, $p < .001$). Attachment anxiety was a significant predictor of lower PDC ($\beta = -0.96$, $SE = 0.12$, $p < .001$, 95% CI $[-1.20, -0.72]$), whereas the direct effect of ACEs on PDC was not significant ($\beta = 0.86$, $SE = 0.86$, $p = .319$, 95% CI $[-0.84, 2.57]$). Bootstrap analyses revealed a significant indirect effect of ACEs on PDC through attachment anxiety (effect = 1.39, BootSE = 0.54, 95% CI $[0.39, 2.52]$), indicating that the association between ACEs and PDC is largely transmitted via attachment anxiety.

In contrast, a separate mediation analysis indicated that ACEs were negatively associated with attachment avoidance ($\beta = -1.00$, $SE = 0.50$, $p = .047$), although the explained variance in this mediator was modest ($R^2 = .03$). This model explained 63.1% of the variance in PDC ($R^2 = .63$, $F(2,133) = 113.52$, $p < .001$). Attachment avoidance was strongly associated with lower PDC ($\beta = -1.61$, $SE = 0.11$, $p < .001$, 95% CI $[-1.83, -1.39]$), while the direct effect of ACEs on PDC was not significant ($\beta = 0.64$, $SE = 0.65$, $p = .325$, 95% CI $[-0.64, 1.91]$). However, the indirect effect of ACEs on PDC through attachment avoidance was not statistically significant (effect = 1.61, BootSE = 0.92, 95% CI $[-0.16, 3.41]$). Despite its strong association with PDC, attachment avoidance does not appear to play a mediating role in the

relationship between ACEs and PDC, highlighting the differential contribution of attachment dimensions.

Figure 1

Mediation analysis of the relationship between ACEs and PDC, mediated by insecure attachment (anxiety and avoidance)



4. Discussion

The findings of this study reveal that adaptation to perinatal grief through PDC is a multifactorial process shaped by biographical vulnerabilities (ACEs), relational patterns (attachment), and emotional factors (guilt and MHP). Consistent with attachment theory (Bowlby, 1978) and the systemic-transactional model (Bodenmann, 2005) of DC, attachment avoidance was identified as the strongest and most consistent predictor of reduced post-loss DC, whereas ACEs appeared to impact PDC mainly through indirect pathways mediated by attachment anxiety. (Freedle & Oliveira, 2024; Scheidt et al., 2012; Smith et al., 2025)

Attachment Styles

Attachment styles emerged as the strongest predictors of DC, with attachment avoidance showing a robust negative association and attachment anxiety also contributing to lower DC, albeit with a smaller effect. These findings support H1 and H3, highlighting the central role of attachment-related emotion regulation processes in couples' adjustment to perinatal loss (Albuquerque et al., 2018; Caldwell et al., 2023; Christiansen et al., 2013; Condon, 1993; Kersting & Wagner, 2012; Scheidt et al., 2012) and are consistent with

Bowlby's attachment theory (1978), which posits that insecure attachment compromises both affect regulation and the ability to rely on significant others during distress.

Low attachment avoidance constitutes a core condition for high DC across all configurations of fsQCA, supporting H4 and underscoring the pivotal role of avoidance in shaping DC. can be theoretically grounded in the attachment theory concept of the *secure base*. (Mikulincer & Shaver, 2018). Effective DC requires partners to remain emotionally accessible, responsive, and willing to engage in mutual vulnerability when facing stressors. In contrast, attachment avoidance—characterized by a preference for autonomy, discomfort with intimacy, and suppression of emotional needs (Brandão et al., 2020; Wendołowska et al., 2022)—directly undermines the emotional openness and proximity-seeking behaviors that sustain this secure base within intimate relationships.

Furthermore, the neurobiological level, avoidantly attached individuals exhibit automatic deactivation of the attachment system under distress, inhibiting emotional disclosure and proximity-seeking (Mikulincer & Shaver, 2018). In the context of perinatal grief—a stressor that threatens both individual and relational identity—this deactivation disrupts shared meaning-making, emotional co-regulation, and the coordinated coping processes that define high-quality DC (Freedle & Oliveira, 2024; Wendołowska et al., 2022)

In contrast, although attachment anxiety was negatively associated with DC in regression analyses, its effect was less pronounced than avoidance. This may be because, paradoxically, individuals with high attachment anxiety actively seek connection and support, albeit in potentially less adaptive ways (hyperactivation of the attachment system, excessive reassurance-seeking) (Leroy et al., 2020). This connection-seeking, though anxious, may maintain some level of dyadic communication, whereas attachment avoidance leads to emotional disconnection and isolation, which are more detrimental to joint coping (Bröning & Wartberg, 2024; Freedle & Oiveira, 2024).

The Role of ACEs: Indirect Pathways Through Attachment Anxiety

ACEs were associated with lower DC, and mediation analyses indicated that this relationship was driven primarily by attachment anxiety rather than attachment avoidance, , partially confirming H5. Women with higher ACE exposure reported greater attachment anxiety, which in turn was linked to reduced DC. This pattern is consistent with developmental attachment models suggesting that early adversity fosters hyperactivation of the attachment system, characterized by fear of abandonment, emotional dysregulation, and heightened dependency needs (Höltge et al., 2023; Shahab et al., 2021; Widom et al., 2018;

Zumdahl et al., 2025). In the context of perinatal loss, such hyperactivation may amplify distress and relational strain, undermining effective DC even when the desire for closeness is present.

The absence of a significant indirect effect through attachment avoidance suggests that avoidant strategies may reflect more stable relational orientations that are less directly shaped by cumulative childhood adversity, whereas attachment anxiety appears more sensitive to early relational trauma. Early adverse experiences such as abuse, neglect, and exposure to violence are thought to generate internal working models marked by relational hypervigilance and preoccupation with partner availability, which manifest as attachment anxiety in adulthood (Höltge et al., 2023; Shahab et al., 2021; Widom et al., 2018; Zumdahl et al., 2025). ACEs may sensitize the attachment system toward fear of abandonment rather than toward defensive disengagement from intimacy.

At the same time, pathways from ACEs to attachment are type- and timing-specific. Emotional abuse and emotional neglect have been shown to differentially predict anxious and avoidant attachment, respectively, (Höltge et al., 2023) and earlier exposure to adversity is associated with greater parental attachment insecurity (Zumdahl et al., 2025). Moreover, ACEs also exerted direct effects on DC in some analyses, indicating that early adversity compromises DC through multiple pathways, including enduring difficulties in emotion regulation, trauma-related beliefs, heightened guilt, and vulnerability to MHP, independently of attachment patterns (Shahab et al., 2021; Widom et al., 2018).

Guilt and MHP as vulnerability markers

Guilt was negatively associated with DC, supporting H1 and in line with previous evidence that self-blame and perceived responsibility intensify distress following perinatal loss. Although guilt was assessed using a single-item measure, its association with reduced DC suggests that guilt may inhibit emotional sharing and mutual support by fostering withdrawal, shame, or fear of burdening the partner.

MHP were also linked to less adaptive coping profiles, confirming H2 and reinforcing their role as vulnerability markers rather than diagnostic predictors. Women reporting MHP showed higher ACE exposure, greater attachment insecurity, and lower DC, suggesting cumulative risk pathways that constrain relational coping resources during grief.

Given the cross-sectional design and measurement limitations, these findings should be interpreted cautiously; however, they underscore the importance of considering both emotional distress and relational patterns when supporting women after perinatal loss.

Multiple Configurations: Equifinality and Clinical Profiles

Beyond linear associations, fsQCA showed that DC in perinatal loss follows an equifinal and asymmetric logic, thus confirming H4: multiple configurations of attachment patterns, ACEs, guilt, and MHP can lead to either high or low DC, and no single factor is sufficient on its own. Rather, the absence of key risk conditions—especially low attachment avoidance—often proved more decisive than the presence of protective factors, highlighting the usefulness of configurational approaches for capturing the complexity of couple adaptation to loss.

These results indicate that there is no single risk or resilience profile but multiple pathways toward adaptation or maladaptation. For instance, high DC may occur despite high ACE exposure when attachment avoidance is low and MHP are absent, whereas low DC may emerge even with low ACEs when high avoidance co-occurs with elevated guilt. This allows the identification of clinically meaningful profiles to guide intervention.

Three broad profiles can be distinguished. High vulnerability (high anxiety, high avoidance, high guilt) entails the greatest risk of emotional disconnection and complicated grief and calls for interventions targeting emotion regulation, guilt, and avoidance of intimacy (Scheidt et al., 2012). Attachment-driven vulnerability (high anxiety or avoidance in the absence of MHP) suggests the need for attachment-based couple therapy to strengthen secure base functioning and emotional disclosure (Bröning & Wartberg, 2024; Wendołowska et al., 2022). Protective profiles (low anxiety and low avoidance, with or without ACEs) are associated with high DC and benefit from consolidating supportive dyadic practices and community resources.

Cultural context: Spanish sample

The study was conducted with a Spanish sample, and expressions of grief, attachment patterns, and DC may vary across cultures (Smid et al., 2018; Zhou et al., 2023). Spanish culture, influenced by Mediterranean and Catholic traditions, may emphasize family support and community mourning practices that could facilitate DC or, conversely, may impose specific gender expectations on the expression of grief that limit emotional openness. (Smid et al., 2018; Zhou et al., 2023). For example, German-speaking mourners in Switzerland show

more emotion than mourners in China, and cultural norms dictate whether emotions should be expressed more when alone than when with close others (Zhou et al., 2023). Similarly, the distribution of attachment styles varies across cultures, with avoidant and dismissive styles being more common in Japanese samples and anxious styles being more common in Italian and Spanish samples (GBD 2021 Global Stillbirths Collaborators, 2024).

Limitations

Despite the contributions, this research has several limitations. Despite its contributions, this research has several limitations. First, the sample ($N = 162$) consisted predominantly of highly educated Spanish women in stable relationships, with the vast majority of losses occurring during the first trimester (75.48%), limiting generalizability to other populations. Furthermore, the sample may be subject to selection bias, with women more inclined to reflective and adaptive coping being more likely to participate. This may have resulted in an underestimation of the prevalence of negative dyadic coping and severe psychopathology. The small sample size reflects the difficulty of accessing this population, despite extensive recruitment efforts through over 50 associations and professional social media accounts. Additionally, the sensitive and painful nature of the topics may have further constrained participation and contributed to attrition.

The cultural specificity is particularly relevant. Grief expression, attachment patterns, and dyadic coping vary substantially across cultures, and the Spanish context may have influenced the observed patterns. Replication studies in diverse cultural contexts (e.g., non-Western, non-Catholic, individualistic cultures) are essential to determine whether the centrality of attachment avoidance and the mediating role of attachment anxiety generalize beyond the Spanish context.

In addition, other areas affected by loss, such as family relationships, social environment, or work environment, were not explored (Salgado et al., 2021; Fernández-Alcántara et al., 2012; Fernández-Sola et al., 2020; Mota et al., 2023). Moreover, the variability in time since the loss may have influenced the grief experiences (Tseng et al., 2017). Furthermore, PDC was assessed only from the perspective of women, which limits the understanding of shared processes (Bodenmann et al., 2019).

Although there are validated scales for assessing guilt in trauma contexts or in general clinical experiences—such as the Trauma-Related Guilt Inventory (TRGI; Kubany et al., 1996) and the State Shame and Guilt Scale (SSGS; Marschall et al., 1994) their content is not directly

applicable to the perinatal setting. This highlights a significant methodological limitation: the absence of instruments specifically designed to capture the experience of guilt associated with perinatal loss, even though literature recognizes it as a central component in the grieving process. Additionally, reliance on self-reports may introduce recall or social desirability biases, especially in retrospective reporting of ACEs (Gomes et al., 2019), although the measures used showed acceptable reliability (Pinto et al., 2014). Finally, only the cumulative effect of ACEs was considered, when a differential approach would allow for examining how specific types of influence coping differently. The low internal consistency of the instrument is due to the items assessing heterogeneous, non-interchangeable exposures, each reflecting a different type of childhood adversity. The instrument is a cumulative index, where the total score represents overall risk rather than a single latent construct. Therefore, high inter-item correlations or a unidimensional structure are not expected, and Cronbach's alpha is not an appropriate reliability measure in this context (Fitzgerald & Gallus, 2025; Lacey & Minnis, 2020; LaNoue & Hass, 2025). Future studies should explore whether certain forms of childhood adversity, such as neglect versus abuse, contribute differently to attachment insecurity, guilt, and the ability to engage in PDC after perinatal loss. Such analyses could provide more nuanced insights into the mechanisms linking early adversity and later relational coping, ultimately guiding more personalized interventions.

All variables were assessed through self-reports at a single time point, introducing the risk of common method, which can artificially inflate correlations between variables due to shared variance sources related to the measurement method. We recognize this as a potentially important confounder and suggest future research to implement procedural remedies (e.g., temporal separation of measurements, multiple information sources including partner reports, counterbalancing scale order) and/or statistical remedies to control it.

The cross-sectional design limits causal conclusions, as reverse causality or unmeasured confounders cannot be ruled out. Future longitudinal studies tracking attachment, mental health, and dyadic coping before and after perinatal loss are needed to more robustly test mediation pathways and identify risk and protective factors.

Despite its limitations, this research has important strengths. It is one of the few studies that jointly addresses the role of ACEs, attachment styles, guilt, and MHP in PDC after perinatal loss in a sample of Spanish women. In addition, it takes a comprehensive life-cycle approach and uses a mixed methodology, combining correlational analyses, mediation and moderation models, and fsQCA, providing a deeper understanding of the mechanisms that influence dyadic coping in contexts of perinatal grief. Beyond these contributions, the results

allow for the identification of distinct clinical profiles, from which therapeutic recommendations can be derived. This highlights the potential of conducting preliminary assessments to guide which type of intervention may be most suitable in each case. Moreover, the findings underscore the importance of adopting a therapeutic framework that is flexible and plural, offering multiple orientations and pathways for support, rather than a single standardized approach.

Future research

For future research, it would be advisable to work with larger and more diverse samples, considering different sociocultural contexts and gender and sex identities to improve the generalizability of the results. It is also advisable to delve deeper into variables such as social support, the quality of the couple's relationship, and the existence of children, which are recognized as protective factors in perinatal grief (Bellhouse et al., 2018; Testoni et al., 2022). In addition, longitudinal designs would allow for the analysis of the evolution of coping over time (Tseng et al., 2017). Finally, it is essential to include the perspective of both partners and different family configurations, as focusing on only one party limits the understanding of relational dynamics and prevents the design of interventions that are sensitive to diversity.

Practical Implications

The findings of this study highlight the need to implement preventive interventions focused on secure attachment throughout the life cycle. It is essential to develop psychoeducational programs that promote emotional regulation, affective expression, and resilience in the couple, to mitigate the impact of ACEs and facilitate a more adaptive coping with stressful situations such as perinatal loss.

In relation to the results obtained, assessment of attachment patterns may help identify women at greater risk for impaired DC and inform tailored intervention strategies that address relational barriers to mutual support. Women with high attachment avoidance could benefit from interventions that prioritize establishing emotional safety and respecting autonomy before introducing explicit DC techniques. For women with high attachment anxiety, interventions may focus on emotion regulation, communication skills and cognitive restructuring of abandonment-related beliefs. Managing relational hyperactivation in these women may enhance DC effectiveness. When there is high ACEs exposure, trauma approaches that combine attachment-focused and relational components may be beneficial.

Couple-based interventions addressing emotional regulation, open communication and mutual support may be especially effective. Evidence indicates that the most effective programs tend to incorporate cognitive-oriented strategies, prioritize face-to-face delivery when possible,

and adopt individualized formats that accommodate each couple's attachment patterns and specific relational need (Heazell et al., 20216; Li et al., 2024) In addition, the identification of different clinical profiles suggests that interventions should not be uniform but adapted to the relational and emotional configurations of each couple. Early intervention and the reinforcement of shared emotional skills may reduce psychological vulnerability, strengthen dyadic resources, and improve adaptation in moments of crisis. Taken together, these findings emphasize that there is no single path to coping, but rather multiple routes that can be supported through personalized, flexible interventions tailored to each couple's needs.

5. Conclusion

In practical terms, this study advances understanding of dyadic coping after perinatal loss by highlighting the central role of adult attachment—particularly low avoidance—and by demonstrating the value of integrative, multi-method approaches. By identifying both linear predictors and configurational pathways, the findings offer a more nuanced framework for supporting women and couples navigating perinatal grief.

Acknowledgments:

We extend our deepest gratitude to the women who generously participated in this study, sharing and revisiting a profoundly painful experience with the sole purpose of helping other women in similar circumstances, and doing so with complete selflessness. We are also sincerely grateful to Dr. XXXX for his invaluable guidance, which has helped us make our research more sensitive and humane—also offered entirely altruistically. Finally, we would like to thank XXXX, graduate in psychology, for her assistance with the dissemination of the survey and for her support during the early stages of the project.

Author contributions: R.S-G. and L.L-T. conceived and designed the study. R.S-G. and L.L-T recruited the participants and collected the data. L.L-T. performed the statistical analyses. R.S-G. and L.L-T interpreted the results. R.S-G. drafted the first version of the manuscript. L.L-T and F.G-S. reviewed the manuscript. L.L.-T serve as a coordinator of the study. All authors critically revised the manuscript for important intellectual content. All authors read and approved the final version of the manuscript. All authors have participated sufficiently in the work and agreed to be accountable for all aspects of the work in accordance with the ICMJE criteria.

Availability of data and materials: The datasets generated and analyzed during the current study are available from the corresponding author on reasonable request.

Conflict of interest: The authors declare no conflict of interest.

Ethics approval and consent to participate: The study was conducted in accordance with the principles of the Declaration of Helsinki. The research protocol was reviewed and approved by the Ethics Committee of University of Valencia (2024-PSILOG-3468509). Written informed consent was obtained from all participants prior to their inclusion in the study.

Funding: This research received no external funding.

References

- Ainsworth, M. D. S., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Lawrence Erlbaum.
- Akuze, J., Blencowe, H., Waiswa, P., Baschieri, A., Gordeev, V. S., Kwesiga, D., ... & Serbanescu, F. (2020). Randomised comparison of two household survey modules for measuring stillbirths and neonatal deaths in five countries: The Every Newborn-INDEPTH study. *The Lancet Global Health*, 8(4), e555–e566.
[https://doi.org/10.1016/S2214-109X\(20\)30053-2](https://doi.org/10.1016/S2214-109X(20)30053-2)
- Albuquerque, S., Narciso, I., & Pereira, M. (2017). Dyadic coping mediates the relationship between parents' grief and dyadic adjustment following the loss of a child. *Anxiety, Stress, & Coping*, 31(1), 93–106. <https://doi.org/10.1080/10615806.2017.1363390>
- Alves, C., Jenkins, S. M., & Rapp, A. (2023). Early pregnancy loss (spontaneous abortion) [Updated 2023, October 12]. In *StatPearls* [Internet]. StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK560521/>
- Alves, S., Pratas, M., Sousa, M., Fidalgo, D., Morais, A., Jongenelen, I., Lamela, D., Pinto, T. M., & Costa, R. (2025). Prenatal couple relationship satisfaction, romantic attachment, and childbirth-related posttraumatic stress symptoms. *Journal of Reproductive and Infant Psychology*. Advance online publication.
<https://doi.org/10.1080/02646838.2025.2452908>
- Anderson, M. A. (2021). *Childhood experiences, adult attachment styles and maternal outcomes* [Doctoral dissertation, Oklahoma State University]. ProQuest One Academic. <https://www.proquest.com/dissertations-theses/childhood-experiences-adult-attachment-styles/docview/2669184509/se-2>

- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, 61(2), 226–244. <https://doi.org/10.1037/0022-3514.61.2.226>
- Baschieri, A., Gordeev, V. S., Akuze, J., Kwesiga, D., Blencowe, H., Cousens, S., ... & Lawn, J. E. (2019). Every Newborn-INDEPTH” (EN-INDEPTH) study protocol for a randomised comparison of household survey modules for measuring stillbirths and neonatal deaths in five Health and Demographic Surveillance sites. *Journal of Global Health*, 9(1), 010901. <https://doi.org/10.7189/jogh.09.010901>
- Beaumont, J., Smith, D., Bailey, E., Barron, R., Tomlinson, E., & Heazell, A. E. P. (2025). Psychological Distress, Post-Traumatic Stress and Emotional Suppression in a Pregnancy After a Perinatal Death: A Longitudinal Survey. *BJOG : an international journal of obstetrics and gynaecology*, 132(10), 1469–1480. <https://doi.org/10.1111/1471-0528.18212>
- Bellhouse, C., Temple-Smith, M., Watson, S., & Bilardi, J. (2018). “The loss was traumatic. . . some healthcare providers added to that”: Women’s experiences of miscarriage. *Women and Birth*, 32(2), 137–146. <https://doi.org/10.1016/j.wombi.2018.06.006>
- Bifulco, A., Kwon, J., Jacobs, C., Moran, P. M., Bunn, A., & Beer, N. (2006). Adult attachment style as mediator between childhood neglect/abuse and adult depression and anxiety. *Social Psychiatry and Psychiatric Epidemiology*, 41(10), 796–805. <https://doi.org/10.1007/s00127-006-0101-z>
- Bodenmann, G. (2005). Dyadic coping and its significance for marital functioning. In T. A. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 33–49). American Psychological Association. <https://doi.org/10.1037/11031-002>
- Bodenmann, G. (2008). *Dyadisches Coping Inventar: Test manual* [Dyadic Coping Inventory: Testmanual]. Bern, Switzerland: Huber
- Bodenmann, G., Falconier, M. K., & Randal, A. K. (2019). Editorial: Dyadic coping. *Frontiers in Psychology*, 10, Article 1498. <https://doi.org/10.3389/fpsyg.2019.01498>
- Bodenmann, G., Randal, A. K., & Falconier, M. K. (2017). Coping as a couple: The systemic transactional model (SCM). In M. K. Falconier, A. K. Randall, & G. Bodenmann (Eds.), *Couples coping with stress: A intercultural perspective* (pp. 5–22). Routledge.
- Bowlby, J. (1978). Attachment theory and its therapeutic implications. *Adolescent Psychiatry*, 6, 5–33.

- Brandão, T., Matias, M., Ferreira, T., Vieira, J., Schulz, M. S., & Matos, P. M. (2020). Attachment, emotion regulation, and well-being in couples: Intrapersonal and interpersonal associations. *Journal of personality*, 88(4), 748–761. <https://doi.org/10.1111/jopy.12523>
- Bröning, S., & Wartberg, L. (2024). Attachment Orientations: Associations with Romantic Partners' Self-Regulation and Dyadic Coping. *Journal of sex & marital therapy*, 50(4), 512–526. <https://doi.org/10.1080/0092623X.2024.2322566>
- Cabrera, O. A., Hoge, C. W., Bliese, P. D., Castro, C. A., & Messer, S. C. (2007). Childhood adversity and combat as predictors of depression and post-traumatic stress in deployed troops. *American Journal of Preventive Medicine*, 33(2), 77–82. <https://doi.org/10.1016/j.amepre.2007.03.019>
- Caldwell, J., Meredith, P., Whittingham, K., & Ziviani, J. (2020). Shame and guilt in the postnatal period: a systematic review. *Journal of Reproductive and Infant Psychology*, 39(1), 67–85. <https://doi.org/10.1080/02646838.2020.1754372>
- Caldwell, J. M., Meredith, P. J., Whittingham, K., Ziviani, J., & Wilson, T. (2023). Women pregnant after previous perinatal loss: relationships between adult attachment, shame, and prenatal psychological outcomes. *Journal of Reproductive and Infant Psychology*, 42(4), 653–667. <https://doi.org/10.1080/02646838.2023.2180142>
- Cassidy, R. (2021). Estadísticas de mortalidad intrauterina, perinatal e infantil en España 1996-2020. *Umamanita*. Retrieved from: <https://www.umamanita.es/estadisticas-de-mortalidad-perinatal-e-infantil-en-espana/>
- Cena, L., Trainini, A., Tralli, N., Nodari, L. S., Iacona, E., Ronconi, L., & Testoni, I. (2022). The impact of the COVID-19 pandemic on perinatal loss experienced by the parental couple: Protocol for a mixed methods study. *JMIR Research Protocols*, 11(9), e38866. <https://doi.org/10.2196/38866>
- Centers for Disease Control and Prevention. (2021). *About the CDC-Kaiser ACE Study*. U.S. Department of Health & Human Services. Retrieved from <https://www.cdc.gov/violenceprevention/aces/about.html>
- Centers for Disease Control and Prevention. (2021). *Preventing adverse childhood experiences (ACEs): Leveraging the best available evidence*. U.S. Department of Health and Human Services. <https://stacks.cdc.gov/view/cdc/82316>
- Christiansen, D. M., Elklit, A., & Olf, M. (2013). Parents bereaved by infant death: PTSD symptoms up to 18 years after the loss. *General Hospital Psychiatry*, 35(6), 605–611. <https://doi.org/10.1016/j.genhosppsych.2013.06.006>

- Condon, J. T. (1993). The assessment of antenatal emotional attachment: Development of a questionnaire instrument. *British Journal of Medical Psychology*, 66(2), 167–183. <https://doi.org/10.1111/j.2044-8341.1993.tb01739.x>
- Cooke, J. E., Racine, N., Plamondon, A., Tough, S., & Madigan, S. (2019). Maternal adverse childhood experiences, attachment style, and mental health: Pathways of transmission to child behavior problems. *Child abuse & neglect*, 93, 27–37. <https://doi.org/10.1016/j.chiabu.2019.04.011>
- Cunen, N. B., McNeill, J., & Murray, K. (2013). A systematic review of midwife-led interventions to address postpartum post-traumatic stress. *Midwifery*, 30(2), 170–184. <https://doi.org/10.1016/j.midw.2013.09.003>
- Eng, S., & Woodside, A. G. (2012). Configural analysis of the drinking culture and tourism consumption: A complexity theory approach. *Journal of Business Research*, 65(5), 674–682. <https://doi.org/10.1016/j.jbusres.2011.09.008>
- Falconier, M. K., Jackson, J. B., Hilpert, P., & Bodenmann, G. (2015). Dyadic coping and relationship satisfaction: A meta-analysis. *Clinical Psychology Review*, 42, 28–46. <https://doi.org/10.1016/j.cpr.2015.07.002>
- Falconier, M. K., Nussbeck, F., & Bodenmann, G. (2012). Dyadic coping in Latino couples: validity of the Spanish version of the Dyadic Coping Inventory. *Anxiety Stress & Coping*, 26(4), 447–466. <https://doi.org/10.1080/10615806.2012.699045>
- Falconier, M. K., & Kuhn, R. (2019). Dyadic coping in couples: A conceptual integration and a review of the empirical literature. *Frontiers in Psychology*, 10, Article 571. <https://doi.org/10.3389/fpsyg.2019.00571>
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, 14(4), 245–258. [https://doi.org/10.1016/s0749-3797\(98\)00017-8](https://doi.org/10.1016/s0749-3797(98)00017-8)
- Fernández-Alcántara, M., Cruz-Quintana, F., Pérez-Marfil, N., & Robles-Ortega, H. (2012). Factores psicológicos implicados en el duelo perinatal. *Index De Enfermería*, 21(1–2), 48–52. <https://doi.org/10.4321/s1132-12962012000100011>
- Fernández-Fuertes, A. A., Orgaz, B., Fuertes, A., & Carcedo, R. (2011). La evaluación del apego romántico en adolescentes españoles: Validación de la versión reducida del *Experiences in Close Relationships-Revised* (ECR-R). *Anales de Psicología / Annals of Psychology*, 27(3), 827–833. <https://revistas.um.es/analesps/article/view/135561>

- Fernández-Sola, C., Camacho-Ávila, M., Hernández-Padilla, J. M., Fernández-Medina, I. M., Jiménez-López, F. R., Hernández-Sánchez, E., Conesa-Ferrer, M. B., & Granero-Molina, J. (2020). Impact of Perinatal Death on the Social and Family Context of the Parents. *International journal of environmental research and public health*, 17(10), 3421. <https://doi.org/10.3390/ijerph17103421>
- Finkelhor, D., Shattuck, A., Turner, H., & Hamby, S. (2015). A revised inventory of adverse childhood experiences. *Child Abuse & Neglect*, 48, 13–21. <https://doi.org/10.1016/j.chiabu.2015.07.011>
- Fitzgerald, M., & Gallus, K. L. (2025). Conceptualizing and measuring childhood adversity: A comprehensive critique of the adverse childhood experiences measure and offering a new conceptualization of childhood adversity. *The American journal of orthopsychiatry*, 95(3), 274–287. <https://doi.org/10.1037/ort0000785>
- Fonseca-Rondón, A. C., Fajardo-Guzmán, L. N., Gutiérrez-Royo, C. L., Mogollón-Pulido, V., Grau-González, I. A., & Ortega, L. (2023). Experiencias adversas y protectoras durante el desarrollo temprano: Un modelo transaccional de mecanismos psicobiológicos. *Revista de Psicopatología y Psicología Clínica*, 28(2), 151–165. <https://doi.org/10.5944/rppc.36344>
- Fraley, R. C. (2013). *Information on the Experiences in Close Relationships—Revised (ECR-R) adult attachment questionnaire* [Supplementary material]. University of Illinois at Urbana-Champaign. Retrieved March 4, 2025, from <https://labs.psychology.illinois.edu/~rcfraley/measures/ecrr.htm>
- Fraley, R. C., Heffernan, M. E., Vicary, A. M., & Brumbaugh, C. C. (2011). The experiences in close relationships—Relationship Structures Questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment*, 23(3), 615–625. <https://doi.org/10.1037/a0022898>
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, 78(2), 350–365. <https://doi.org/10.1037/0022-3514.78.2.350>
- Freedle, A., & Oliveira, E. (2024). Interpersonal and intrapersonal factors contributing to women's posttraumatic growth following perinatal loss. *Psychological trauma : theory, research, practice and policy*, 16(2), 193–200. <https://doi.org/10.1037/tra0001395>
- Freud, S. (1917). *Mourning and melancholia*. London, UK: Hogarth.

- GBD 2021 Global Stillbirths Collaborators (2024). Global, regional, and national stillbirths at 20 weeks' gestation or longer in 204 countries and territories, 1990-2021: findings from the Global Burden of Disease Study 2021. *Lancet (London, England)*, 404(10466), 1955–1988. [https://doi.org/10.1016/S0140-6736\(24\)01925-1](https://doi.org/10.1016/S0140-6736(24)01925-1)
- Gold, K. J., Sen, A., & Leon, I. (2017). Whose Fault Is It Anyway? Guilt, Blame, and Death Attribution by Mothers After Stillbirth or Infant Death. *Illness, Crisis & Loss*, 26(1), 40-57. <https://doi.org/10.1177/1054137317740800> (Original work published 2018)
- Hazan, C., & Shaver, P. R. (1987). Romantic Love Conceptualized as an Attachment Process. *Journal of Personality and Social Psychology*, 52, 511-524. <http://dx.doi.org/10.1037/0022-3514.52.3.511>
- Heazell, A. E. P., Siassakos, D., Blencowe, H., Burden, C., Bhutta, Z. A., Cacciatore, J., Dang, N., Das, J., Flenady, V., Gold, K. J., Mensah, O. K., Mllum, J., Nuzum, D., O'Donoghue, K., Redshaw, M., Rizvi, A., Roberts, T., Toyin Saraki, H. E., Storey, C., Wojcieszek, A. M., ... Lancet Ending Preventable Stillbirths investigator group (2016). Stillbirths: economic and psychosocial consequences. *Lancet (London, England)*, 387(10018), 604–616. [https://doi.org/10.1016/S0140-6736\(15\)00836-3](https://doi.org/10.1016/S0140-6736(15)00836-3)
- Herbert, D., Young, K., Pietrusińska, M., & MacBeth, A. (2022). The mental health impact of perinatal loss: A systematic review and meta-analysis. *Journal of affective disorders*, 297, 118–129. <https://doi.org/10.1016/j.jad.2021.10.026>
- Höltge, J., Rohner, S. L., Heim, E. M., Nater, U., & Thoma, M. V. (2023). Differential Pathways from Child Maltreatment Types to Insecure Adult Attachment Styles via Psychological and Social Resources: A Bayesian Network Analysis. *Journal of interpersonal violence*, 38(11-12), 7089–7114. <https://doi.org/10.1177/08862605221140039>
- Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., Jones, L., & Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. *The Lancet Public Health*, 2(8), e356–e366. [https://doi.org/10.1016/s2468-2667\(17\)30118-4](https://doi.org/10.1016/s2468-2667(17)30118-4)
- Kersting, A., & Wagner, B. (2012). Complicated grief after perinatal loss. *Dialogues in Clinical Neuroscience*, 14(2), 187–194. <https://doi.org/10.31887/dcns.2012.14.2/akersting>
- Kokou-Kpolou, C. K., Megalakaki, O., & Nieuviarts, N. (2018). Persistent depressive and grief symptoms for up to 10 years following perinatal loss: Involvement of negative

- cognitions. *Journal of Affective Disorders*, 241, 360–366. <https://doi.org/10.1016/j.jad.2018.08.048>
- Koukopoulos, A. E., Angeletti, G., Sani, G., Janiri, D., Manfredi, G., Kotzalidis, G. D., & De Chiara, L. (2019). Perinatal mixed affective state. *Psychiatric Clinics of North America*, 43(1), 113–126. <https://doi.org/10.1016/j.psc.2019.10.004>
- Kubany, E. S., Haynes, S. N., Abueg, F. R., Manke, F. P., Brennan, J. M., & Stahura, C. (1996). Development and validation of the Trauma-Related Guilt Inventory (TRGI). *Psychological Assessment*, 8(4), 428–444. <https://doi.org/10.1037/1040-3590.8.4.428>
- Kübler-Ross, E. (2006). *On death and dying* (2nd ed.). Mexico City, Mexico: Random House Mondadori, S.A. de C.V.
- Lacey, R. E., & Minnis, H. (2020). Practitioner Review: Twenty years of research with adverse childhood experience scores - Advantages, disadvantages and applications to practice. *Journal of child psychology and psychiatry, and allied disciplines*, 61(2), 116–130. <https://doi.org/10.1111/jcpp.13135>
- Landolt, S. A., Weitkamp, K., Roth, M., Sisson, N. M., & Bodenmann, G. (2023). Dyadic coping and mental health in couples: A systematic review. *Clinical Psychology Review*, 106, Article102344. <https://doi.org/10.1016/j.cpr.2023.102344>
- LaNoue, M. D., & Hass, R. W. (2025). Conceptualizing self-reported adverse childhood experiences: From epidemiologic exposure to psychometric latent variable. *Social science & medicine* (1982), 366, 117664. <https://doi.org/10.1016/j.socscimed.2024.117664>
- Ledermann, T., Bodenmann, G., Gagliardi, S., Charvoz, L., Verardi, S., Rossier, J., Bertoni, A., & Iafrate, R. (2010). Psychometrics of the Dyadic Coping Inventory in three language groups. *Swiss Journal of Psychology / Schweizerische Zeitschrift für Psychologie / Revue Suisse de Psychologie*, 69(4), 201–212.
- LeRoy, A. S., Gabert, T., Garcini, L., Murdock, K. W., Heijnen, C., & Fagundes, C. P. (2020). Attachment orientations and loss adjustment among bereaved spouses. *Psychoneuroendocrinology*, 112, 104401. <https://doi.org/10.1016/j.psyneuen.2019.104401>
- Li, S. N., Yang, L., Wang, Q. Y., Pan, S., Xiao, M. H., & Xie, J. (2024). Effectiveness of Nonpharmacological Interventions for Improving the Mental Health and Other Psychosocial Outcomes of Parents with Perinatal Loss: A Systematic Review and

- Meta-Analysis. *Depression and anxiety*, 2024, 2181544.
<https://doi.org/10.1155/2024/2181544>
- Mamun, A., Biswas, T., Scott, J., Sly, P. D., McIntyre, H. D., Thorpe, K., Boyle, F. M., Dekker, M. N., Doi, S., Mitchell, M., McNeil, K., Kothari, A., Hardiman, L., & Callaway, L. K. (2023). Adverse childhood experiences, the risk of pregnancy complications and adverse pregnancy outcomes: a systematic review and meta-analysis. *BMJ Open*, 13(8), e063826. <https://doi.org/10.1136/bmjopen-2022-063826>
- Marschall, D., Sanftner, J., & Tangney, J. P. (1994). *The State Shame and Guilt Scale*. Unpublished manuscript, George Mason University, Fairfax, VA.
- Mendoza, B. N., & Meza, G. O. (2022). Adaptación del Cuestionario de Experiencias Adversas en la infancia en muestras mexicanas. *Psicología Y Salud*, 32(2), 203–214.
- Mikulincer, M., & Shaver, P. R. (2018). *Attachment in adulthood: Structure, dynamics, and change (2nd edition)*. The Guilford Press.
- Molgora, S., Fenaroli, V., Acquati, C., De Donno, A., Baldini, M. P., & Saita, E. (2019). Examining the role of dyadic coping on the marital adjustment of couples undergoing Assisted Reproductive Technology (ART). *Frontiers in Psychology*, 10, Article 415. <https://doi.org/10.3389/fpsyg.2019.00415>
- Organización Mundial de la Salud. (2022). *Vigilancia y respuesta a la muerte materna y perinatal: material de apoyo para la implementación*. Organización Mundial de la Salud. <https://iris.who.int/handle/10665/364704>.
- Papapetrou, C., Panoulis, K., Mourouzis, I., & Kouzoupis, A. (2020). Pregnancy and the perinatal period: The impact of attachment theory. *Psychiatriki*, 31(3), 257–270. <https://doi.org/10.22365/jpsych.2020.313.257>
- Pappas, I. O., & Woodside, A. G. (2021). Fuzzy-set qualitative comparative analysis (fsQCA): Guidelines for research practice in information systems and marketing. *International Journal of Child & Adolescent Trauma*, 14(3), 301–319. <https://doi.org/10.1007/s40653-020-00332-8>
- Ragin, C. C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond*. University of Chicago Press.
- Reynolds, C. M., & Grün, D. (2023). Does time heal all wounds? An investigation of time, grief, and attitudes toward death. *Death Studies*, 48(10), 1035–1045. <https://doi.org/10.1080/07481187.2023.2297065>
- Salgado, H.O., Andreucci, C. B., Gomes, A. C. R., & Souza, J. P. (2021). The perinatal bereavement project: development and evaluation of supportive guidelines for families

- experiencing stillbirth and neonatal death in Southeast Brazil—a quasi-experimental before-and-after study. *Reproductive Health*, 18(1), Article 5. <https://doi.org/10.1186/s12978-020-01040-4>
- Scheidt, C., Hasenburg, A., Kunze, M., Waller, E., Pfeifer, R., Zimmermann, P., Hartmann, A., & Waller, N. (2012). Are individual differences of attachment predicting bereavement outcome after perinatal loss? A prospective cohort study. *Journal of Psychosomatic Research*, 73(5), 375–382. <https://doi.org/10.1016/j.jpsychores.2012.08.017>
- Shahab, M. K., de Ridder, J. A., Spinhoven, P., Penninx, B. W. J. H., Mook-Kanamori, D. O., & Elzinga, B. M. (2021). A tangled start: The link between childhood maltreatment, psychopathology, and relationships in adulthood. *Child abuse & neglect*, 121, 105228. <https://doi.org/10.1016/j.chiabu.2021.105228>
- Smid, G. E., Groen, S., de la Rie, S. M., Kooper, S., & Boelen, P. A. (2018). Toward Cultural Assessment of Grief and Grief-Related Psychopathology. *Psychiatric services (Washington, D.C.)*, 69(10), 1050–1052. <https://doi.org/10.1176/appi.ps.201700422>
- Smith, M. V., Gotman, N., & Yonkers, K. A. (2016). Early childhood adversity and pregnancy outcomes. *Maternal and Child Health Journal*, 20(4), 790–798. <https://doi.org/10.1007/s10995-015-1909-5>
- Smith, K. V., Skjerdingsstad, N., Ebrahimi, O. V., Maccallum, F., & Ehlers, A. (2025). Unraveling attachment - A network analysis of the cognitive pathways linking attachment and prolonged grief. *Psychological medicine*, 55, e276. <https://doi.org/10.1017/S0033291725101669>
- Stroebe, M., & Schut, H. (2010). The dual process model of coping with bereavement: A decade on. *Omega: Journal of Death and Dying*, 61(4), 273–289. <https://doi.org/10.2190/OM.61.4.b>
- Trombetta, T., Taccini, F., Mannarini, S., & Rollè, L. (2025). The impact of intimate partner violence on negative affect: The mediating role of adult attachment. *Journal of Aggression, Maltreatment & Trauma*, 34(3), 406–421. <https://doi.org/10.1080/10926771.2025.2468237>
- Watson, C. R., Eaton, A., Campbell, C. I., Alexeeff, S. E., Avalos, L. A., Ridout, K. K., & Young-Wolff, K. C. (2024). Association of Adverse Childhood Experiences and Resilience With Depression and Anxiety During Pregnancy. *Obstetrics and gynecology*, 143(5), 707–710. <https://doi.org/10.1097/AOG.0000000000005545>

- Wendołowska, A., Czyżowska, N., & Czyżowska, D. (2022). The Role of Attachment and Dyadic Coping in Shaping Relational Intimacy: Actor-Partner Interdependence Model. *International journal of environmental research and public health*, 19(23), 16211. <https://doi.org/10.3390/ijerph192316211>
- Widom, C. S., Czaja, S. J., Kozakowski, S. S., & Chauhan, P. (2018). Does adult attachment style mediate the relationship between childhood maltreatment and mental and physical health outcomes?. *Child abuse & neglect*, 76, 533–545. <https://doi.org/10.1016/j.chiabu.2017.05.002>
- Wojcik, K. D., Cox, D. W., & Kealy, D. (2019). Adverse childhood experiences and shame- and guilt-proneness: Examining the mediating roles of interpersonal problems in a community sample. *Child Abuse & Neglect*, 98, Article 104233. <https://doi.org/10.1016/j.chiabu.2019.104233>
- Worden, J. W. (2018). *Grief counseling and grief therapy: A handbook for the mental health practitioner*. New York, NY: Springer Publishing Company.
- Zhou, N., Smith, K. V., Stelzer, E., Maercker, A., Xi, J., & Killikelly, C. (2023). How the bereaved behave: a cross-cultural study of emotional display behaviours and rules. *Cognition & emotion*, 37(5), 1023–1039. <https://doi.org/10.1080/02699931.2023.2219046>
- Zumdahl, M. G., Saxsma, M. G., & Fraley, R. C. (2025). Adult attachment outcomes and the timing of adverse childhood experiences. *Personality and Social Psychology Bulletin*. Advance online publication. <https://doi.org/10.1177/01461672251336491>

Predictors of Perinatal Grief and Posttraumatic Growth in Women with Partners: The Role of Attachment, Adverse Childhood Experiences, Dyadic Coping, and Loss-Related Variables

Rebeca Santamaría-Gutiez¹ y Laura Lacomba-Trejo^{2*}

¹ Clinical Psychology and Health Unit Service, General Universitary Hospital of Valencia, Valencia, Spain

² Department of Developmental and Educational Psychology, Faculty of Psychology and Speech Therapy, Universitat de València, Valencia, Spain

* Correspondence: laura.lacomba @uv.es

Manuscrito no publicado

Manuscrito en proceso de revisión por pares en la revista *Journal of Marital and Family Therapy*.

Predictors of Perinatal Grief and Posttraumatic Growth in Women with Partners: The Role of Attachment, Adverse Childhood Experiences, Dyadic Coping, and Loss- Related Variables

Abstract

Perinatal loss (PL) can lead to diverse psychological outcomes, including elevated perinatal grief (PG) and posttraumatic growth (PTG), depending on individual vulnerabilities, relational resources, and loss characteristics. This study examined linear predictors and configurational pathways to PG and PTG in 85 women in Spain who experienced PL, assessing adverse childhood experiences (ACEs), attachment anxiety and avoidance, positive dyadic coping (DC), PG, and PTG. Hierarchical regression showed higher PG was associated with more recent loss, greater ACE exposure, higher attachment anxiety, and greater DC, explaining 26% of variance. The PTG model explained 6%, with DC as the only significant predictor. Qualitative comparative analysis revealed no single necessary factor; high PG arose from recent loss and attachment insecurity, while low PG related to lower adversity and attachment anxiety. PTG emerged through multiple pathways, mostly including DC. Findings highlight the combined role of vulnerabilities and relational resources, supporting tailored, couple-focused interventions after PL.

Keywords: perinatal grief, posttraumatic growth, attachment, adverse children experiences, dyadic coping.

Introduction

Perinatal loss (PL) is a profoundly stressful event with significant and enduring psychological consequences. PL encompasses a broad range of experiences, including spontaneous and induced abortions, ectopic pregnancies, selective reductions, twin deaths during gestation, fetal deaths in utero or intrapartum, premature or neonatal deaths, and relinquishment for adoption (Álvarez et al., 2012), occurring from pregnancy through the infant's first year (Fenstermacher & Hupcey, 2013). Beyond the death of an expected child, PL disrupts expectations, life projects, and meanings associated with parenthood, underscoring the complexity and heterogeneity of its psychological impact.

Perinatal grief (PG) presents distinctive features, frequently described as a disenfranchised or socially unrecognized grief, compounded by cultural silence and sometimes invalidating healthcare responses (Delgado et al., 2023). Parents may also experience secondary losses, including the anticipated parental role, aspects of personal identity, and core beliefs regarding safety and predictability (Côté-Arsenault & Denney-Koelsch, 2011), which can intensify and prolong emotional suffering (Cuenca, 2023).

Empirical research indicates that PL may trigger prolonged grief, depression, anxiety, and post-traumatic stress disorder (PTSD), while other individuals report positive psychological changes consistent with post-traumatic growth (PTG) (Eisma & Stroebe, 2021; Quenby et al., 2021). Although PL entails profound sorrow and the grieving of a desired child, it is conceptually distinct from prolonged or complicated grief, which is characterized by intense and persistent distress that exceeds culturally expected durations and significantly interferes with daily functioning (APA, 2022). Importantly, considerable variability exists in psychological adaptation following PL: while some

individuals experience persistent distress, others gradually integrate the loss, showing reduced suffering and, in some cases, positive psychological transformations (Mørk et al., 2023).

From a risk–resilience or diathesis–stress perspective, PL can be conceptualized as a major stressor whose impact depends on the interaction between pre-existing vulnerabilities, individual and relational resources, and contextual factors (Kishimoto et al., 2021). Within this framework, adverse outcomes such as prolonged PG and positive outcomes such as PTG may coexist as part of a complex adaptation process. Contemporary perspectives on grief emphasize the diversity of grief responses, cautioning against pathologizing suffering, and highlight resilience as a common outcome, with many individuals achieving functional adaptation over time (Bonanno et al., 2011).

PTG was conceptualized by Tedeschi and Calhoun (1995, 2004) to describe positive psychological changes following traumatic or highly challenging events, including enhanced personal strength, deeper interpersonal relationships, renewed appreciation of life, spiritual development, and perception of new life opportunities. Growth and distress are not mutually exclusive but can co-occur (Kadri et al., 2022). In the context of PL, studies have reported moderate levels of PTG, particularly in appreciation of life, personal strength, and interpersonal relationships (Krosch & Shakespeare-Finch, 2017), though research remains limited, with ongoing debates about conceptualization and measurement, especially perceived versus actual change (Jayawickreme et al., 2020).

Within a vulnerability–resources framework, early life experiences represent key distal vulnerability factors. Adverse childhood experiences (ACEs), including abuse, neglect, exposure to violence, or parental psychopathology, have been linked to long-

term alterations in emotional development, stress regulation, and mental health (Felitti et al., 1998). Cumulative risk models suggest that a higher number of ACEs increases psychological vulnerability, whereas critical period models emphasize the heightened sensitivity during key developmental stages (Fonseca-Rondón et al., 2023). In the perinatal context, greater ACEs exposure has been linked to pregnancy complications, reduced psychological coping capacities during gestation and following PL, and increased risk of stress, anxiety, depression, and complicated grief (Mamun et al., 2023; Smith et al., 2016).

These ACEs may shape adult attachment patterns and influence emotional regulation and support-seeking following PL. Attachment theory offers an integrative framework for understanding these differences: humans have an innate need for secure emotional bonds, and the loss of an attachment figure or anticipated bond can strongly activate the attachment system (Bowlby, 1980). Secure attachment has been associated with greater emotional regulation capacity, effective support-seeking, and adaptive grief processing, functioning as a protective factor against complicated grief (Levi-Belz & Lev-Ari, 2019). In contrast, insecure attachment styles have been linked to poorer grief outcomes. Anxious attachment is associated with rumination, emotional hypervigilance, and difficulties integrating loss, whereas avoidant attachment is related to emotional inhibition, withdrawal, and high levels of unexpressed grief. Disorganized attachment has been associated with symptoms of prolonged grief, possibly due to difficulties in constructing a coherent narrative of the loss (Neimeyer & Burke, 2017; Sekowski & Prigerson, 2022). These patterns may partially mediate the impact of distal vulnerabilities, such as ACEs, on grief adaptation.

Adaptation to PL also occurs within a relational context, where dyadic coping (DC) has emerged as a particularly relevant construct. DC reflects partners' joint efforts to

manage stress affecting one or both individuals, maintaining well-being and relationship functioning (Bodenmann, 2005; Bodenmann et al., 2019). It involves recognizing stress as a shared experience, preceiving the partner as a central support source, and coordinating emotional regulation and problem-solving strategies (Landolt et al., 2023). These strategies may be positive—such as open communication, emotional support, collaboration, and validation—or negative, characterized by controlling behaviors, hostility, overprotection, or minimization of distress (Falconier et al., 2015). Positive DC plays a protective role following perinatal loss, being associated with lower levels of anxiety, depression, PTSD symptoms, and a reduced likelihood of prolonged grief while reducing emotional isolation, strengthening couple cohesion, and facilitating shared meaning-making processes that foster PTG (Albuquerque et al., 2018; Freedle & Oliveira, 2024).

Finally, contextual variables such as the time since the loss and the number of PL experienced may moderate adaptation, influencing both the intensity and trajectory of PG and PTG (Ryninks et al., 2022).

Overall, PG is shaped by individual, relational, and experiential factors. Yet, research integrating adult attachment, DC, and ACEs as joint predictors of PG and PTG remains limited. An integrated framework may enhance understanding of risk and resilience mechanisms involved in adaptation following PL and guide targeted preventive and therapeutic interventions.

Objectives and hypotheses

The primary objective was to examine how individual vulnerabilities, relational resources, and loss-related contextual factors jointly shape PG and PTG following PL in women. To capture both linear and complex patterns of adaptation, the study combined correlational analyses, hierarchical regression models (HRM), and a configurational

approach using fuzzy-set Qualitative Comparative Analysis (fsQCA). Specifically, the study aimed to:

(a) examine basic associations among ACEs, attachment dimensions, DC, and outcomes of PG and PTG; (b) identify the relative contribution of individual, relational, and contextual factors to PG and PTG using HRM; and (c) identify multiple configurations of vulnerability and resource factors associated with high and low levels of PG and PTG using fsQCA.

First, based on prior research, it was expected that higher levels of vulnerability factors (e.g., ACEs and insecure attachment) would be associated with higher PG, whereas relational resources (particularly DC) would be associated with higher PTG. Second, from a configurational perspective, it was expected that no single condition would be necessary or sufficient to explain adaptation outcomes following PL. Rather, multiple combinations of individual, relational, and contextual factors were expected to characterize distinct pathways to PG and PTG.

Method

Participants

The final sample comprised 85 Spanish women who had experienced at least one PL, aged between 27 and 59 years ($M = 38.26$, $SD = 5.55$). Most identified as heterosexual (82.35%), were married or cohabiting (90.60%), and had children (64.70%). The most common household size was two people (41.00%), and 59.00% lived with a partner and children. Most participants completed higher education (84.70%), had a permanent employment (38.60%), and reported an annual income between €20,001 and €30,000 (31.30%).

Clinically, 20% of participants were pregnant at the time of the study. Most had experienced one PL (70.60%), while 20.00% reported two losses. The most common

time since the most recent loss was more than three years (34.10%), followed by one to two years (18.80%). Pregnancy loss was the most frequently reported type of loss (84.70%), with most losses occurring during the first trimester (94.40%). The majority had no live children prior to their most recent loss (68.20%). Following the loss, 16.90% reported mental health problems; 42.90% were currently receiving psychological or psychiatric treatment, and 50% had received treatment in the past.

Inclusion criteria were: women who (a) had experienced PL, (b) were of legal age, (c) resided in Spain, (d) had been the pregnant person, (e) provided informed consent, and (f) completed all questionnaires. Of the initial respondents, 94 were excluded for not meeting the PL criterion and 75 for incomplete responses.

Instruments

An ad hoc online questionnaire was created to gather a set of variables, including sociodemographic information (e.g., age, sex assigned at birth, gender identity, place of residence, sexual orientation, marital status, number of children, household composition, educational level, employment status, and income); relational characteristics (e.g., having a partner in the past year, partner's gender identity, and relationship duration); and clinical data related to obstetric and reproductive history (e.g., current pregnancy status, type of pregnancy, frequency of pregnancies and PL, time elapsed since the most recent loss, gestational age at loss, type and cause of the loss, and the presence of living children before and/or after the loss).

Adverse Childhood Experiences Questionnaire (ACEQ; WHO, 2012) assesses exposure to ten different types of adversity using dichotomous responses (yes/no) in adults; scores above 3 indicate increased health risk (Felitti et al., 1998). The questionnaire is organized into two domains: personal adversity, which includes

experiences of abuse and neglect (e.g. physical, emotional, and sexual abuse), and family adversity, related to dysfunction in the family environment (e.g. parental separation, domestic violence, substance abuse in the household). The Spanish adaptation has shown moderate reliability (total $\alpha = .68$; abuse $\alpha = .70$; neglect $\alpha = .45$; Mendoza & Meza, 2022). In the present study, Cronbach's alpha coefficients were .62 for the total score, .63 for the abuse dimension, and .43 for the neglect dimension. The low internal consistency can be explained by the fact that its items assess heterogeneous and non-interchangeable exposures, each representing a different form of childhood adversity. The instrument is designed as a cumulative index, where the sum of adverse experiences reflects the total risk, rather than as a traditional psychometric scale that measures a single latent construct. Therefore, a high correlation between items or a unidimensional structure is not expected, and the use of Cronbach's alpha as an indicator of reliability is not appropriate in this context (Fitzgerald & Gallus, 2025; Lacey & Minnis, 2020; LaNoue & Hass, 2025).

Spanish version of the Experiences in Close Relationships–Revised scale (ECR-R; Fraley et al., 2011; Fernández-Fuertes et al., 2011) was used to assess insecure romantic attachment. It consists of 18 self-report items rated on a 7-point Likert scale and includes two factors: attachment anxiety and attachment avoidance. Factor scores are calculated by averaging the corresponding items. The Spanish validation showed adequate internal consistency ($\alpha = .80$ for anxiety and $\alpha = .86$ for avoidance). In the present study, reliability was acceptable to high, with Cronbach's $\alpha = .83$ for anxiety, .78 for avoidance, and .94 for the total score.

Dyadic Coping Inventory (DCI; Bodenmann, 2008; Ledermann et al., 2010) assesses how couples cope with stress at a dyadic level. The Spanish adaptation (Falconier et al., 2012) includes 37 Likert-type items and evaluates several domains:

stress communication, supportive coping, delegated coping, negative coping, joint coping, and coping evaluation. Negatively worded items are reverse scored. Total scores are interpreted as below average (<111), average (111–145), or above average (>145) (Bodenmann, 2008). The Spanish version showed excellent internal consistency for the total scale ($\alpha = .94$) and acceptable to high reliability across subscales ($\alpha = .64-.92$). In the present study, the total scale demonstrated high reliability (Cronbach's $\alpha = .94$).

Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996) is a self-report measure of positive psychological change following traumatic events. It comprises 21 items rated on a 6-point Likert scale, with higher scores indicating greater PTG. The instrument assesses five domains: Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation of Life. The Spanish adaptation demonstrated excellent internal consistency for the total scale ($\alpha = .95$) and acceptable to high reliability across subscales ($\alpha = .75-.90$; Quezada-Berumen & González-Ramírez, 2020). In the present study, reliability was high (Cronbach's $\alpha = .94$).

Perinatal Grief Scale (PGS; Toedter et al., 1988) was used to assess the intensity of grief following perinatal loss and to identify women at risk of complicated grief. The Spanish version (Paramio-Cuevas, 2016) was applied, consisting of 16 items rated on a 5-point Likert scale and a two-dimensional structure that allows calculation of a total score. Scores above 49 indicate potential complicated grief. The Spanish adaptation demonstrated adequate reliability, with an overall internal consistency of .88. In our study, Cronbach's alpha was .83.

Procedure

This study is part of a broader research project approved by the Ethics Committee of the XXXXX (XXXXX) and was conducted in accordance with the principles of the Declaration of Helsinki. Prior to dissemination, expert consultations and feedback

from the PG association XXXX were used to ensure sensitivity to participants lived experiences.

The final online survey was disseminated via personal networks, social media, and relevant national and provincial organizations in Spain, as well as through healthcare professionals. Participation was voluntary and anonymous, electronic informed consent was obtained, and data were collected using the XXXXX Limesurvey platform between October 2024 and January 2025.

Data Analysis

Data was analyzed using SPSS (Version 29.0.2.0; IBM Corporation, Armonk, NY, USA). Descriptive analyses (means, standard deviations, and ranges) and frequency analyses were conducted. Hypotheses were tested using Pearson's bivariate correlations, independent samples *t*-tests with effect sizes calculated using Cohen's *d*, and stepwise multiple linear regression. Finally, fsQCA (v. 4.1) was applied to identify combinations of conditions associated with high or low levels of PG and PTG, assessing necessary and sufficient conditions according to consistency criteria proposed in the literature (Eng & Woodside, 2012; Woodside, 2013).

Results

Descriptive analysis: sociodemographic, relational, and clinical variables

The sample consisted of 85 women with a mean age of 38.26 years (*SD* = 5.55). Most participants identified as heterosexual (82.4%), had male partners (94.1%; 5.88% female), and were married or in a stable relationship (90.6%). Approximately two thirds had children (64.7%), and 31.8% had children prior to their most recent perinatal loss (PL). The majority lived with their partner and/or children (89.0%). Regarding education, most had completed higher education (84.7%), and the most common

employment status was permanent employment (38.6%). Annual income most frequently ranged between €20,001 and €30,000 (31.3%).

With respect to mental health, 16.9% of participants reported a diagnosed mental disorder, and half of these had received treatment in the past. In terms of reproductive history, most participants had experienced a single PL (70.6%), primarily pregnancy loss (84.7%), with the majority occurring during the first trimester (94.4%). Most participants were not pregnant at the time of assessment (80.0%).

Participants reported a low number of ACEs ($M = 1.81$, $SD = 1.75$). Regarding romantic attachment, mean scores were relatively low for both attachment anxiety ($M = 27.84$, $SD = 11.36$) and attachment avoidance ($M = 17.73$, $SD = 9.21$), and were close to the established cut-off points of the scale. Based on the median split method proposed by Fraley et al. (2000, 2013), the predominant attachment style was secure (35.8%), followed by fearful (29.6%), preoccupied (23.5%), and dismissing/avoidant (11.1%).

The mean score for DC was moderately high ($M = 142.03$, $SD = 18.39$). Using the exploratory cut-off points proposed by Bodenmann et al. (2008), 8.6% of participants scored below the average range, 59.0% within the normative range, and 32.1% above average. For PTGI, the mean score was 41.44 ($SD = 19.93$), with most participants reporting slight change (82.6%), followed by moderate (15.1%) and significant change (2.3%) after traumatic events. Finally, the mean score on the PGS was 37.73 ($SD = 9.56$), with 90.6% of participants classified as experiencing active grief and 3.5% as possible complicated grief.

- INSERT TABLE 1-

Correlational analysis

Bivariate correlation analyses revealed a coherent pattern of associations among loss-related, developmental, attachment, and relational variables. A higher number of

losses was associated with higher ACEs, and higher ACEs were, in turn, related to a longer time since the loss. ACEs were also positively associated with attachment anxiety, attachment avoidance, and higher levels of PG.

Regarding attachment dimensions, higher attachment anxiety was associated with higher PG and greater attachment avoidance. Attachment avoidance showed a negative association with DC, indicating that higher avoidance was linked to lower levels of DC within the couple. In contrast, DC was positively associated with PTG, suggesting that greater relational coping resources were linked to higher levels of growth following the loss. Finally, fewer losses, shorter time since the loss, and lower attachment anxiety were associated with higher levels of DC, highlighting the combined influence of loss-related and attachment-related factors on relational adjustment (Table 2).

- INSERT TABLE 2-

Linear regression analysis

Hierarchical stepwise regression analyses were conducted to examine the contribution of loss-related, individual, and relational variables to PG and PTG. In the first step, time since the loss and frequency of losses were entered. In the second step, ACEs and attachment anxiety and attachment avoidance were included. In the final step, PDC was added.

For PG, the final model explained 26% of the variance. In this model, shorter time since the loss emerged as a significant negative predictor, whereas higher levels of ACEs, greater attachment anxiety, and higher PDC were associated with higher levels of PG.

In contrast, the regression model for PTG accounted for a more modest proportion of variance. The final model explained 6% of the variance, with PDC being

the only significant predictor in the last step. None of the loss-related or attachment variables contributed significantly to PTG once PDC was included in the model.

- INSERT TABLE 4-

Fuzzy set qualitative comparative analysis (fsQCA)

Necessary analysis

Consistent with previous research, necessary condition analyses were conducted (Table 5 & 6). The results indicated that no single condition was necessary for either high or low levels of PG or PTG following PL, as all consistency values remained below the established threshold of 0.90.

- INSERT TABLE 5 -

Sufficiency analysis

The fsQCA identified seven sufficient configurations associated with high levels of PG, jointly explaining 74% of the cases. The most relevant configuration accounted for 44% of the cases and was characterized by a short time since the loss combined with high attachment anxiety. The second configuration explained 37% of the cases and involved low ACEs, low PDC, and high attachment anxiety. A third pathway covered 33% of the cases, combining high ACEs, attachment avoidance, and low PDC. The remaining configurations contributed to the overall solution by illustrating additional, less frequent combinations of conditions leading to elevated PG.

Regarding low levels of PG, five sufficient configurations were identified, explaining 72% of the cases. The most prominent pathway accounted for 59% and was defined by the co-occurrence of low ACEs and low attachment anxiety. The second configuration explained 38% of the cases and combined a low frequency of losses, low ACEs, and low attachment avoidance. A third pathway, explaining 47% of the cases,

involved low frequency of losses, low ACEs, and high PDC, underscoring the protective role of DC resources.

Several sufficient configurations were also found for high PTG following the loss, jointly explaining 62% of the cases. The most influential configuration accounted for 39% and combined high ACEs, high PDC, and low attachment avoidance. A second pathway explained 27% of the cases and was characterized by a short time since the loss, high ACEs, and low avoidance. The third configuration, explaining 26% of the cases, involved a low frequency of losses, high ACEs, and low attachment anxiety, suggesting that PTG may emerge even in the context of early adversity when attachment-related vulnerabilities are limited.

Finally, six configurations were identified as sufficient for low levels of PTG, explaining 52% of the cases. The most relevant pathway accounted for 33% of the cases and was defined by a low frequency of losses combined with high attachment anxiety and high attachment avoidance. The second configuration explained 29% of the cases and involved low frequency of losses, low ACEs, low PDC, and high attachment anxiety. A third pathway accounted for 27% of the cases and was characterized by a short time since the loss, low ACEs, low PDC, and high attachment avoidance, highlighting the joint influence of attachment-related and relational factors on reduced growth outcomes.

- INSERT TABLE 6 -

Discussion

This study examined the influence of factors related to PL (frequency of losses and time elapsed since the loss), ACEs, attachment dimensions, and DC on PG and PTG. Overall, the findings underscore the complexity and heterogeneity of psychological adaptation following PL and highlight the central role of relational processes in both grief and growth trajectories.

Correlational analyses indicated that a higher frequency of losses and greater ACEs exposure were associated with more intense PG and more insecure attachment patterns. Attachment anxiety emerged as a key vulnerability factor, consistently linked to higher PG and lower DC, inline with previous research (Maccallum & Bryant, 2018; Scheidt et al., 2012). From an attachment-based perspective, individuals with anxious attachment tend to experience heightened emotional distress and difficulties in emotion regulation due to hyperactivation of the attachment system, which may amplify grief responses (Lenzo et al., 2025; Smith et al., 2025). Avoidant attachment was negatively associated with DC, suggesting that deactivating strategies may constrain access to relational coping resources, consistent with evidence linking avoidant attachment to emotional inhibition and reduced support-seeking in the context of loss (LeRoy et al., 2019).

Regression analyses showed that PG was primarily explained by time elapsed since the loss, ACEs, attachment anxiety, and DC. The association between temporal proximity and higher PG aligns with longitudinal evidence of normative declines in grief intensity over time (Mørk et al., 2023; Tseng et al., 2017). The positive association between DC and PG may appear counterintuitive; however, this result likely reflects greater relational engagement in response to acute distress during early stages of grief. Couples experiencing more intense grief may mobilize DC as a reactive coping strategy, rather than DC serving as an immediate buffer against suffering (Tseng et al., 2017). Given the cross-sectional design, causal direction cannot be established, and longitudinal research is needed to clarify whether DC precedes or follows changes in grief intensity.

In contrast to PG, linear models explained a relatively small proportion of variance in PTG, suggesting that growth-related outcomes may depend on processes not fully captured in the present analyses, such as deliberate rumination, challenges to core

beliefs, meaning-making, and existential or spiritual processes in the development of PTG following PL (Álvarez-Calle et al., 2023; Freedle et al., 2021; Ryninks et al., 2022). Nevertheless, DC emerged as the only significant predictor of PTG, supporting interpersonal models that emphasize relational resources and shared meaning-making (Albuquerque et al., 2018; Freedle & Oliveira, 2024). Correlational patterns further suggested that DC may mediate the association between attachment security and PTG.

The fsQCA analyses revealed multiple configurations associated with high and low levels of PG and PTG, reinforcing the notion of equifinality and multifinality in adaptation to PL. High PG was characterized by configurations combining recent loss and high attachment anxiety, as well as profiles marked by high ACEs, attachment avoidance, and low DC, underscoring anxious attachment as a cross-cutting vulnerability factor across diverse grief contexts (Maccallum & Bryant, 2018). A particularly vulnerable subgroup combined high ACEs, attachment avoidance, and low positive DC, indicating a convergence of early adversity and relational disengagement (Mackle et al., 2023; McDonnell & Valentino, 2016). In contrast, low PG was associated with low ACEs, low attachment anxiety, and the presence of DC. Low PG, in contrast, was associated with configurations characterized by low ACEs, low attachment anxiety, and the presence of DC, underscoring the protective role of relational resources in mitigating grief intensity.

High PTG levels were primarily associated with configurations combining high ACEs, low attachment avoidance, and high DC. The most prominent pathway suggests that early adversity may be transformed into growth when relational security and collaborative coping are present, supporting models that conceptualize PTG as a fundamentally relational process (Albuquerque et al., 2018; Freedle & Oliveira, 2024).

Time elapsed since the loss functioned differently across analytic approaches, appearing as a predictor of PG in regression models but as a flexible condition in PTG

configurations, highlighting the non-linear and individualized nature of adaptation (Mørk et al., 2023; Tseng et al., 2017).

The dual role of ACEs—as both a risk factor for intense grief and a potential catalyst for growth when combined with protective relational resources reflects the paradoxical effects of adversity documented in resilience research. Moderate adversity, in the presence of supportive relationships, may foster psychological flexibility and meaning-making, whereas overwhelming adversity in the absence of such resources may exacerbate vulnerability (Osofsky et al., 2021).

The differential predictors of PG and PTG support dual-process and integrative models of grief, which posit that loss-oriented and restoration-oriented processes may co-occur (Álvarez-Calle et al., 2023). While PG appears to be driven primarily by vulnerability factors (e.g., ACEs, attachment anxiety, temporal proximity), PTG seems to be facilitated by relational resources, particularly secure attachment and effective DC. Secure attachment emerged as a transdiagnostic protective factor, associated with both reduced grief intensity and greater growth potential through enhanced emotion regulation, support-seeking, and adaptive cognitive processing (Freedle & Oliveira, 2024; Smith et al., 2025).

Finally, the absence of necessary conditions in the fsQCA analyses reinforces a non-deterministic view of adaptation to PL, emphasizing multiple pathways and the need for individualized assessments and tailored interventions (Scheidt et al., 2012). For instance, individuals characterized by high attachment anxiety and low DC may benefit from couple-focused interventions aimed at improving communication and collaborative coping, whereas those with avoidant attachment patterns may require individual approaches targeting emotional expression and relational engagement (LeRoy et al., 2019; Albuquerque et al., 2018).

Limitations

Despite the study's strengths, several limitations should be acknowledged. First, the cross-sectional design precludes causal inferences regarding the relationships among perinatal PG, PTG, attachment, DC, and ACEs. Consequently, the temporal direction of the associations identified through regression and fsQCA analyses cannot be established.

Second, reliance on retrospective self-report measures may have introduced biases, including recall bias, social desirability, and the influence of current psychological functioning. Prior research has documented limited concordance between prospective and retrospective ACE assessments, as traumatic experiences may be under- or over-reported due to memory-related processes or mood-congruent biases (Baldwin et al., 2019; Daníelsdóttir et al., 2024). Nevertheless, retrospective ACE measures have demonstrated acceptable reliability and remain widely used in clinical and epidemiological research (Pinto et al., 2014).

ACEs instruments also present methodological limitations, including restricted item coverage, binary response formats, and limited psychometric validation (McLennan et al., 2020). The low internal consistency observed for some ACE subscales likely reflects the heterogeneous and low-base-rate nature of certain experiences rather than measurement error. Accordingly, ACEs were interpreted as a cumulative exposure index rather than a unidimensional scale, consistent with established recommendations (Felitti et al., 1998; Bollen & Lennox, 1991).

Although the sample size ($n = 85$) is comparable to that of previous studies in the Spanish context (Camacho-Dávila et al., 2019; Delgado et al., 2023), the relatively small and hard-to-reach sample may have limited statistical power and increased heterogeneity. The sample was predominantly composed of cisgender gestational women, restricting generalizability to non-gestational partners, men, and gender-diverse

individuals. Moreover, voluntary and involuntary losses were not examined separately, and couple-level characteristics were not systematically assessed, despite their potential relevance for DC and grief outcomes.

Future Research

Future research should prioritize prospective longitudinal designs assessing individuals at multiple time points following perinatal loss, from the immediate aftermath to several years post-loss. Such designs would help identify distinct trajectories of PG and PTG, as well as critical periods of vulnerability and recovery. Ethical and practical challenges inherent to longitudinal research in sensitive contexts should be carefully addressed.

Incorporating multi-method and multi-informant approaches—including clinical interviews, qualitative methods, and partner reports—would provide a more comprehensive understanding of relational processes in grief and growth. Future studies should examine key mediating mechanisms highlighted in the PTG literature, such as deliberate versus intrusive rumination, challenges to core beliefs, meaning-making, continuing bonds, and disclosure dynamics (Álvarez-Calle et al., 2023; Freedle et al., 2021; Ryninks et al., 2022).

There is also a need to refine measurement of ACEs by incorporating contemporary socio-environmental adversities, severity, chronicity, and cultural sensitivity (Slack et al., 2026). Given the central role of DC identified in both regression and configurational analyses, future research should explore how different forms and timing of DC shape grief and growth outcomes.

Expanding samples to include diverse cultural contexts, family structures, and both members of the dyad would further enhance generalizability and clinical applicability.

Practical Implications

Clinical care following perinatal loss should include comprehensive assessments addressing loss-related characteristics, attachment patterns, childhood adversity, relationship quality, and dyadic coping resources. Such evaluations may facilitate early identification of individuals at risk for complicated grief and inform personalized intervention planning. Interventions should aim to strengthen adaptive coping strategies, foster meaning-making, and enhance couple communication (Baldwin et al., 2019; Kokou-Kpolou et al., 2018; McLennan et al., 2020). Healthcare professionals may benefit from specialized training to recognize both vulnerability and the potential for growth, particularly among individuals with insecure attachment patterns and elevated ACE exposure.

The findings underscore the importance of couple-centered interventions that promote positive dyadic coping, emotional communication, and mutual validation, supporting grief processing and shared meaning-making. Posttraumatic growth should be conceptualized as one of several possible adaptation trajectories following loss, rather than a normative or expected outcome.

Conclusion

Psychological responses following PL are heterogeneous and shaped by the interaction of ACEs, attachment patterns, and DC processes. While attachment anxiety and early adversity are associated with more intense PG, DC emerges as a key relational resource facilitating PTG. Importantly, PG and PTG may coexist, reflecting distinct but interconnected adaptation processes. The identification of multiple configurational pathways highlights that no single factor determines outcomes following PL, reinforcing the value of individualized, attachment- and relationship-focused clinical approaches.

References

- Albuquerque, S., Narciso, I., & Pereira, M. (2018). Posttraumatic growth in bereaved parents: A multidimensional model of associated factors. *Psychological trauma: theory, research, practice and policy*, 10(2), 199–207. <https://doi.org/10.1037/tra0000305>
- Álvarez, M., Claramunt, M. A., Carrascosa, L. G., & Silvente, C. (2012). *Las voces olvidadas: Pérdidas gestacionales tempranas*. Obstore.
- Álvarez-Calle, M., & Chaves, C. (2023). Posttraumatic growth after perinatal loss: A systematic review. *Midwifery*, 121, 103651. <https://doi.org/10.1016/j.midw.2023.103651>
- American Psychiatric Association [APA]. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). American Psychiatric Publishing.
- Baldwin, J. R., Reuben, A., Newbury, J. B., & Danese, A. (2019). Agreement Between Prospective and Retrospective Measures of Childhood Maltreatment: A Systematic Review and Meta-analysis. *JAMA psychiatry*, 76(6), 584–593. <https://doi.org/10.1001/jamapsychiatry.2019.0097>
- Bodenmann, G. (2005). Dyadic coping and its significance for marital functioning. In T. A. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 33–49). American Psychological Association. <https://doi.org/10.1037/11031-002>
- Bodenmann, G. (2008). *Dyadisches Coping Inventar: Test manual* [Dyadic Coping Inventory: Testmanual]. Bern, Switzerland: Huber
- Bodenmann, G., Falconier, M.K., & Randal, A.K. (2019). Editorial: Dyadic Coping. *Frontiers in Psychology*, 10, 1498. <https://doi.org/10.3389/fpsyg.2019.01498>

- Bollen, K., & Lennox, R. (1991). Conventional wisdom on measurement: A structural equation perspective. *Psychological Bulletin*, 110(2), 305–314. <https://doi.org/10.1037/0033-2909.110.2.305>
- Bonanno, G.A., Westphal, M., & Mancini, A.D. (2011). Resilience to loss and potential trauma. *Annual review of clinical psychology*, 7, 511-35.
- Bowlby, J. (1980). *Loss (Attachment and Loss, Vol. III)*. Barcelona, Spain: Paidós Ibérica.
- Camacho-Ávila, M., Fernández-Sola, C., Jiménez-López, F. R., Granero-Molina, J., Fernández-Medina, I. M., Martínez-Artero, L., & Hernández-Padilla, J. M. (2019). Experience of parents who have suffered a perinatal death in two Spanish hospitals: a qualitative study. *BMC pregnancy and childbirth*, 19(1), 512. <https://doi.org/10.1186/s12884-019-2666-z>
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Lawrence Erlbaum Associates.
- Côté-Arsenault, D., & Denney-Koelsch, E. (2011). "My baby is a person": parents' experiences with life-threatening fetal diagnosis. *Journal of palliative medicine*, 14(12), 1302–1308. <https://doi.org/10.1089/jpm.2011.0165>
- Cuenca D. (2023). Pregnancy loss: Consequences for mental health. *Frontiers in global women's health*, 3, 1032212. <https://doi.org/10.3389/fgwh.2022.1032212>
- Daníelsdóttir, H. B., Aspelund, T., Shen, Q., Halldorsdottir, T., Jakobsdóttir, J., Song, H., Lu, D., Kuja-Halkola, R., Larsson, H., Fall, K., Magnusson, P. K. E., Fang, F., Bergstedt, J., & Valdimarsdóttir, U. A. (2024). Adverse Childhood Experiences and Adult Mental Health Outcomes. *JAMA psychiatry*, 81(6), 586–594. <https://doi.org/10.1001/jamapsychiatry.2024.0039>

- Delgado, L., Cobo, J., Giménez, C., Fucho-Rius, G. F., Sammut, S., Martí, L., Lesmes, C., Puig, S., Obregón, N., Canet, Y., & Palao, D. J. (2023). Initial impact of perinatal loss on mothers and their partners. *International Journal of Environmental Research and Public Health*, 20(2), 1304. <https://doi.org/10.3390/ijerph20021304>
- Eisma, M. C., & Stroebe, M. S. (2021). Emotion regulatory strategies in complicated grief: A Systematic Review. *Behavior Therapy*, 52(1), 234–249. <https://doi.org/10.1016/j.beth.2020.04.004>
- Eng, S., & Woodside, A. G. (2012). Configural analysis of the drinking culture and tourism consumption: A complexity theory approach. *Journal of Business Research*, 65(5), 674–682. <https://doi.org/10.1016/j.jbusres.2011.09.008>
- Falconier, M. K., Jackson, J. B., Hilpert, P., & Bodenmann, G. (2015). Dyadic coping and relationship satisfaction: A meta-analysis. *Clinical psychology review*, 42, 28–46.
- Falconier, M. K., Nussbeck, F., & Bodenmann, G. (2012). Dyadic coping in Latino couples: validity of the Spanish version of the Dyadic Coping Inventory. *Anxiety Stress & Coping*, 26(4), 447–466. <https://doi.org/10.1080/10615806.2012.699045>
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, 14(4), 245–258. [https://doi.org/10.1016/s0749-3797\(98\)00017-8](https://doi.org/10.1016/s0749-3797(98)00017-8)

- Fenstermacher, K., & Hupcey, J. E. (2013). Perinatal bereavement: A principle-based concept analysis. *Journal of Advanced Nursing*, 69(11), 2389–2400. <https://doi.org/10.1111/jan.12119>
- Fernández-Fuertes, A. A., Orgaz, B., Fuertes, A., & Carcedo, R. (2011). La evaluación del apego romántico en adolescentes españoles: Validación de la versión reducida del *Experiences in Close Relationships-Revised* (ECR-R). *Anales de Psicología / Annals of Psychology*, 27(3), 827–833. <https://revistas.um.es/analesps/article/view/135561>
- Fitzgerald, M., & Gallus, K. L. (2025). Conceptualizing and measuring childhood adversity: A comprehensive critique of the adverse childhood experiences measure and offering a new conceptualization of childhood adversity. *The American journal of orthopsychiatry*, 95(3), 274–287. <https://doi.org/10.1037/ort0000785>
- Fonseca-Rondón, A. C., Fajardo-Guzmán, L. N., Gutiérrez-Royo, C. L., Mogollón-Pulido, V., Grau-González, I. A., & Ortega, L. (2023). Experiencias adversas y protectoras durante el desarrollo temprano: Un modelo transaccional de mecanismos psicobiológicos. *Revista de Psicopatología y Psicología Clínica*, 28(2), 151–165. <https://doi.org/10.5944/rppc.36344>
- Fraley, R. C., Heffernan, M. E., Vicary, A. M., & Brumbaugh, C. C. (2011). The experiences in close relationships—Relationship Structures Questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment*, 23(3), 615–625. <https://doi.org/10.1037/a0022898>
- Freedle, A., & Oliveira, E. (2024). Interpersonal and Intrapersonal factors contributing to women's posttraumatic growth following perinatal loss.

Psychological Trauma: Theory, Research, Practice, and Policy, 16(2), 193–200.

<https://doi.org/10.1037/tra0001395>

Jayawickreme, E., Infurna, F. J., Alajak, K., Blackie, L. E. R., Chopik, W. J., Chung, J. M., Dorfman, A., Fleeson, W., Forgeard, M. J. C., Frazier, P., Furr, R. M., Grossmann, I., Heller, A. S., Laceulle, O. M., Lucas, R. E., Luhmann, M., Luong, G., Meijer, L., McLean, K. C., Park, C. L., ... Zonneveld, R. (2021). Post-traumatic growth as positive personality change: Challenges, opportunities, and recommendations. *Journal of personality*, 89(1), 145–165.
<https://doi.org/10.1111/jopy.12591>

Kadri, A., Gracey, F., & Leddy, A. (2022). What factors are associated with posttraumatic growth in older adults? A systematic review. *Clinical Gerontologist*. <https://doi.org/10.1080/07317115.2022.2034200>

Kishimoto, M., Yamaguchi, A., Niimura, M., Mizumoto, M., Hikitsuchi, T., Ogawa, K., Ozawa, N., & Tachibana, Y. (2021). Factors affecting the grieving process after perinatal loss. *BMC women's health*, 21(1), 313.
<https://doi.org/10.1186/s12905-021-01457-4>

Kokou-Kpolou, K., Megalakaki, O., & Nieuviarts, N. (2018). Persistent depressive and grief symptoms for up to 10 years following perinatal loss: Involvement of negative cognitions. *Journal of affective disorders*, 241, 360–366.
<https://doi.org/10.1016/j.jad.2018.08.063>

Krosch, D. J., & Shakespeare-Finch, J. (2017). Grief, traumatic stress, and posttraumatic growth in women who have experienced pregnancy loss. *Psychological trauma : theory, research, practice and policy*, 9(4), 425–433.
<https://doi.org/10.1037/tra0000183>

- Lacey, R. E., & Minnis, H. (2020). Practitioner Review: Twenty years of research with adverse childhood experience scores - Advantages, disadvantages and applications to practice. *Journal of child psychology and psychiatry, and allied disciplines*, 61(2), 116–130. <https://doi.org/10.1111/jcpp.13135>
- Landolt, S. A., Weitkamp, K., Roth, M., Sisson, N. M., & Bodenmann, G. (2023). Dyadic coping and mental health in couples: A systematic review. *Clinical Psychology Review*, 106, 102344. <https://doi.org/10.1016/j.cpr.2023.102344>
- LaNoue, M. D., & Hass, R. W. (2025). Conceptualizing self-reported adverse childhood experiences: From epidemiologic exposure to psychometric latent variable. *Social science & medicine* (1982), 366, 117664. <https://doi.org/10.1016/j.socscimed.2024.117664>
- Ledermann, T., Bodenmann, G., Gagliardi, S., Charvoz, L., Verardi, S., Rossier, J., Bertoni, A., & Iafrate, R. (2010). Psychometrics of the Dyadic Coping Inventory in three language groups. *Swiss Journal of Psychology / Schweizerische Zeitschrift für Psychologie / Revue Suisse de Psychologie*, 69(4), 201–212.
- Lenzo, V., Triscari, S., Quattropiani, M. C., Bordino, V., Cibelli, F., Lombardo, L., Caretti, V., Schimmenti, A., & Sideli, L. (2025). When the body speaks of loss: psychosomatic dysregulation as a mediator between insecure attachment and prolonged grief symptoms in oncological and traumatic bereavement. *Frontiers in psychology*, 16, 1708285. <https://doi.org/10.3389/fpsyg.2025.1708285>
- LeRoy, A. S., Gabert, T., Garcini, L., Murdock, K. W., Heijnen, C., & Fagundes, C. P. (2020). Attachment orientations and loss adjustment among bereaved

spouses. *Psychoneuroendocrinology*, 112, 104401.

<https://doi.org/10.1016/j.psyneuen.2019.104401>

Levi-Belz, Y., & Lev-Ari, L. (2019). Is There Anybody Out There? Attachment Style and Interpersonal Facilitators as Protective Factors Against Complicated Grief Among Suicide-Loss Survivors. *The Journal of nervous and mental disease*, 207(3), 131–136. <https://doi.org/10.1097/NMD.0000000000000940>

Maccallum, F., & Bryant, R. A. (2018). Prolonged grief and attachment security: A latent class analysis. *Psychiatry research*, 268, 297–302. <https://doi.org/10.1016/j.psychres.2018.07.038>

Mackle, T., Colodro-Conde, L., de Dassel, T., Braun, A., Pope, A., Bennett, E., Kothari, A., Bruxner, G., Medland, S. E., & Patterson, S. (2023). "Echoes of a dark past" is a history of maternal childhood maltreatment a perinatal risk factor for pregnancy and postpartum trauma experiences? A longitudinal study. *BMC pregnancy and childbirth*, 23(1), 397. <https://doi.org/10.1186/s12884-023-05714-2>

Mamun, A., Biswas, T., Scott, J., Sly, P. D., McIntyre, H. D., Thorpe, K., Boyle, F. M., Dekker, M. N., Doi, S., Mitchell, M., McNeil, K., Kothari, A., Hardiman, L., & Callaway, L. K. (2023). Adverse childhood experiences, the risk of pregnancy complications and adverse pregnancy outcomes: a systematic review and meta-analysis. *BMJ Open*, 13(8), e063826. <https://doi.org/10.1136/bmjopen-2022-063826>

McDonnell, C. G., & Valentino, K. (2016). Intergenerational Effects of Childhood Trauma: Evaluating Pathways Among Maternal ACEs, Perinatal Depressive Symptoms, and Infant Outcomes. *Child maltreatment*, 21(4), 317–326. <https://doi.org/10.1177/1077559516659556>

- McLennan, J. D., MacMillan, H. L., & Afifi, T. O. (2020). Questioning the use of adverse childhood experiences (ACEs) questionnaires. *Child abuse & neglect*, 101, 104331. <https://doi.org/10.1016/j.chiabu.2019.104331>
- Mendoza, B. N., & Meza, G. O. (2022). Adaptación del Cuestionario de Experiencias Adversas en la infancia en muestras mexicanas. *Psicología Y Salud*, 32(2), 203–214.
- Mørk, S., Hvidtjørn, D., Möller, S., Henriksen, T. B., O'Connor, M., & Bonanno, G. A. (2023). Grief trajectories after loss in pregnancy and during the neonatal period. *Journal of psychiatric research*, 168, 293–299. <https://doi.org/10.1016/j.jpsychires.2023.10.052>
- Neimeyer, R. A., & Burke, L. A. (2017). Spiritual distress and depression in bereavement: A meaning-oriented contribution. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 35(1), 38–59. <https://doi.org/10.1007/s10942-017-0262-6>
- Organización Mundial de la Salud [WHO]. (2022). *Vigilancia y respuesta a la muerte materna y perinatal: material de apoyo para la implementación*. Organización Mundial de la Salud. <https://iris.who.int/handle/10665/364704>.
- Osofsky, J. D., Osofsky, H. J., Frazer, A. L., Fields-Olivieri, M. A., Many, M., Selby, M., Holman, S., & Conrad, E. (2021). The importance of adverse childhood experiences during the perinatal period. *The American psychologist*, 76(2), 350–363. <https://doi.org/10.1037/amp0000770>
- Paramio Cuevas, J. C. (2016). *Adaptación transcultural y evaluación psicométrica de la escala de duelo perinatal* [Tesis doctoral, Universidad de Cádiz]
- Pinto, R. J., Correia, L., & Maia, Â. (2014). Assessing the reliability of retrospective reports of adverse childhood experiences among adolescents with

- documented childhood maltreatment. *Journal of Family Violence*, 29(4), 431–438. <https://doi.org/10.1007/s10896-014-9602-9>
- Quenby, S., Gallos, I. D., Dhillon-Smith, R. K., Podeseck, M., Stephenson, M. D., Fisher, J., Brosens, J. J., Brewin, J., Ramhorst, R., Lucas, E. S., McCoy, R. C., Anderson, R., Daher, S., Regan, L., Al-Memar, M., Bourne, T., MacIntyre, D. A., Rai, R., Christiansen, O. B., Sugiura-Ogasawara, M., ... Coomarasamy, A. (2021). Miscarriage matters: the epidemiological, physical, psychological, and economic costs of early pregnancy loss. *Lancet (London, England)*, 397(10285), 1658–1667. [https://doi.org/10.1016/S0140-6736\(21\)00682-6](https://doi.org/10.1016/S0140-6736(21)00682-6)
- Quezada-Berumen, Lucía, & González-Ramírez, Mónica Teresa. (2020). Propiedades psicométricas del inventario de crecimiento postraumático en población mexicana. *Acción Psicológica*, 17(1), 13-28. <https://dx.doi.org/10.5944/ap.17.1.25736>
- Ryninks, K., Wilkinson-Tough, M., Stacey, S., & Horsch, A. (2022). Comparing posttraumatic growth in mothers after stillbirth or early miscarriage. *PloS one*, 17(8), e0271314. <https://doi.org/10.1371/journal.pone.0271314>
- Scheidt, C. E., Hasenburg, A., Kunze, M., Waller, E., Pfeifer, R., Zimmermann, P., Hartmann, A., & Waller, N. (2012). Are individual differences of attachment predicting bereavement outcome after perinatal loss? A prospective cohort study. *Journal of psychosomatic research*, 73(5), 375–382. <https://doi.org/10.1016/j.jpsychores.2012.08.017>
- Sekowski, M., & Prigerson, H. G. (2022). Disorganized attachment and prolonged grief. *Journal of clinical psychology*, 78(9), 1806–1823. <https://doi.org/10.1002/jclp.23325>

- Slack, H. R., Fovargue, I., Liu, X., & Matheron, A. (2026). Measuring adversity without harm: Survivors' critique and recommendations for trauma-informed assessment. *Child abuse & neglect*, 171, 107829. <https://doi.org/10.1016/j.chiabu.2025.107829>
- Smith, M. V., Gotman, N., & Yonkers, K. A. (2016). Early childhood adversity and pregnancy outcomes. *Maternal and Child Health Journal*, 20(4), 790–798. <https://doi.org/10.1007/s10995-015-1909-5>
- Smith, K. V., Skjerdingsstad, N., Ebrahimi, O. V., Maccallum, F., & Ehlers, A. (2025). Unraveling attachment - A network analysis of the cognitive pathways linking attachment and prolonged grief. *Psychological medicine*, 55, e276. <https://doi.org/10.1017/S0033291725101669>
- Tedeschi, R. G., & Calhoun, L. G. (1995). *Trauma & transformation: Growing in the aftermath of suffering*. Sage Publications, Inc. <https://doi.org/10.4135/9781483326931>
- Tedeschi, R. G., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*, 9(3), 455–472. <https://doi.org/10.1002/jts.2490090305>
- Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic Growth: Conceptual Foundations and Empirical Evidence. *Psychological Inquiry*, 15(1), 1–18. https://doi.org/10.1207/s15327965pli1501_01
- Toedter, Lori J.; Judith N. Lasker y Janice M. Alhadeff (1988): «The perinatal grief scale: Development and initial validation», *American Journal of Orthopsychiatry*, 58 (3), 435-449.

- Tseng, Y. F., Cheng, H. R., Chen, Y. P., Yang, S. F., & Cheng, P. T. (2017). Grief reactions of couples to perinatal loss: A one-year prospective follow-up. *Journal of clinical nursing*, 26(23-24), 5133–5142. <https://doi.org/10.1111/jocn.14059>
- Woodside, A. G. (2013). Moving beyond multiple regression analysis to algorithms: Calling for adoption of a paradigm shift from symmetric to asymmetric thinking in data analysis and crafting theory [Editorial]. *Journal of Business Research*, 66 (4), 463-472 <https://doi.org/10.1016/j.jbusres.2012.12.021>

Tables and Figures

Table 1
Sociodemographic and Clinical Characteristics

Variable	Category	<i>n</i>	%
Sexual orientation	Heterosexual	70	82.35
	Homosexual	3	3.53
	Bisexual	11	12.94
	Asexual	1	1.18
Number of cohabitants	0	1	1.20
	1	24	28.90
	2	34	41.00
	3	18	21.70
	4	5	6.00
	5	1	1.20
Lives with	Partner	25	30.10
	Parents	1	1.20
	Partner and children	49	59.00
	Parents and children	2	2.40
	Parents, partner and children	3	3.60
Education	Primary studies	2	2.40
	Secondary studies	9	10.80
	Higher education	72	84.70
Occupation	Public servant	17	20.50
	Self-employed	17	20.50
	Permanent contract	32	38.60
	Temporary employment contract	6	7.20
	Unemployed	3	3.60
	Household work	2	2.40

	Unemployment benefit/subsidy	2	2.40
	Other	2	2.30
Annual income	Less than €5,000	2	2.40
	€5,001–€10,000	3	3.60
	€10,001–€15,000	14	16.90
	€15,001–€20,000	11	13.30
	€20,001–€30,000	26	31.30
	€30,001–€40,000	14	16.90
	More than €40,000	13	15.70
Perinatal loss	1	60	70.60
	2	17	20.00
	3	6	7.10
	5	1	1.20
	6	1	1.20
Time since last loss	Less than 3 months	9	10.60
	Between 3 and 6 months	9	10.60
	Between 6 months and 1 year	11	12.90
	Between 1 and 2 years	16	18.80
	Between 2 and 3 years	11	12.90
	More than 3 years	29	34.10

Table 2*Associations among ACEs, Insecure Attachment, PDC, and Guilt*

		1	2	3	4	5	6	7	8
Frequency of PL		1							
Time since last loss		.02	1						
ACEs		.25*	.25*	1					
Romantic Attachment	Anxiety	.05	.07	.22*	1				
	Avoidance	.13	.20	.11	.43**	1			
PDC		-.03	-.15	-.07	-.51**	-.78**	1		
PTGI		.06	.10	.12	-.02	-.11	-.25*	1	
PGS		-.07	-.13	.28**	.41**	.17	-.09	.12	1

Note: * $p \leq .05$; ** $p \leq .01$; 1 = Number of losses; 2 = Times since last loss; 3 = ACEs; 4 = anxiety; 5 = avoidance; 6 = PDC; 7 = PTGI; 8 = PGS.

Table 3*Hierarchical Stepwise Regression Model Predicting PDC*

Predictor	PG					PTGI				
	ΔR^2	ΔF	β	t	VIF	ΔR^2	ΔF	B	t	VIF
Step 1	.02	0.92				.02	0.71			
Number of losses			-.19	-1.86	1.11			.013	.11	1.11
Last loss			-.25*	-2.45	1.12			.12	1.02	1.12
Step 2	.25	8.78*				.04	0.97			
ACEs			.29**	2.72	1.22			.12	.96	1.22
Anxiety			.42**	3.61	1.43			.11	.87	1.43
Avoidance			.30	1.88	2.68			.17	.94	2.68
Step 3	.04	4.21*				.08	6.44*			
DCI			.33*	2.05	2.86			.47*	2.54	2.86
Durbin-Watson	2.08					.32				
Adjusted R^2	.26					.06				

*Note. Adjusted R^2 = adjusted coefficient of determination; ΔR^2 = change in R^2 ; ΔF = change in F ; β = standardized regression coefficient; t = t -value; VIF = variance inflation factor; * $p \leq .05$, *** $p \leq .00$*

Table 4

Descriptive Statistics and Calibrated Values for fsQCA

	Number of losses	Time since last loss	ACEs	Anxiety	Avoidance	PDC	PTGI	PGS
<i>M</i>	1.44	4.16	1.81	27.84	17.70	134.77	41.45	37.69
<i>SD</i>	.88	1.73	1.70	11.30	9.16	17.78	19.81	9.52
<i>Min</i>	1.00	1.00	0.00	9.00	9.00	91.00	4.00	20.00
<i>Max</i>	6.00	6.00	6.00	52.00	62.00	169.00	85.00	62.00
<i>P10</i>	1.00	1.00	0.00	12.00	9.00	111.00	10.70	25.00
<i>P50</i>	1.00	4.00	2.00	29.00	16.00	137.00	46.50	36.50
<i>P90</i>	2.30	6.00	4.00	43.80	27.80	155.60	65.30	51.30

Note. *M* = Mean; *SD* = Standard Deviation; *Min* = Minimum; *Max* = Maximum; *P10* = 10th percentile; *P50* = Median; *P90* = 90th percentile.

Table 5
Necessary Analysis for High and Low Levels of PG and PTG

	High levels of PG		Low levels of PG		High levels of PTG		Low levels of PTG	
Condition	Consistency	Coverage	Consistency	Coverage	Consistency	Coverage	Consistency	Coverage
Number of losses	0.78	0.63	0.78	0.63	0.79	0.63	0.76	0.61
Absence of number of losses	0.53	0.71	0.54	0.71	0.51	0.68	0.55	0.73
Time since last loss	0.73	0.59	0.77	0.63	0.77	0.62	0.72	0.59
Absence of time since last loss	0.54	0.70	0.50	0.65	0.49	0.63	0.53	0.70
ACEs	0.58	0.68	0.48	0.57	0.58	0.67	0.48	0.57
Absence of ACEs	0.63	0.55	0.73	0.64	0.63	0.55	0.72	0.64
Anxiety	0.71	0.74	0.52	0.54	0.59	0.61	0.60	0.63
Absence of anxiety	0.56	0.54	0.75	0.72	0.64	0.61	0.63	0.61
Avoidance	0.60	0.65	0.54	0.59	0.52	0.56	0.63	0.68
Absence of avoidance	0.61	0.57	0.67	0.63	0.70	0.69	0.59	0.56
DC	0.60	0.59	0.65	0.64	0.70	0.69	0.54	0.54
Absence of DC	0.64	0.65	0.59	0.60	0.53	0.53	0.69	0.70

Table 6
Sufficiency Analysis for High and Low Levels of PG and PTG

	High levels of PG <i>Consistency threshold: 0.80</i>			Low levels of PG <i>Consistency threshold: 0.83</i>			High levels of PTG <i>Consistency threshold: 0.81</i>			Low levels of PTG <i>Consistency threshold: 0.86</i>		
	1	2	3	1	2	3	1	2	3	1	2	3
Number of loss					○	○			○	○	○	
Time since loss	○							○				○
ACEs		○	●	○	○	○	●	●	●		○	○
Anxiety	●	●		○					○	●	●	
Avoidance			●			○	○	○		●		●
DC		○	○		●		●				○	○
Raw coverage	0.44	0.37	0.33	0.59	0.38	0.38	0.39	0.27	0.26	0.33	0.29	0.27
Unique coverage	0.04	0.06	0.05	0.13	0.01	0.00	0.05	0.00	0.03	0.02	0.00	0.00
Consistency	0.85	0.80	0.76	0.77	0.86	0.83	0.84	0.81	0.85	0.86	0.88	0.92
Consistency global			0.77			0.74			0.78			0.78
Overall coverage			0.73			0.72			0.62			0.52

Note. Expected vectors according to Fiss (2021). For high levels of PG/PTG: 0,0,0,0,0; For low levels: 1,1,1,1,1; ● = Presence or high level of the condition; ○ = Absence or low level of the condition.; Large circles indicate the presence of core conditions, whereas small circles indicate the presence of peripheral conditions.

Postpartum depression and post-traumatic stress: risk factors and protection throughout the life cycle.

Rebeca Santamaría-Gutiez¹, Verónica García-Tribaldos² y Laura Lacomba-Trejo^{2*}

¹ Clinical Psychology and Health Unit Service, General University Hospital of Valencia, Valencia, Spain

² Department of Developmental and Educational Psychology, Faculty of Psychology and Speech Therapy, Universitat de València, Valencia, Spain

* Correspondence: laura.lacomba@uv.es

Manuscrito no publicado.

Manuscrito en proceso de revisión por pares en la revista *Violence Against Women*.

Postpartum depression and post-traumatic stress: risk factors and protection throughout the life cycle.

Abstract

The postpartum period is a crucial stage during which prolonged high levels of stress are common due to changes related to pregnancy and childbirth. In addition to the inherent stressors of this period, several individual and social variables interact to either mitigate or exacerbate its psychological impact. These variables include adverse childhood experiences (ACEs), romantic attachment styles, resilience, family functioning, and obstetric violence (OV). This study aimed to examine the impact of these factors on postpartum mental health, specifically on postpartum depression (PPD) and childbirth-related post-traumatic stress disorder (CB-PTSD).

A total of 848 women aged 18 to 49 years ($M = 34.29$; $SD = 4.05$) participated. The following instruments were used: ACEQ (ACEs), ECR-R (romantic attachment), CD-RISC (resilience), FACES II (family functioning), EVO (obstetric violence), EPDS (postpartum depression), and PPQ (CB-PTSD). Descriptive, correlational, and predictive analyses (regression and fsQCA) were conducted.

The results indicated a high prevalence of both symptomatology and revealed strong, statistically significant correlations among all variables. Key contributing factors to postpartum depression included ACEs, insecure attachment, OV, low resilience, and low family cohesion. In the case of CB-PTSD, ACEs, an anxious attachment style, OV, and low resilience emerged as relevant predictors.

This study underscores the importance of understanding the short- and long-term impacts of traumatic childhood events; recognizing and preventing OV and raising awareness of its consequences; promoting secure romantic and family relationships; educating women about their obstetric rights and needs; and effectively preventing and treating postpartum depression and PTSD.

Keywords: postpartum depression, post-traumatic stress disorder associated with childbirth, adverse childhood experiences, obstetric violence, resilience, attachment

1. Introduction

Adverse Childhood Experiences (ACEs) refer to stressful or traumatic events occurring from birth to age 18. These experiences are associated with long-term psychological and physical health problems, as well as with deficits in social, emotional, and cognitive development (Felitti et al., 1998). One mechanism through which ACEs exert their effects is by disrupting early attachment processes.

According to attachment theory (Bowlby, 1973), early relationships with caregivers shape internal working models of security and connection. Insecure attachment, often resulting from early adversity, has been linked to increased vulnerability to psychopathology, including childbirth-related post-traumatic stress disorder (CB-PTSD), postpartum depression (PPD), and anxiety (Bifulco et al., 2006; Finch et al., 2024). These internal models influence how women interpret and respond to emotionally intense experiences such as pregnancy and childbirth.

Pregnancy is a complex period involving physiological, psychological, and social changes. In this vulnerable context, the presence of ACEs or an insecure attachment style may increase susceptibility to perinatal mental health disorders, including PPD and CB-PTSD (Kingston et al., 2012). Another relevant risk factor during the perinatal period is obstetric violence (OV), defined as actions or omissions by healthcare professionals that harm a woman's physical, psychological, or reproductive health during pregnancy, childbirth, or postpartum care (Arguedas, 2014; Araujo-Cuauro, 2019). For women with a history of trauma, OV can be particularly distressing and amplify the emotional impact of childbirth. In Spain, the prevalence of OV has been reported at 67.4% (Martínez-Galiano et al., 2021). OV may involve physical, sexual, or

psychological harm, and can result in long-lasting or even irreversible consequences (Kohan et al., 2025). Its occurrence significantly increases the risk of developing PPD and CB-PTSD (Ďuríčková et al., 2024; Finch et al., 2024; Martínez-Galiano et al., 2021; Silva-Fernández et al., 2023).

Postpartum depression is the most prevalent psychological disorder during the perinatal stage, affecting approximately 10–19% of women (Ayers et al., 2016; Armer et al., 2024; Zhang et al., 2023). It can impair maternal cognitive functioning, hinder the formation of secure attachment bonds with the infant, and negatively impact parenting, partner relationships, and child development. Children of mothers with PPD are at greater risk of cognitive, motor, and socio-emotional difficulties (Shorey et al., 2018; Zhang et al., 2023).

CB-PTSD refers to trauma-related symptoms that follow a distressing childbirth experience. It is characterized by four symptom clusters: intrusive memories, avoidance, negative alterations in mood or cognition, and hyperarousal, persisting for at least one month and interfering with daily functioning (Cook et al., 2018; Ma et al., 2023). Among women with a history of ACEs, the prevalence of CB-PTSD ranges from 15.7% to 19.6% (Armer et al., 2024; Hernandez-Martinez et al., 2019; Sexton et al., 2015).

Despite the documented impact of ACEs and OV on postpartum mental health, certain protective factors may buffer this vulnerability. One such factor is family functioning. Olson's Circumplex Model conceptualizes family systems along three dimensions: cohesion (emotional closeness), adaptability (flexibility in roles and rules), and communication (which helps maintain balance between the other two)

(Olson, 2000). Positive family dynamics play a protective role by supporting emotional regulation, providing instrumental support, and fostering resilience, which can reduce symptoms of PPD and CB-PTSD.

Another crucial protective factor is resilience, understood as the capacity to recover from adversity and even grow as a result of it. Higher levels of resilience are associated with more favorable psychological outcomes in individuals with a history of ACEs (Chang et al., 2021), including postpartum women (Sexton et al., 2015; Young-Wolff et al., 2019), and have been shown to mitigate the effects of trauma exposure on CB-PTSD (Wrenn et al., 2011; Finch et al., 2024).

Although these variables have been studied separately, there is a lack of integrative research exploring how ACEs, OV, attachment, family functioning, and resilience interact to predict postpartum psychological outcomes. To address this gap, the present study applies both hierarchical regression models (HRM) and qualitative comparative analysis (QCA), allowing a combined variable-based and configural approach to identify patterns that predict PPD and CB-PTSD in women in Spain.

The following hypotheses were proposed: H1: The presence of ACEs, OV and an insecure romantic attachment style (avoidant or anxious) will be positively associated with higher levels of PPD and PTSD; H2: Resilience, adaptability and family cohesion will be negatively associated with PPD and PTSD, acting as protective factors; H3: There will be a significant positive correlation between PPD and PTSD; H4: In prediction models, the variables ACEs, OV, insecure attachment, resilience, cohesion and family adaptability will significantly explain PPD and PTSD; H5: PPD and

PTSD will be determined by specific combinations of risk factors (ACEs, OV, insecure attachment) and protective factors (resilience, cohesion and adaptability).

2. Method

2.1. Participants

The sample consisted of 848 women aged between 18 and 49 years ($M = 34.29$, $SD = 4.05$). The inclusion criteria were: a) being over 18 years old; b) having given birth in the past year; c) being able to read and sign the informed consent form; and d) being able to complete all questionnaires. Most participants were heterosexual (95.52%), married or in a relationship (93.04%), and lived in a family structure consisting of themselves and their partners as parental figures for their children (81.49%). For most women, the recent pregnancy was their first (67.22%). More detailed information is provided in Table 1.

- INSERT TABLE 1 -

2.2 Variables and instruments

Psychological variables were assessed using validated self-report instruments. All instruments demonstrated adequate internal consistency in previous studies and in the present research (see Table 1).

Adverse Childhood Experiences (ACEs) were measured using the Adverse Childhood Experiences Questionnaire (ACEQ; Felitti et al., 1998; Spanish adaptation: Nevárez & Ochoa-Meza, 2022).

Romantic attachment was assessed with the Experiences in Close Relationships-Revised questionnaire (ECR-R; Fraley et al., 2000; Spanish version: Fernández-Fuertes et al., 2011), which measures the dimensions of attachment anxiety and avoidance.

Resilience was evaluated using the abbreviated version of the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003; Spanish version: Notario-Pacheco et al., 2011).

Family functioning was assessed using the Family Adaptability and Cohesion Evaluation Scales II (FACES II; Olson et al., 1982; Spanish version: Martínez-Pampliega et al., 2006), which includes cohesion and adaptability dimensions.

Obstetric violence (OV) was measured with the Obstetric Violence Scale (Castro & Rates, 2021).

Postpartum depression (PPD) was assessed using the Edinburgh Postnatal Depression Scale (EPDS; Cox et al., 1987; Spanish version: García-Esteve et al., 2003).

Childbirth-related PTSD (CB-PTSD) was evaluated using the Perinatal Post-Traumatic Stress Questionnaire (PPQ; DeMier et al., 1996; Spanish version: Hernández-Martínez et al., 2019).

2.3. Procedure and design

A cross-sectional, observational, and correlational study was conducted in February 2025. After obtaining ethical approval (Universitat de València, 2024-PSILOG-3773873), an online survey was distributed via social media and through perinatal healthcare professionals. All participants provided informed consent prior to participation.

2.4. Data analysis

Data were analyzed using SPSS v28 (IBM Corp., 2023) and fsQCA 2.5 software (Claude & Cristopher, 2014). Descriptive analyses were conducted on sociodemographic and clinical variables. Calibration values for the fsQCA, correlational analyses using Pearson's coefficient, and predictive analyses via hierarchical regression models were obtained. Additionally, a fuzzy-set qualitative comparative analysis (fsQCA) was carried out to explore high and low levels of PPD and CB-PTSD. The analysis considered the following factors: ACEs, avoidant attachment, anxious attachment, resilience, family climate, and OV. Continuous variables were recalibrated around three thresholds based on the 10th, 50th, and 90th percentiles (Woodside, 2013): P10 indicated low membership or exclusion from the set; P50 represented average membership (neither clearly inside nor outside the set); and P90 reflected high or full membership in the set.

3. Results

3.1 Descriptive analysis: psychosocial and emotional factors, PPD, and CB-PTSD.

Participants showed low ACEs scores, with 11.67% exceeding the clinical threshold. In romantic attachment, anxiety scores were higher than avoidance. Most participants (65.45%) reported high resilience. Family cohesion and adaptability showed similar average levels. OV scores were relatively low. Regarding mental health outcomes, 43.04% were at risk of PPD and 30.19% of CB-PTSD. Detailed descriptive statistics are presented in Table 2.

- INSERT TABLE 2 -

3.2 Correlational analysis: association between the variables under study

Linear, statistically significant, and positive associations were found between PPD and the following variables: CB-PTSD (specifically with the activation dimension), ACEs, anxiety and avoidance within romantic attachment, and OV. In contrast, PPD was negatively associated with resilience, family cohesion, and adaptability.

Similarly, CB-PTSD was positively associated with ACEs, anxiety and avoidance in romantic attachment, and OV; and negatively associated with resilience, cohesion, and adaptability (Table 3).

-INSERT TABLE 3 -

3.3. Predictive analysis

3.3.1 Hierarchical regression models

Hierarchical regression analyses were conducted to predict PPD and CB-PTSD. In the final step, the model explained 37% of the variance in PPD and 39% in CB-PTSD. Key predictors of PPD included ACEs, anxious and avoidant attachment, low resilience, low family cohesion, and OV. For CB-PTSD, significant predictors were ACEs, anxious attachment, low resilience, and OV. No issues of autocorrelation or multicollinearity were found. Detailed results are provided in Table 4.

- INSERT TABLE 4 -

3.3.2 Comparative Qualitative Analysis of Fuzzy Data (fsQCA)

Analysis of Necessary Conditions

Table 2 presents the descriptive statistics and calibration values for the variables used in the fsQCA. Based on the results, no necessary conditions were identified for high or low levels of PPD or CB-PTSD, as consistency values did not exceed the 0.90 threshold (Ragin, 2008) (Table 5).

- INSERT TABLE 5 -

Analysis of Sufficient Conditions

The sufficiency analysis identified configurations of conditions leading to high and low levels of PPD and CB-PTSD (Table 6). All models showed acceptable consistency (≥ 0.74), confirming their explanatory value.

For **high PPD**, 17 configurations explained 79% of cases (consistency = 0.77). The most frequent pathway (56%) combined high anxious attachment and low resilience. Other relevant combinations included: (1) high anxious-avoidant attachment and low adaptability (45%), and (2) ACEs, OV, and low resilience (34%).

For **low PPD**, 17 configurations also explained 79% of cases (consistency = 0.76). Key combinations included: (1) high resilience and low anxious-avoidant attachment (50%), (2) high resilience, high adaptability, and absence of OV (49%), and (3) resilience, absence of ACEs, avoidant attachment, and OV (40%).

For **high CB-PTSD**, 11 configurations explained 77% of cases (consistency = 0.77). The main pathways were: (1) OV and low resilience (49%), (2) ACEs and OV (44%), and (3) anxious attachment, low resilience, and low cohesion (43%).

Finally, **low CB-PTSD** was explained by 16 configurations (76% of cases, consistency = 0.77). Protective pathways included: (1) low anxious-avoidant attachment and absence of OV (49%), (2) family cohesion, absence of ACEs and OV (48%), and (3) high adaptability, absence of OV, and absence of avoidant attachment (49%).

- INSERT TABLE 6 -

4. Discussion and conclusions

The present study aimed to examine how ACEs, romantic attachment, OV, family functioning, and resilience—both independently and interactively—affect maternal mental health during the postpartum period, particularly PPD and CB-PTSD (H1, H2, H4, H5). The results confirm the predictive role of ACEs, OV, and insecure romantic attachment (H1), consistent with previous research (Armer et al., 2024; Bielas et al., 2016). The perinatal stage may act as a catalyst for unresolved trauma, especially when compounded by OV, whose effects extend from individual to institutional levels (Araujo-Cuauro, 2019; Silva-Fernández et al., 2023).

Insecure attachment was associated with greater psychological distress (H1), potentially reflecting unmet relational needs during this critical life phase (Bifulco et

al., 2006; Fraley & Shaver, 2000). Resilience emerged as the most consistent protective factor (H2), with both hierarchical regression models and fsQCA analyses confirming its role in reducing risk for PPD and CB-PTSD (Sexton et al., 2015; Finch et al., 2024). Although family functioning (cohesion and adaptability) demonstrated protective effects, only cohesion significantly predicted PPD, not CB-PTSD, partially supporting H2 and suggesting possible methodological differences in prior studies (Uruk et al., 2007).

PPD and CB-PTSD were strongly correlated (H3), aligning with their known symptomatic overlap (Dekel et al., 2020). All predictors explained variance in PPD, while CB-PTSD was predicted by ACEs, anxious attachment, low resilience, and OV (H4). Notably, OV was the strongest explanatory factor for CB-PTSD across analyses.

The fsQCA revealed distinct configurations of risk and protective factors associated with both high and low symptom levels (H5). High PPD was predicted by insecure attachment combined with low resilience; CB-PTSD by OV, low resilience, and ACEs. Conversely, low symptomatology was explained by resilience, secure attachment, and absence of OV.

These findings underscore the importance of addressing individual (resilience), relational (attachment), and structural (OV, ACEs) factors to prevent postpartum mental health disorders. Preventive strategies should include trauma-informed care and early intervention for vulnerable populations.

4.1. Limitations

Despite its contributions, this study has some limitations. First, the sample may lack full representativeness due to the dissemination method and the participant profile, which was primarily heterosexual, Spanish-speaking women with average income levels. Limitations were also identified regarding the internal reliability of the instruments and the ACE questionnaire's equal weighting of events with varying traumatic impact. Additionally, the absence of validated tools to assess OV, reliance on retrospective self-reports, and lack of multi-informant data limit generalizability. Future research should incorporate an intersectional approach to better understand the impacts on mental health (Tamarit, 2023). Expanding recruitment to health centers or breastfeeding support teams during the postpartum period could improve sample diversity. It is recommended to analyze the differential impact of individual ACE items, develop validated OV measures, and conduct longitudinal studies incorporating other informants. Furthermore, including additional relevant variables such as self-efficacy (Leahy-Warren et al., 2012; Takács et al., 2019), social support (Gan et al., 2019), and perceived partner responsiveness (Li et al., 2025) would enrich the understanding of maternal mental health, ideally through mediation and moderation analyses.

4.2. Conclusion

Despite these limitations, the study holds important practical implications. Findings highlight the need to train healthcare professionals in trauma-informed care, implement strategies to prevent OV, and raise awareness of the long-term consequences of ACEs. Promoting secure attachment, resilient families, and

respectful perinatal care through preventive programs and childbirth education can empower women and reduce vulnerability. Comprehensive assessment, prevention, and treatment of PPD and CB-PTSD must remain central goals in maternal mental health care.

5. References

- Ainsworth, M. D. S., Blehai; M. C, Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum.
- Alguacil, M., Núñez-Pomar, J., Pérez-Campos, C., & Prado-Gascó, V. (2019). Perceived value, satisfaction and future intentions in sport services: Putting congruence and brand trust in the equation – linear models vs QCA. *Academia Revista Latinoamericana de Administracion*, 32(4), 566–579. <https://doi.org/10.1108/ARLA-04-2019-0099>
- Alhowaymel, F. M., Kalmakis, K. A., Chiodo, L. M., Kent, N. M., & Almuneef, M. (2023). Adverse Childhood Experiences and Chronic Diseases: Identifying a Cut-Point for ACE Scores. *International Journal of Environmental Research and Public Health*, 20(2), 1651. <https://doi.org/10.3390/IJERPH20021651>
- Alsop, R., Bertelsen, M., & Holland, J. (2006). *Empowerment in practice: From analysis to implementation*. World Bank. <https://doi.org/10.1596/978-0-8213-6450-5>
- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). <https://doi.org/10.1176/appi.books.9780890425787>
- Anda, R. F., Croft, J. B., Felitti, V. J., Nordenberg, D., Giles, W. H., Williamson, D. F., & Giovino, G. A. (1999). Adverse childhood experiences and smoking during

- adolescence and adulthood. *JAMA*, 282(17), 1652–1658.
<https://doi.org/10.1001/JAMA.282.17.1652>
- Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., Dube, S. R., & Giles, W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood. A convergence of evidence from neurobiology and epidemiology. *European Archives of Psychiatry and Clinical Neuroscience*, 256(3), 174–186. <https://doi.org/10.1007/s00406-005-0624-4>
- Andersen, L. B., Melvaer, L. B., Videbech, P., Lamont, R. F., & Joergensen, J. S. (2012). Risk factors for developing post-traumatic stress disorder following childbirth: a systematic review. *Acta Obstetrica et Gynecologica Scandinavica*, 91(11), 1261–1272. <https://doi.org/10.1111/J.1600-0412.2012.01476.X>
- Araujo-Cuauro, J. C. (2019). Violencia obstétrica: una práctica oculta deshumanizadora, ejercida por el personal médico asistencial ¿Es un problema de salud pública y de derechos humanos? *Revista Mexicana de Medicina Forense y Ciencias de La Salud*, 4(2), 1–11.
- Arguedas, G. (2014). La violencia obstétrica: propuesta conceptual a partir de la experiencia costarricense. *Cuadernos Inter.c.a.Mbio Sobre Centroamérica y El Caribe*, 11(1), 145–169. <https://doi.org/10.15517/C.A.V11I1.14238>
- Armer, J. S., Oh, W., Davis, M. T., Issa, M., Sexton, M. B., & Muzik, M. (2024). Post-traumatic change and resilience after childhood maltreatment: Impacts on maternal mental health over the postpartum period. *Journal of Affective Disorders*, 361, 1–9. <https://doi.org/10.1016/J.JAD.2024.06.010>
- Ayers, S., Bond, R., Bertullies, S., & Wijma, K. (2016). The aetiology of post-traumatic stress following childbirth: a meta-analysis and theoretical framework.

- Psychological Medicine*, 46(6), 1121–1134.
<https://doi.org/10.1017/S0033291715002706>
- Belli, L. F. (2017). La violencia obstétrica: Otra forma de violación a los derechos humanos. *Revista Redbioética UNESCO*, 4(7), 25–34.
<https://ri.conicet.gov.ar/handle/11336/12868>
- Bellón, S. (2015). La violencia obstétrica desde los aportes de la crítica feminista y la biopolítica. *Dilemata*, 7(18), 93–111.
<https://www.dilemata.net/revista/index.php/dilemata/article/view/374>
- Bielas, H., Barra, S., Skrivanek, C., Aebi, M., Steinhausen, H. C., Bessler, C., & Plattner, B. (2016). The associations of cumulative adverse childhood experiences and irritability with mental disorders in detained male adolescent offenders. *Child and Adolescent Psychiatry and Mental Health*, 10(1), 34.
<https://doi.org/10.1186/S13034-016-0122-7>
- Bifulco, A., Kwon, J., Jacobs, C., Moran, P. M., Bunn, A., & Beer, N. (2006). Adult attachment style as mediator between childhood neglect/abuse and adult depression and anxiety. *Social Psychiatry and Psychiatric Epidemiology*, 41(10), 796–805. <https://doi.org/10.1007/S00127-006-0101-Z>
- Bifulco, A., Mahon, J., Kwon, J. H., Moran, P. M., & Jacobs, C. (2003). The Vulnerable Attachment Style Questionnaire (VASQ): an interview-based measure of attachment styles that predict depressive disorder. *Psychological Medicine*, 33(6), 1099–1110. <https://doi.org/10.1017/S0033291703008237>
- Bolger, K. E., & Patterson, C. J. (2003). Sequelae of Child Maltreatment: Vulnerability and Resilience. *Resilience and Vulnerability: Adaptation in the Context of*

Childhood *Adversities*, 156–181.

<https://doi.org/10.1017/CBO9780511615788.009>

Bowlby, J. (1973). *Attachment and Loss. Vol. 2: Separation: Anxiety and Anger*. New York: Basic Books.

Brummelte, S., & Galea, L. A. M. (2010). Depression during pregnancy and postpartum: contribution of stress and ovarian hormones. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, 34(5), 766–776.
<https://doi.org/10.1016/j.PNPBP.2009.09.006>

Carrera, C. A., Cabezas, E. V., Godoy, V. T., Arias, D. S., & Conce, E. A. (2023). Violencia Obstétrica y su Impacto en la Salud Materna. Revisión Bibliográfica. *Ciencia Latina Revista Científica Multidisciplinar*, 7(6), 8748–8757.
https://doi.org/10.37811/CL_RCM.V7I6.9537

Castro, M. C., & Rates, S. S. (2021). Validation and factorial invariance test of obstetric violence scale in women from Chile. *Interdisciplinaria*, 38(2), 209–223.
<https://doi.org/10.16888/INTERD.2021.38.2.14>

Chang, J. J., Ji, Y., Li, Y. H., Yuan, M. Y., & Su, P. Y. (2021). Childhood trauma and depression in college students: Mediating and moderating effects of psychological resilience. *Asian Journal of Psychiatry*, 65, 102824.
<https://doi.org/10.1016/j.AJP.2021.102824>

Claude, R., & Christopher, R. (2014). *Acq [computer Programme]*. University of Houston-Downtown. Available online:
<https://www.socsci.uci.edu/~cragin/fsQCA/software.shtml>

- Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, 18(2), 76–82. <https://doi.org/10.1002/DA.10113>
- Cook, N., Ayers, S., & Horsch, A. (2018). Maternal posttraumatic stress disorder during the perinatal period and child outcomes: A systematic review. *Journal of Affective Disorders*, 225, 18–31. <https://doi.org/10.1016/J.JAD.2017.07.045>
- Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of Postnatal Depression: Development of the 10-item Edinburgh Postnatal Depression scale. *British Journal of Psychiatry*, 150(JUNE), 782–786. <https://doi.org/10.1192/bjp.150.6.782>
- Dávila, U., Evelia, L., Rivera, C., & Julio, R. (2022). Violencia obstétrica y síndrome de depresión post parto en centros maternos públicos. *Ciencia Latina Revista Científica Multidisciplinar*, 6(6), 6639–6653. https://doi.org/10.37811/CL_RCM.V6I6.3911
- Dekel, S., Ein-Dor, T., Dishy, G. A., & Mayopoulos, P. A. (2020). Beyond postpartum depression: posttraumatic stress-depressive response following childbirth. *Archives of Women's Mental Health*, 23(4), 557–564. <https://doi.org/10.1007/S00737-019-01006-X>
- DeMier, R. L., Hynan, M. T., Harris, H. B., & Manniello, R. L. (1996). Perinatal Stressors as Predictors of Symptoms of Posttraumatic Stress in Mothers of Infants at High Risk. *Journal of Perinatology*, 16(4), 276–280.
- Dong, M., Dube, S. R., Felitti, V. J., Giles, W. H., & Anda, R. F. (2003). Adverse childhood experiences and self-reported liver disease: new insights into the causal

- pathway. *Archives of Internal Medicine*, 163(16), 1949–1956.
<https://doi.org/10.1001/ARCHINTE.163.16.1949>
- Dube, S. R., Anda, R. F., Felitti, V. J., Chapman, D. P., Williamson, D. F., & Giles, W. H. (2001). Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the life span: Findings from the adverse childhood experiences study. *JAMA*, 286(24), 3089–3096.
<https://doi.org/10.1001/jama.286.24.3089>
- Dube, S. R., Anda, R. F., Felitti, V. J., Edwards, V. J., & Croft, J. B. (2002). Adverse childhood experiences and personal alcohol abuse as an adult. *Addictive Behaviors*, 27(5), 713–725. [https://doi.org/10.1016/S0306-4603\(01\)00204-0](https://doi.org/10.1016/S0306-4603(01)00204-0)
- Dube, S. R., Felitti, V. J., Dong, M., Chapman, D. P., Giles, W. H., & Anda, R. F. (2003). Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The adverse childhood experiences study. *Pediatrics*, 111(3), 564–572.
<https://doi.org/10.1542/peds.111.3.564>
- Ďuríčková, B., Škodová, Z., & Bašková, M. (2024). Risk factors associated with postpartum depression and PTSD after birth in a sample of Slovak women. *Heliyon*, 10(1), e23560. <https://doi.org/10.1016/J.HELİYON.2023.E23560>
- Edwards, V. J., Holden, G. W., Felitti, V. J., & Anda, R. F. (2003). Relationship between multiple forms of childhood maltreatment and adult mental health in community respondents: Results from the adverse childhood experiences study. *American Journal of Psychiatry*, 160(8), 1453–1460.
<https://doi.org/10.1176/appi.ajp.160.8.1453>

- Eng, S., & Woodside, A. G. (2012). Configural analysis of the drinking man: fuzzy-set qualitative comparative analyses. *Addictive Behaviors*, 37(4), 541–543. <https://doi.org/10.1016/J.ADDBEH.2011.11.034>
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, 14(4), 245–258. [https://doi.org/10.1016/S0749-3797\(98\)00017-8](https://doi.org/10.1016/S0749-3797(98)00017-8)
- Fernández Fuertes, A. A., Orgaz Baz, B., Fuertes Martín, J. A., Carcedo González, R. J. (2011). La evaluación del apego romántico en adolescentes españoles: validación de la versión reducida del Experiences in Close Relationships-Revised (ECR-R). *Anales de Psicología*, 27(3), 827–833.
- Finch, K., Lawrence, D., Williams, M. O., Thompson, A. R., & Hartwright, C. (2024). Relationships between adverse childhood experiences, attachment, resilience, psychological distress and trauma among forensic mental health populations. *Journal of Forensic Psychiatry and Psychology*, 35(5), 660-684. <https://doi.org/10.1080/14789949.2024.2365149>
- Florián-Pinto, F., Acevedo-Juárez, B., Barragán-Campos, R., Sánchez-Garcés, J., & Avila-George, H. (2024). Estimación de la concentración de clorofila en hojas de arce a través de un enfoque de aprendizaje automático, 17(1), 597-607.
- Fraley, R. C., & Shaver, P. R. (2000). Adult Romantic Attachment: Theoretical Developments, Emerging Controversies, and Unanswered Questions. *Review of General Psychology*, 4(2), 132–154. <https://doi.org/10.1037/1089-2680.4.2.132>

- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, 78(2), 350–365. <https://doi.org/10.1037/0022-3514.78.2.350>
- Gan, Y., Xiong, R., Song, J., Xiong, X., Yu, F., Gao, W., Hu, H., Zhang, J., Tian, Y., Gu, X., Zhang, J., & Chen, D. (2019). The effect of perceived social support during early pregnancy on depressive symptoms at 6 weeks postpartum: a prospective study. *BMC Psychiatry*, 19, 1-8. <https://doi.org/10.1186/s12888-019-2188-2>
- Garcia-Esteve, L., Ascaso, C., Ojuel, J., & Navarro, P. (2003). Validation of the Edinburgh Postnatal Depression Scale (EPDS) in Spanish mothers. *Journal of Affective Disorders*, 75(1), 71–76. [https://doi.org/10.1016/S0165-0327\(02\)00020-4](https://doi.org/10.1016/S0165-0327(02)00020-4)
- Gomis-Pomares, A., Lacomba-Trejo, L., & Villanueva, L. (2025). Using Avoidant Emotion-Focused Coping and being a Woman with Adverse Childhood Experiences as the Worst-Case Scenario for Internalising Problems. *Journal of Child and Adolescent Trauma*, 1-11. <https://doi.org/10.1007/S40653-025-00688-Z>
- Grady, M. D., Levenson, J. S., & Bolder, T. (2017). Linking Adverse Childhood Effects and Attachment: A Theory of Etiology for Sexual Offending. In *Trauma, Violence, and Abuse* (Vol. 18, Issue 4, pp. 433–444). SAGE Publications Ltd. <https://doi.org/10.1177/1524838015627147>
- Haar, K., El-Khani, A., Mostashari, G., Hafezi, M., Malek, A., & Maalouf, W. (2021). Impact of a brief family skills training programme (“strong families”) on parenting skills, child psychosocial functioning, and resilience in iran: A multisite

- controlled trial. *International Journal of Environmental Research and Public Health*, 18(21), 11137. <https://doi.org/10.3390/IJERPH182111137>
- Halperin, O., Sarid, O., & Cwikel, J. (2015). The influence of childbirth experiences on women's postpartum traumatic stress symptoms: A comparison between Israeli Jewish and Arab women. *Midwifery*, 31(6), 625–632. <https://doi.org/10.1016/j.MIDW.2015.02.011>
- Hazan, C., & Shaver, P. (1987). Romantic Love Conceptualized as an Attachment Process. *Journal of Personality and Social Psychology*, 52(3), 511–524. <https://doi.org/10.1037/0022-3514.52.3.511>
- Hazan, C., & Shaver, P. R. (1994). Attachment as an Organizational Framework for Research on Close Relationships. *Psychological Inquiry*, 5(1), 1–22. https://doi.org/10.1207/S15327965PLI0501_1
- Hernández Vargas, M. (2019). *Impacto psicosocial de la violencia obstétrica a través de relatos de vida de mujeres*. [Tesis de grado, Universidad de Costa Rica]. <https://repositorio.sibdi.ucr.ac.cr/handle/123456789/18799>
- Hernández, M. (2021). Pasar por la carnicería: relatos de mujeres costarricenses sobre violencia obstétrica. *Wimb Lu*, 16(2), 93–118. <https://doi.org/10.15517/WL.V16I2.48101>
- Hernández-Martínez, A., Martínez-Vázquez, S., Rodríguez-Almagro, J., Khan, K. S., Delgado-Rodríguez, M., & Martínez-Galiano, J. M. (2021). Validation of perinatal post-traumatic stress disorder questionnaire for Spanish women during the postpartum period. *Scientific Reports*, 11(1), 5567. <https://doi.org/10.1038/S41598-021-85144-2>

- Hernández-Martínez, A., Rodríguez-Almagro, J., Molina-Alarcón, M., Infante-Torres, N., Donate Manzanares, M., & Martínez-Galiano, J. M. (2019). Postpartum post-traumatic stress disorder: Associated perinatal factors and quality of life. *Journal of Affective Disorders*, 249, 143–150. <https://doi.org/10.1016/J.JAD.2019.01.042>
- Hildyard, K. L., & Wolfe, D. A. (2002). Child neglect: developmental issues and outcomes☆. *Child Abuse & Neglect*, 26(6–7), 679–695. [https://doi.org/10.1016/S0145-2134\(02\)00341-1](https://doi.org/10.1016/S0145-2134(02)00341-1)
- IBM Corp. (2023). *IBM SPSS Statistics for Windows*, Version 29.0.2.0 Armonk, NY: IBM Corp
- Instituto Nacional de Estadística. (2025, 19 de febrero). *Estimación mensual de nacimientos*. [Comunicado de prensa] <https://www.ine.es/dyngs/Prensa/EDES EMN2024.htm>
- Jojoa-Tobar, E., Cuchumbe-Sánchez, Y. D., Ledesma-Rengifo, J. B., Muñoz-Mosquera, M. C., Campo, A. M. P., & Suarez-Bravo, J. P. (2019). Violencia obstétrica: haciendo visible lo invisible. *Revista de la Universidad Industrial de Santander. Salud*, 51(2), 135-146.
- Jones, R. K., Jerman, J., & Charlton, B. M. (2018). Sexual orientation and exposure to violence among U.S. patients undergoing abortion. *Obstetrics and Gynecology*, 132(3), 605–611. <https://doi.org/10.1097/AOG.0000000000002732>,
- Kheirabadi, G. R., Maracy, M. R., Akbaripour, S., & Masaeli, N. (2012). Psychometric Properties and Diagnostic Accuracy of the Edinburgh Postnatal Depression Scale in a Sample of Iranian Women. *Iranian Journal of Medical Sciences*, 37(1), 32. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3470287/>

- Khodarahimi, S. (2013). The role of family typology on mental health, positive and negative emotions, self-esteem, and wife physical abuse in an Iranian sample. *Journal of Comparative Family Studies*, 44(1), 41–56. <https://doi.org/10.3138/JCFS.44.1.41>
- Kingston, D., Heaman, M., Fell, D., Dzakpasu, S., & Chalmers, B. (2012). Factors associated with perceived stress and stressful life events in pregnant women: findings from the Canadian Maternity Experiences Survey. *Maternal and Child Health Journal*, 16(1), 158–168. <https://doi.org/10.1007/S10995-010-0732-2>
- Kock, N. (2014). Advanced Mediating Effects Tests, Multi-Group Analyses, and Measurement Model Assessments in PLS-Based SEM. *International Journal of E-Collaboration*, 10(1), 1–13. <https://doi.org/10.4018/IJEC.2014010101>
- Kohan, S., Mena-Tudela, D., & Youseflu, S. (2025). The impact of obstetric violence on postpartum quality of life through psychological pathways. *Scientific Reports*, 15(1), 4799. <https://doi.org/10.1038/S41598-025-88708-8>
- Koyama, Y., Fujiwara, T., Murayama, H., Machida, M., Inoue, S., & Shobugawa, Y. (2022). Association between adverse childhood experiences and brain volumes among Japanese community-dwelling older people: Findings from the NEIGE study. *Child Abuse & Neglect*, 124, 105456. <https://doi.org/10.1016/J.CHIABU.2021.105456>
- Lacomba-Trejo, L., Quezada-Gaibor, K., Gomis-Pomares, A., Prado-Gascó, V., & Villanueva, L. (2024). Adverse childhood experiences and coping strategies: do they make a difference in psychopathic traits and altruism for young adults? *Current Psychology*, 43(39), 30926–30936. <https://doi.org/10.1007/S12144-024-06680-4>

- Leahy-Warren, P., McCarthy, G., & Corcoran, P. (2012). First-time mothers: Social support, maternal parental self-efficacy and postnatal depression. *Journal of Clinical Nursing*, 21(3-4), 388-397. <https://doi.org/10.1111/J.1365-2702.2011.03701.X>
- Ley 41/2002, de 14 de noviembre, básica reguladora de la autonomía del paciente y de derechos y obligaciones en materia de información y documentación clínica. *Boletín Oficial del Estado*, núm. 274, de 15 de noviembre de 2002, pp. 40126-40132. <https://www.boe.es/buscar/doc.php?id=BOE-A-2002-22188>
- Li, B., Liu, T., Ma, D., Sun, J., & Liu, J. (2025). Association of fear of childbirth and postpartum depression with perceived partner response during pregnancy. *BMC Pregnancy and Childbirth*, 25(1), 211. <https://doi.org/10.1186/S12884-025-07332-6>
- Liang, S., Yan, J., Zhang, T., Zhu, C., Situ, M., Du, N., Fu, X., & Huang, Y. (2014). Differences between non-suicidal self injury and suicide attempt in Chinese adolescents. *Asian Journal of Psychiatry*, 8(1), 76-83. <https://doi.org/10.1016/J.AJP.2013.11.015>
- Llobera, R., & Ferrer, V. A. (2019). Violencia obstétrica. La perspectiva de mujeres que la han sufrido. *Investigaciones Feministas*, 10(1), 167-184. <https://doi.org/10.5209/INFE.60886>
- Ma, D., Sun, S., Qian, J., Wang, M., Gu, H., Lou, J., & Yu, X. (2023). Predictors of pregnancy stress and psychological birth trauma in women undergoing vaginal delivery: a cross-sectional study in China. *BMC Pregnancy and Childbirth*, 23(1), 596. <https://doi.org/10.1186/S12884-023-05890-1>

- Madigan, S., Deneault, A. A., Racine, N., Park, J., Thiemann, R., Zhu, J., Dimitropoulos, G., Williamson, T., Fearon, P., Cénat, J. M., McDonald, S., Devereux, C., & Neville, R. D. (2023). Adverse childhood experiences: a meta-analysis of prevalence and moderators among half a million adults in 206 studies. *World Psychiatry*, 22(3), 463-471. <https://doi.org/10.1002/WPS.21122>
- Main, M., & Solomon, J. (1986). Discovery of an insecure-disorganized/disoriented attachment pattern. In T. B. Brazelton & M. W. Yogman (Eds.), *Affective development in infancy* (pp. 95–124). Ablex Publishing.
- Marcus, S. M. (2009). Depression during Pregnancy: Rates, Risks and Consequences. *Journal of Population Therapeutics and Clinical Pharmacology*, 16(1), 15–22. <https://pubmed.ncbi.nlm.nih.gov/19164843/>
- Martín-Castañeda, L. B. (2020). La violencia obstétrica desde la perspectiva de las matronas de atención primaria y hospitalaria en Barcelona. Un análisis desde la antropología. *Matronas Profesión*, 22(1), 6–11. <https://dialnet.unirioja.es/servlet/articulo?codigo=8123382&info=resumen&idioma=SPA>
- Martínez-Galiano, J. M., Martinez-Vazquez, S., Rodríguez-Almagro, J., & Hernández-Martínez, A. (2021). The magnitude of the problem of obstetric violence and its associated factors: A cross-sectional study. *Women and Birth: Journal of the Australian College of Midwives*, 34(5), e526–e536. <https://doi.org/10.1016/J.WOMBI.2020.10.002>
- Martínez-Pampliega, A., Iraurgi, I., Galindez, E., & Sanz, M. (2006). Family Adaptability and Cohesion Evaluation Scale (FACES): desarrollo de una versión de 20 ítems

- en español. In *Article in International Journal of Clinical and Health Psychology*, 6(2), 317-338. <https://www.researchgate.net/publication/28109743>
- Ministerio de Sanidad y Consumo (2007) *Estrategia de atención al Parto Normal en el Sistema Nacional de Salud*. Madrid: Autor.
- Ministerio de Sanidad, Servicios Sociales e Igualdad (2014). *Guía de práctica clínica de atención en el embarazo y puerperio*. Madrid: Autor.
- Mosley-Johnson, E., Campbell, J. A., Garacci, E., Walker, R. J., & Egede, L. E. (2021). Stress that Endures: Influence of Adverse Childhood Experiences on Daily Life Stress and Physical Health in Adulthood. *Journal of Affective Disorders*, 284, 38–43. <https://doi.org/10.1016/j.jad.2021.02.018>
- Nevárez, B., & Ochoa-Meza, G. (2022). Adaptación del Cuestionario de Experiencias Adversas en la infancia en muestras mexicanas. *Psicología y Salud*, 32(2), 203-214. <https://doi.org/10.25009/PYS.V32I2.2742>
- Notario-Pacheco, B., Solera-Martínez, M., Serrano-Parra, M. D., Bartolomé-Gutiérrez, R., García-Campayo, J., & Martínez-Vizcaíno, V. (2011). Reliability and validity of the Spanish version of the 10-item Connor-Davidson Resilience Scale (10-item CD-RISC) in young adults. *Health and Quality of Life Outcomes*, 9(1), 1–6. <https://doi.org/10.1186/1477-7525-9-63/TABLES/3>
- Oláh, B., Fekete, Z., Kuritárné Szabó, I., & Kovács-Tóth, B. (2023). Validity and reliability of the 10-Item Adverse Childhood Experiences Questionnaire (ACE-10) among adolescents in the child welfare system. *Frontiers in Public Health*, 11, 1258798. <https://doi.org/10.3389/FPUBH.2023.1258798/FULL>
- Olson, D. H. (1993). Assessment of family functioning. En B. J. Rousenville (Ed.), *Diagnostic source book on drug abuse research and treatment* (pp. 63). US

Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute on Drug Abuse.

Olson, D. H. (2000). Circumplex model of marital and family systems. *Journal of Family Therapy*, 22(2), 144–167. <https://doi.org/10.1111/1467-6427.00144>

Olson, D. H., Portner, J. & Bell, R.Q. (1982). FACES II. St. Paul, MN: University of Minnesota.

Organización Mundial de la Salud. (2015). *Declaración de la OMS sobre tasas de cesárea*. <https://www.who.int/es/publications/i/item/WHO-RHR-15.02>

Park, Y. yoon, Jeong, Y. jin, Lee, J., Moon, N., Bang, I., Kim, H., Yun, K. sook, Kim, Y. I., & Jeon, T. hee. (2018). The influence of family adaptability and cohesion on anxiety and depression of terminally ill cancer patients. *Supportive Care in Cancer*, 26(1), 313–321. <https://doi.org/10.1007/S00520-017-3912-4/TABLES/5>

Pedersen, G. A., Smallegange, E., Coetzee, A., Hartog, K., Turner, J., Jordans, M. J. D., & Brown, F. L. (2019). A Systematic Review of the Evidence for Family and Parenting Interventions in Low- and Middle-Income Countries: Child and Youth Mental Health Outcomes. *Journal of Child and Family Studies*, 28(8), 2036–2055. <https://doi.org/10.1007/S10826-019-01399-4>

Quinnell, F. A., & Hynae, M. T. (1999). Convergent and discriminant validity of the perinatal PTSD questionnaire (PPQ): A preliminary study. *Journal of Traumatic Stress*, 12(1), 193–199. <https://doi.org/10.1023/A:1024714903950>

Radoš, S. N., Sawyer, A., Ayers, S., & Burn, E. (2018). Coping styles associated with post-traumatic stress and depression symptoms following childbirth in croatian women. *Psihologijske Teme*, 27(3), 543–559. <https://doi.org/10.31820/PT.27.3.10>

- Ragin, C. C. (2008). Redesigning Social Inquiry - Presentation. *Redesigning Social Inquiry*.
- Rengel, C. (2011). La maniobra de Kristeller: revisión de las evidencias científicas. *Matronas Prof*, 12(3), 82–91.
- Rodríguez, J., & Martínez, A. (2021). La violencia obstétrica: una práctica invisibilizada en la atención médica en España. *Gaceta Sanitaria*, 35(3), 211–212. <https://doi.org/10.1016/J.GACETA.2020.06.019>
- Rodríguez-Garrido, P. (2024). Violencia obstétrica capacitista hacia mujeres con discapacidad: Una revisión integradora de la literatura. *Salud Colectiva*, 19, e4676. <https://doi.org/10.18294/SC.2023.4676>
- Samantha, A., Aguilar, G., Johanna, Y., Reyes, R., Johana, M., & Tandazo, C. (2024). Una Mirada a la Violencia Obstétrica en las Madres Gestantes y No Gestantes. *Ciencia Latina Revista Científica Multidisciplinar*, 8(3), 8800–8817. https://doi.org/10.37811/CL_RCM.V8I3.12037
- Segovia, J. S., Ravanal, E. C., & Castillo, D. V. (2023). Experiences of Gynecological Violence among Binary and NonBinary Chilean Women. *Journal of Sexual Medicine & Research* 2(4), 1–11. [https://doi.org/10.47363/JSMR/2023\(2\)119](https://doi.org/10.47363/JSMR/2023(2)119)
- Sexton, M. B., Hamilton, L., McGinnis, E. W., Rosenblum, K. L., & Muzik, M. (2015). The roles of resilience and childhood trauma history: main and moderating effects on postpartum maternal mental health and functioning. *Journal of Affective Disorders*, 174, 562–568. <https://doi.org/10.1016/J.JAD.2014.12.036>
- Sheftall, A. H., Mathias, C. W., Furr, R. M., & Dougherty, D. M. (2013). Adolescent attachment security, family functioning, and suicide attempts. *Attachment &*

- Human Development*, 15(4), 368–383.
<https://doi.org/10.1080/14616734.2013.782649>
- Shonkoff, J. P., Garner, A. S., Siegel, B. S., Dobbins, M. I., Earls, M. F., McGuinn, L., Pascoe, J., Wood, D. L., High, P. C., Donoghue, E., Fussell, J. J., Gleason, M. M., Jaudes, P. K., Jones, V. F., Rubin, D. M., Schulte, E. E., Macias, M. M., Bridgemohan, C., Fussell, J., ... Wegner, L. M. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1). <https://doi.org/10.1542/PEDS.2011-2663>
- Shorey, S., Chee, C. Y. I., Ng, E. D., Chan, Y. H., Tam, W. W. S., & Chong, Y. S. (2018). Prevalence and incidence of postpartum depression among healthy mothers: A systematic review and meta-analysis. *Journal of Psychiatric Research*, 104, 235–248. <https://doi.org/10.1016/J.JPSYCHIRES.2018.08.001>
- Silva-Fernández, C. S., de la Calle, M., Arribas, S. M., Garrosa, E., & Ramiro-Cortijo, D. (2023). Factors Associated with Obstetric Violence Implicated in the Development of Postpartum Depression and Post-Traumatic Stress Disorder: A Systematic Review. *Nursing Reports (Pavia, Italy)*, 13(4), 1553–1576. <https://doi.org/10.3390/NURSREP13040130>
- Sisto, A., Vicinanza, F., Campanozzi, L. L., Ricci, G., Tartaglini, D., & Tambone, V. (2019). Towards a Transversal Definition of Psychological Resilience: A Literature Review. *Medicina*, 55(11), 745–767. <https://doi.org/10.3390/MEDICINA55110745>
- Soriano, J., & Monsalve, V. (2019). Profiles of personality and resilience in chronic pain: Utility of the CD-RISC-10 to discriminate between resilient and vulnerable types. *Revista de La Sociedad Espanola Del Dolor*, 26(2), 72–80. <https://doi.org/10.20986/RESED.2018.3670/2018>

- Suárez, A. M. (2023). Una mirada a la violencia obstétrica: la relación individuo-cuerpo y sociedad-cuerpos. *Eikasía Revista de Filosofía*, 114, 167–183. <https://doi.org/10.57027/EIKASIA.114.586>
- Takács, L., Smolík, F., & Putnam, S. (2019). Assessing longitudinal pathways between maternal depressive symptoms, parenting self-esteem and infant temperament. *PLoS ONE*, 14(8), e0220633. <https://doi.org/10.1371/JOURNAL.PONE.0220633>
- Tamarit Chuliá, A. (2023). *Ajuste psicosocial en mujeres y personas no binarias queer. Intersecciones entre género y orientación sexual*. [Tesis de doctorado, Universitat de València]. <https://hdl.handle.net/10550/88725>
- Távora, L. (2022). Violence against women in the obstetric care setting. *Revista Peruana de Ginecología y Obstetricia*, 68(4), 1-4. <https://doi.org/10.31403/RPGO.V68I2469>
- Tian, Z., Zhang, N., Li, Y., Wu, Y., & Wang, L. (2024). Adverse childhood experiences and subsequent experiences of intimate partner violence in adulthood: a gender perspective. *Epidemiology and Psychiatric Sciences*, 33, e75. <https://doi.org/10.1017/S2045796024000775>
- Uruk, A. Ç., Sayger, T. V., & Cogdal, P. A. (2007). Examining the influence of family cohesion and adaptability on trauma symptoms and psychological well-being. *Journal of College Student Psychotherapy*, 22(2), 51–63. https://doi.org/10.1300/J035V22N02_05
- Valiente, N. G. L., Guerra, G. de los Á. M., Najarro, D. A. P., Menéndez, A. F. A., & Flores, A. M. V. (2023). Consecuencias físicas y psicológicas de la violencia obstétrica en países de Latinoamérica. *Alerta, Revista Científica Del Instituto Nacional de Salud*, 6(1), 70–77. <https://doi.org/10.5377/ALERTA.V6I1.15231>

- Van Wyk, J. A. (2023). ACEs and Angst: Adverse Childhood Experiences, General Strain Theory, and Adolescent Male Suicidal and Violent Behaviors. *SAGE Open*, 13(2). <https://doi.org/10.1177/21582440231176710>
- Vázquez, M. B., Pereira, B., & Míguez, M. C. (2018). Psychometric Properties of the Spanish Version of the Pregnancy Related Anxiety Questionnaire (PRAQ). *The Spanish Journal of Psychology*, 21, E64. <https://doi.org/10.1017/SJP.2018.67>
- Wagner, M. (20 de octubre de 2000). *El nacimiento en el nuevo milenio*. [Presentación en papel]. I Congreso Internacional del Parto y Nacimiento en casa, Jerez de la Frontera, España.
- Woodside, A. G. (2013). Moving beyond multiple regression analysis to algorithms: Calling for adoption of a paradigm shift from symmetric to asymmetric thinking in data analysis and crafting theory. *Journal of Business Research*, 66(4), 463–472. <https://doi.org/10.1016/J.JBUSRES.2012.12.021>
- Wrenn, G. L., Wingo, A. P., Moore, R., Pelletier, T., Gutman, A. R., Bradley, B., & Ressler, K. J. (2011). The Effect of Resilience on Posttraumatic Stress Disorder in Trauma-Exposed Inner-City Primary Care Patients. *Journal of the National Medical Association*, 103(7), 560–566. [https://doi.org/10.1016/S0027-9684\(15\)30381-3](https://doi.org/10.1016/S0027-9684(15)30381-3)
- Young-Wolff, K. C., Alabaster, A., McCaw, B., Stoller, N., Watson, C., Sterling, S., Ridout, K. K., & Flanagan, T. (2019). Adverse Childhood Experiences and Mental and Behavioral Health Conditions During Pregnancy: The Role of Resilience. *https://Home.Liebertpub.Com/Jwh*, 28(4), 452–461. <https://doi.org/10.1089/JWH.2018.7108>

- Zhang, G.-R., Li, P.-S., & Jia, Y.-B. (2023). Relationship between family cohesion/adaptability and postpartum depressive symptoms: A single-center retrospective study. *World Journal of Psychiatry*, 13(2), 50. <https://doi.org/10.5498/WJP.V13.I2.50>
- Zhang, L., Huang, R., Lei, J., Liu, Y., & Liu, D. (2024). Factors associated with stress among pregnant women with a second child in Hunan province under China's two-child policy: a mixed-method study. *BMC Psychiatry*, 24(1). <https://doi.org/10.1186/S12888-024-05604-7>
- Zhou, Y., Hu, D., Zhang, K., Mao, J., Teng, F., Yu, T., Xu, K., Tan, R., Ding, X., & Liu, Y. (2020). The mechanism of family adaptability and cohesion in suicidal ideation among Chinese cancer patients. *Journal of Psychosocial Oncology*, 38(5), 612–626. <https://doi.org/10.1080/07347332.2020.1757799>
- Zörer, P. B., & Dirik, G. (2023). Social anxiety from an attachment theory perspective: the mediating role of early maladaptive schema domains and rejection sensitivity. *Journal of Evidence-Based Psychotherapies*, 23(2), 25–48. <https://doi.org/10.24193/JEBP.2023.2.9>

Table 1

Descriptive statistics of sociodemographic and clinical variables

		<i>n</i> = 848	<i>n</i> (%)
Sexual Orientation	Heterosexual	810	95.52 %
	Homosexual	6	0.71 %
	Bisexual	28	3.30 %
	I prefer not to say	3	0.35 %
	My sexual orientation is not listed here	1	0.12 %
Marital Status	Single	51	6.01 %
	Married or in a relationship	789	93.04 %
	Separated or divorced	8	0.94 %
Family Structure	Single parent	32	3.77 %
	Partner as a parental figure for my child	691	81.49 %
	Same-sex parents	17	2.00 %
	Extended (includes grandparents, uncles, aunts, or other relatives as parental figures)	91	10.73 %
	Other family structure	17	2.00 %
Annual Income	Less than 5.000€	35	4.13 %
	5.001 € - 10.000 €	33	3.89 %
	10.001 € - 15.000 €	109	12.85 %
	15.001 € - 20.000 €	142	16.75 %
		<i>n</i> = 848	<i>n</i> (%)
	20.001 € - 30.000 €	279	32.90 %
	30.001 € - 40.000 €	152	17.92 %
	More than 40.000 €	98	11.56 %

Are they enough to cover your expenses?	Yes	678	79.95 %
	No	170	20.05 %
Physical health problem	Yes	54	6.37 %
	No	794	93.63 %
Mental health problem	Yes	56	6.60 %
	No	792	93.40 %
Psychological treatment for mental health problems	I am currently receiving it	29	50.88 %
	I received it	21	36.84 %
	No	7	12.28 %
First pregnancy	Yes	570	67.22 %
	No	278	32.78 %
Planned pregnancy	Yes	756	89.15 %
	No	92	10.85 %
Assisted reproduction techniques	Yes	121	14.27 %
	No	727	85.73 %
Perinatal loss in assisted reproduction	Yes	38	31.40 %
	No	83	68.60 %

Table 2

Descriptive analysis of questionnaire variables and fsQCA calibration values.

	<i>M</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>	P10	P50	P90
Abuse	0.60	0.98	0.00	5.00	0.00	0.00	2.00
Family Dysfunction	0.77	0.95	0.00	5.00	0.00	0.00	2.00
ACEs	1.37	1.62	0.00	10.00	0.00	1.00	4.00
Anxiety	27.34	11.47	9.00	63.00	13.00	26.00	42.00
Avoidance	19.03	8.46	9.00	54.00	10.00	17.00	30.00
Resilience	26.33	6.64	0.00	40.00	17.00	27.00	34.00
Cohesion	41.51	6.90	13.00	50.00	32.00	43.00	49.00
Adaptability	38.04	7.61	11.00	50.00	28.00	39.00	47.00
OV	21.45	10.43	14.00	70.00	14.00	17.00	36.00
PPD	9.34	5.46	0.00	27.00	3.00	8.00	17.00
Trauma Activation	10.36	6.83	0.00	28.00	2.00	10.00	20.00
Trauma Avoidance	3.04	4.25	0.00	20.00	0.00	1.00	10.00
Trauma Intrusion	0.96	1.50	0.00	8.00	0.00	0.00	3.00
CB-PTSD	14.36	10.27	0.00	56.00	2.00	12.00	28.00

Note: M = mean; SD = standard deviation; Min. = minimum; Max. = maximum; P10 = 10th percentile; P50 = 50th percentile; P90 = 90th percentile.

Table 5

	High levels of PPD		Low levels of PPD		High levels of CB-PTSD		Low levels of CB-PTSD	
	Cons,	Cov,	Cons,	Cov,	Cons,	Cov,	Cons,	Cov,
High ACEs	.60	.70	.48	.54	.61	.70	.47	.54
Low ACEs	.61	.54	.74	.64	.60	.53	.74	.65
High Anxiety	.71	.73	.50	.50	.69	.70	.52	.52
Low Anxiety	.51	.51	.73	.71	.53	.53	.71	.70
High Avoidance	.67	.72	.51	.54	.66	.70	.52	.55
Low Avoidance	.56	.54	.73	.68	.58	.55	.72	.68
High Resilience	.53	.52	.75	.73	.54	.53	.72	.71
Low Resilience	.72	.75	.51	.51	.70	.72	.52	.53
High Cohesion	.55	.54	.72	.68	.55	.53	.72	.69
Low Cohesion	.67	.71	.51	.53	.68	.71	.51	.53
High Adaptability	.55	.54	.71	.68	.55	.53	.71	.69
Low Adaptability	.68	.71	.52	.53	.68	.70	.52	.53
High OV	.61	.69	.48	.54	.66	.75	.45	.51
Low OV	.60	.54	.73	.64	.56	.51	.78	.69

Analysis of conditions necessary for high and low levels of PPD and CB-PTSD.

Note: Cons = consistency; Cob = coverage.

Table 3

Correlations between PPD, CB-PTSD (with the dimensions: activation, avoidance, and intrusion), ACEs (with the dimensions: abuse and family dysfunction), anxious and avoidant romantic attachment style, resilience, adaptability, cohesion within the family climate, and OV.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PPD	1													
Activation	.72**	1												
Avoidance	.41**	.44**	1											
Intrusion	.31**	.32**	.52**	1										
CB-PTSD	.70**	.89**	.78**	.57**	1									
Abuse	.22**	.23**	.11*	.15**	.22**	1								
Family Dysfunction	.17**	.22**	.10*	.10*	.20**	.41**	1							
ACEs	.23**	.27**	.13**	.15**	.25**	.84**	.83**	1						
Anxiety	.43**	.37**	.16**	.13**	.33**	.19**	.11*	.18**	1					
Avoidance	.34**	.32**	.11**	.05	.27**	.14**	.10*	.14**	.45**	1				
Resilience	-.47**	-.39**	-.27**	-.16**	-.39**	-.10*	-.11*	-.12**	-.29**	-.19**	1			
Cohesion	-.35**	-.33**	-.23**	-.12**	-.33**	-.25**	-.18**	-.26**	-.29**	-.31**	.25**	1		
Adaptability	-.35**	-.35**	-.25**	-.12**	-.35**	-.24**	-.15**	-.23**	-.30**	-.30**	.32**	.86**	1	
OV	.27**	.26**	.58**	.32**	.46**	.16**	.11*	.16**	.11**	.13**	-.18**	-.22**	-.23**	1

*Nota: *p* ≤ .01; ***p* ≤ .001; 1 = PPD; 2 = Trauma Activation; 3 = Trauma Evitation; 4 = Trauma Intrusion; 5 = CB-PTSD; 6 = Abuse; 7 = Family Dysfunction; 8 = ACEs; 9 = Anxiety; 10 = Avoidance; 11 = Resilience; 12 = Cohesion; 13 = Adaptability; 14 = OV.

Table 4

Hierarchical regression models on PPD and CB-PTSD

Predictor	PPD				VIF	CB-PTSD				VIF
	ΔR^2	ΔF	β	t		ΔR^2	ΔF	β	t	
Block 1	.05	42.10				.06	48.63			
ACEs			.09**	2.87	1.10			.10***	3.26	1.10
Block 2	.30	69.87				.20	42.14			
Anxiety			.22***	6.65	1.31			.14***	4.38	1.31
Avoidance			.11***	3.29	1.27			.06	1.84	1.27
Resilience			-.32***	-10.32	1.19			-.23***	-7.38	1.19
Cohesion			-.13*	-2.28	3.94			-.06	-1.01	3.94
Adaptability			.03	0.49	4.06			-.06	-1.09	4.06
Block 3	.02	24.49				.13	162.78			
OV			.15***	4.95	1.08			.38***	12.76	1.08
Durbin-Watson	1.94					2.07				
R^2_{adj}	.37					.39				

Note: ΔR^2 = change in R^2 ; ΔF = change in F ; β = regression coefficient; t = value of t ; VIF = variance inflation factor; R^2_{adj} = adjusted R^2 ; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Table 6

Summary of the main conditions sufficient for the intermediate solution for high and low levels of PPD and CB-PTSD

<i>Frequency threshold: 1</i>	High levels of PPD <i>Consistency threshold: .85</i>			Low levels of PPD <i>Consistency threshold: .87</i>			High levels of CB-PTSD <i>Consistency threshold: .87</i>			Low levels of CB-PTSD <i>Consistency threshold: .87</i>		
	1	2	3	1	2	3	1	2	3	1	2	3
ACEs			●			○		●			○	
Anxiety	●	●		○					●	○		
Avoidance		●		○		○				○		○
Resilience	○		○	●	●	●	○		○			
Cohesion									○		●	
Adaptability		○			●							●
OV			●		○	○	●	●		○	○	○
Gross coverage	.56	.45	.34	.50	.49	.40	.49	.44	.43	.49	.48	.49
Single coverage	.06	.01	.01	.01	.02	.01	.04	.03	.01	.02	.02	.01
Consistency	.84	.86	.87	.85	.85	.88	.84	.83	.85	.86	.85	.86
Total consistency			.77			.76			.77			.77
Total coverage			.79			.79			.77			.76

Note: Vector based on the Fiss (2021) nomen

clature. For high levels of PPD and CB-PTSD: 1, 1, 1, 0, 0, 0, 1; for low levels of PPD and PTSD-CB: 0, 0, 0, 1, 1, 1, 0; ● = indicates presence of central conditions; ○ = indicates absence of central conditions. Since all explanatory pathways are found in both the parsimonious and intermediate solutions, all conditions in the table are central and not peripheral.

DISCUSIÓN

Esta tesis doctoral tuvo como objetivo examinar, desde una perspectiva ecológica y del ciclo vital, cómo las ACEs y el apego adulto interactúan con recursos individuales y diádicos en la configuración de trayectorias de ajuste psicológico durante el periodo perinatal —incluyendo psicopatología y CPT— en distintos contextos reproductivos y ante eventos perinatales críticos, mediante un enfoque metodológico mixto que integró revisiones sistemáticas y estudios empíricos con análisis lineales y configuracionales.

En resumen, los estudios que conforman esta tesis abordan distintas etapas y contextos del periodo perinatal, incluyendo los TRA, la GS, la PP y el posparto. Los resultados evidencian que las ACEs y el apego adulto constituyen ejes centrales de vulnerabilidad que interactúan con recursos individuales y diádicos —como la resiliencia y el CD— para configurar trayectorias diferenciales de ajuste psicológico. Estas trayectorias pueden manifestarse en forma de psicopatología (p. ej., culpa asociada a la pérdida, DPP, TEPTP o DP) o en procesos adaptativos como el CPT. En este sentido, los hallazgos sugieren que el ajuste psicológico en el periodo perinatal depende de la interacción entre vulnerabilidades distales, contextos reproductivos específicos y recursos relacionales disponibles en el sistema familiar.

En relación con el **primer objetivo específico**, centrado en sintetizar la evidencia sobre el papel del CD en parejas sometidas a TRA (**Estudio 1**), los resultados indican que el CD positivo se asocia con menores niveles de ansiedad y depresión, así como con mayor autoestima, adaptación y satisfacción de pareja. Estrategias como el CD común, el afrontamiento centrado en emociones, el afrontamiento centrado en problemas y el afrontamiento delegado se han

relacionado consistentemente con mejores resultados relacionales y psicológicos. En particular, el CD común se asocia con mayor satisfacción de pareja y menor angustia sexual, desempeñando un papel relevante en la adaptación marital (El Amiri et al., 2023; Molgora et al., 2019). Asimismo, la comunicación sobre el estrés y el CD de apoyo se relacionan con mayor satisfacción relacional y adaptación marital, así como con menores niveles de ansiedad y depresión y mayor cohesión familiar en mujeres con infertilidad (Molgora et al., 2019; Tang et al., 2022).

Por el contrario, las estrategias negativas de CD se asocian con mayor malestar psicológico y peores resultados relacionales. La percepción de CD negativo por parte de la pareja se relaciona con mayor malestar sexual y preocupaciones relacionadas con la fertilidad (El Amiri et al., 2023), así como con mayores niveles de ansiedad y depresión y menor autoestima y satisfacción relacional (Facchin et al., 2021; Tang et al., 2023). Del mismo modo, el afrontamiento evasivo se ha asociado con mayores niveles de ansiedad y depresión (Zurlo et al., 2020) y peor calidad de vida en parejas sometidas a TRA (Bai et al., 2022). Asimismo, la baja expresión emocional se ha vinculado con mayor malestar emocional y estrés en mujeres (García-Quintáns et al., 2023), así como con peor adaptación marital y menor cohesión diádica (Zurlo et al., 2020). Además, la evitación del apego se relaciona negativamente con el uso de estrategias de CD positivo y con menores niveles de satisfacción relacional y mayor conflicto de pareja (Péloquin et al., 2023).

Las diferencias de género también resultan relevantes en el contexto de la TRA. Las mujeres tienden a experimentar mayor estrés relacionado con la fertilidad, pero muestran estrategias de CD más positivas, especialmente en términos de comunicación del estrés y expresión emocional (El Amiri et al., 2023; Markestad et al.,

1998; Molgora et al., 2019; Zurlo et al., 2020). Por su parte, los hombres tienden a mostrar mayores niveles percibidos de capacidad de CD (Molgora et al., 2019).

En conjunto, estos hallazgos subrayan la importancia de promover estrategias de CD positivo para favorecer la adaptación psicológica de las parejas que atraviesan tratamientos de reproducción asistida.

En relación con la segunda parte del primer objetivo específico, centrada en sintetizar la evidencia sobre el impacto de la gestación subrogada (GS) en el apego parental y la salud mental de las madres subrogadas, los padres intencionales y los niños nacidos mediante este método (Estudio 2), los estudios incluidos (n = 11) abordaron distintos aspectos psicológicos, relacionales y del desarrollo en el contexto de la subrogación.

Los resultados muestran que las madres subrogadas tienden a presentar menor conexión emocional prenatal con el bebé, pero mantienen un elevado cuidado hacia su desarrollo durante la gestación en comparación con madres gestantes convencionales (Fischer y Gillman, 1991; Lamba et al., 2018; Lorenceau et al., 2015). Asimismo, el tipo de subrogación (tradicional vs. gestacional) y la relación con los padres intencionales influyen en la calidad del apego durante el embarazo, destacando la relevancia del contexto prenatal en la formación del vínculo temprano (Lorenceau et al., 2015).

La evidencia también sugiere que el vínculo prenatal no solo influye en el bienestar materno durante la gestación, sino que predice la calidad del vínculo madre-bebé tras el nacimiento (Henrichs et al., 2023; Tichelman et al., 2019). En este sentido, la ansiedad prenatal puede debilitar el vínculo durante el embarazo y

asociarse posteriormente con un vínculo madre-hijo más débil y mayores dificultades emocionales y conductuales en la infancia temprana (Henrichs et al., 2023). De forma consistente, diversos factores psicológicos y contextuales influyen en el vínculo posnatal: síntomas depresivos, TEPT, trastornos del sueño o complicaciones obstétricas se relacionan con un vínculo más débil, mientras que la satisfacción de pareja, el apoyo social y la experiencia previa en la crianza actúan como factores protectores (La Rosa et al., 2025).

En relación con el apego infantil, la evidencia disponible indica que los niños nacidos mediante GS no presentan diferencias significativas en la seguridad del apego en comparación con aquellos nacidos mediante otras técnicas de reproducción asistida o por concepción natural (Carone et al., 2023; Carone et al., 2025; Quintigliano et al., 2025). De hecho, más del 60% de los niños fueron clasificados como apego seguro tanto en familias con padres homosexuales como en familias con padres intencionales provenientes de GS (Carone et al., 2025). La seguridad del apego se relacionó principalmente con variables relacionales, como la sensibilidad parental, la disponibilidad de los cuidadores y la calidad de la crianza compartida, tanto en familias monoparentales como en familias con padres del mismo género (Carone, Baiocco et al., 2020; Carone et al., 2020; Carone, 2022; Carone et al., 2023; Carone et al., 2025). Estos resultados sugieren que no es la técnica reproductiva en sí misma, sino la calidad de la dinámica relacional y del entorno familiar, lo que parece determinar el bienestar psicológico infantil.

Los estudios longitudinales también destacan la importancia de la seguridad del apego y del apoyo parental en la exploración por parte de los niños de sus orígenes subrogados (Carone et al., 2020). En este sentido, la transparencia en la comunicación

y la coherencia emocional de los padres favorecen un entorno seguro para integrar la historia de nacimiento, mientras que la evitación o el ocultamiento de información pueden dificultar este proceso (Carone et al., 2020; Carone et al., 2024).

En cuanto a la psicopatología parental, algunas investigaciones indican que las madres subrogadas presentan mayores niveles de depresión durante el embarazo y el posparto en comparación con mujeres embarazadas mediante métodos convencionales (Glonti et al., 2015; Lamba et al., 2018). Asimismo, los padres intencionales, especialmente durante la pandemia de COVID-19, mostraron mayores niveles de ansiedad y somatización que aquellos que habían tenido hijos antes de este periodo (Carone et al., 2021). La pandemia actuó como un factor estresor contextual que incrementó las dificultades emocionales y vinculares en estas familias (Carone et al., 2021).

Estos resultados ponen de relieve la importancia de incorporar atención psicológica en los programas de apoyo vinculados a la gestación subrogada (GS). Los profesionales de la salud deberían contar con formación específica que les permita comprender la compleja dinámica psicológica, emocional y relacional implicada en estos procesos y ofrecer apoyo integral a todas las partes involucradas.

Aunque la GS continúa siendo objeto de debate ético, jurídico y social —y está prohibida en numerosos países—, en aquellos contextos donde es legal resulta fundamental analizar críticamente sus implicaciones psicosociales. La evidencia sugiere que estos procesos pueden implicar dinámicas de vulnerabilidad estructural, asimetrías de poder y posibles riesgos emocionales y relacionales que no siempre son plenamente visibilizados. En este sentido, garantizar condiciones de protección, dignidad y autonomía para la gestante constituye un requisito mínimo, aunque

insuficiente si no se acompaña de evaluaciones rigurosas de sus consecuencias a medio y largo plazo.

En esta línea, la Relatora Especial de Naciones Unidas sobre la violencia contra las mujeres y las niñas ha señalado recientemente la necesidad de revisar críticamente la práctica de la GS, advirtiendo sobre posibles riesgos de explotación, coacción económica y consecuencias reproductivas y psicológicas, así como implicaciones para los derechos de la infancia (Alsalem, 2025). Estas consideraciones refuerzan la importancia de incorporar el principio de precaución en la regulación y supervisión de estos procesos.

Desde una perspectiva aplicada, resulta esencial garantizar que las decisiones relacionadas con la GS se adopten a partir de información completa y basada en evidencia científica independiente. Asimismo, la implementación de equipos multidisciplinares —incluyendo profesionales de la psicología, el trabajo social y el ámbito jurídico— permitiría evaluar de forma integral los riesgos y proteger especialmente a las personas en situación de mayor vulnerabilidad. En este marco, cualquier regulación debería situar en el centro la protección de los derechos humanos, la prevención de la explotación y el bienestar psicológico de todas las personas implicadas.

En los contextos donde la GS es legal, diversos organismos internacionales recomiendan integrar evaluaciones psicológicas y asesoramiento psicoeducativo a lo largo de todo el proceso. La American Society for Reproductive Medicine señala que las gestantes y los progenitores intencionales deberían recibir evaluación psicológica realizada por profesionales especializados, incluyendo la valoración de motivaciones, expectativas, historia de trauma reproductivo, posibles dinámicas de coerción y

capacidad de afrontamiento del proceso de separación (Austin et al., 2024). Esta preparación debería integrarse antes, durante y después del embarazo, abordando aspectos como el apego emocional, las expectativas y las estrategias de afrontamiento.

En particular, dado que algunas gestantes pueden recurrir al distanciamiento emocional como estrategia de autoprotección, las intervenciones preparatorias podrían abordar formas adaptativas de gestionar el vínculo y anticipar el proceso de separación. Estrategias como la escritura reflexiva, el uso de diarios o espacios de diálogo estructurado podrían favorecer la elaboración emocional y reducir el riesgo de duelo complicado tras el nacimiento.

Organizaciones internacionales como la FIGO y la ESHRE también subrayan la necesidad de garantizar consentimiento informado, proteger el bienestar de las gestantes y situar el interés del menor en el centro de las decisiones (FIGO, 2025; ESHRE, 2025). Asimismo, diversos trabajos han señalado preocupaciones relacionadas con posibles situaciones de explotación, coerción económica o falta de regulación en contextos de mayor vulnerabilidad socioeconómica (Akangah et al., 2025; Frati et al., 2021; Writing Group on behalf of the ESHRE Ethics Committee et al., 2025; Zadykowicz et al., 2025).

En relación con los progenitores intencionales, el acompañamiento psicológico podría incluir orientación sobre expectativas realistas, gestión del estrés y estrategias para abordar con los hijos la narrativa de sus orígenes. La evidencia longitudinal indica que los niños informados sobre sus orígenes antes de los siete años presentan relaciones familiares más positivas y mayor bienestar psicológico en etapas posteriores del desarrollo (Golombok et al., 2023; Ilioi et al., 2017).

Finalmente, la literatura reciente también señala la importancia del seguimiento posnatal. Algunos estudios indican que la GS puede asociarse con mayor riesgo de problemas de salud mental de nueva aparición en comparación con mujeres que concibieron sin asistencia o mediante FIV, lo que subraya la necesidad de acompañamiento psicológico prolongado en el posparto (Velez et al., 2025). La oferta de espacios de apoyo estructurado para procesar la separación, junto con intervenciones tempranas de apoyo a la parentalidad para los progenitores intencionales, podría contribuir a prevenir dificultades emocionales y favorecer trayectorias de ajuste más adaptativas.

En relación con la **tercera parte del primer objetivo específico**, se desarrolló el **Estudio 3** donde se sintetiza sistemáticamente la evidencia científica sobre la relación entre PP y apego parental. La revisión incluyó 33 estudios con más de 6000 mujeres, menos de 1000 hombres y más de 11,000 niños. Los hallazgos destacan el papel del apego adulto en la adaptación al duelo perinatal, la influencia del vínculo materno-fetal en el afrontamiento de la pérdida y la relevancia del apego parental para predecir resultados en niños nacidos tras una PP.

Los resultados indican que el duelo perinatal no resuelto se asocia con mayor angustia psicológica materna durante el embarazo (Heller y Zeanah, 1999). El apego inseguro o desorganizado predice una peor adaptación al duelo, mientras que el apego seguro previo se vincula con menores niveles de síntomas de duelo y angustia. Asimismo, la pérdida no resuelta se ha asociado con estilos de apego evitativo en los niños nacidos después de una PP (Heller y Zeanah, 1999; Hughes et al., 2004, 2006; Pinto et al., 2006). En adultos, el apego seguro también se relaciona con mejor funcionamiento relacional y mayor calidad de la relación de pareja (Freedle y Oliveira,

2024; Scheidt et al., 2012).

Aunque la PP suele asociarse con mayor estrés psicológico durante el embarazo posterior (Beauquier-Maccotta et al., 2022; Kinsey et al., 2014; Tsartsara y Johnson, 2006; Yilmaz y Beji, 2013), esta angustia no parece afectar necesariamente a los niveles de vínculo materno-fetal en comparación con mujeres sin historia de pérdida (Armstrong, 2004; Branjerdporn et al., 2022; Mehran et al., 2013; Yilmaz y Beji, 2013). De hecho, un vínculo materno-fetal más fuerte se ha asociado con mejores resultados emocionales y conductuales en niños nacidos tras la pérdida (Branjerdporn et al., 2022).

No obstante, la literatura muestra resultados heterogéneos. Algunos estudios indican que una mayor intensidad del duelo se relaciona con menor vínculo prenatal, especialmente en etapas tempranas del embarazo (Al-Maharma et al., 2016; Beauquier-Maccotta et al., 2022). Este patrón podría reflejar estrategias de evitación del vínculo como mecanismo de protección ante el temor a nuevas pérdidas (Donegan et al., 2023; Grabow y Becker-Blease, 2023), aunque su mantenimiento podría tener implicaciones negativas para el desarrollo posterior del niño (Branjerdporn et al., 2022). Sin embargo, otros trabajos no encuentran diferencias en la calidad del apego prenatal entre mujeres con o sin historia de PP (Armstrong, 2002; Branjerdporn et al., 2021; Kinsey et al., 2014; Mehran et al., 2013; Price, 2008; Yilmaz y Beji, 2013).

En resumen, la evidencia sugiere que el vínculo materno-fetal en embarazos posteriores a una PP puede mantenerse intacto e incluso reforzarse en algunos casos debido a una mayor implicación emocional durante el embarazo (Kelmanson, 2024). No obstante, variables como el contexto cultural, los factores sociodemográficos o la fase del proceso de duelo pueden actuar como elementos de confusión en estos

resultados (Mehran et al., 2013). Estos hallazgos subrayan la importancia de ofrecer apoyo psicológico que facilite la elaboración del duelo, promueva vínculos saludables con el bebé posterior y reduzca la ansiedad y depresión asociadas al embarazo tras la pérdida (Armstrong, 2004; Caldwell et al., 2024).

Los resultados de esta revisión sugieren la necesidad de implementar políticas y prácticas que reconozcan y validen el DP, proporcionando apoyo específico y continuo tanto a nivel clínico como social. Los profesionales de salud deben realizar evaluaciones detalladas del apego y duelo en madres y padres que han experimentado PP, adaptando las intervenciones a necesidades individuales. Es fundamental la formación y sensibilización profesional sobre la importancia de reconocer y gestionar adecuadamente el DP, así como la implementación de políticas que reconozcan y validen esta experiencia, proporcionando apoyo específico y continuo a nivel clínico y social.

En relación con el **segundo objetivo específico**, se desarrolló el **Estudio 4** donde se analizó cómo las ACEs, el apego romántico inseguro, la culpa y los problemas de salud mental predicen el CD positivo en mujeres tras PP. Los resultados de este estudio respaldan la hipótesis 4, indicando que la adaptación al duelo perinatal a través del coping diádico positivo (CD) es un proceso multifactorial influido por vulnerabilidades biográficas (ACEs), patrones relacionales (apego) y factores emocionales (culpa y problemas de salud mental). En consonancia con la teoría del apego (Bowlby, 1978) y el modelo sistémico-transaccional del CD (Bodenmann et al., 2017), la evitación del apego emergió como el predictor más fuerte y consistente de la reducción del CD tras la pérdida. Asimismo, la ansiedad de apego medió la relación entre ACEs y CD, de modo que una mayor exposición a ACEs se asoció con mayor

apego ansioso y, a su vez, con niveles más bajos de CD (Freedle y Oliveira, 2024; Scheidt et al., 2012; Smith et al., 2025).

Confirmando la hipótesis 1 del estudio 4, las ACEs se asociaron con menores niveles de CD positivo. Los análisis de mediación indicaron que esta relación se explica principalmente a través de la ansiedad de apego. Las mujeres con mayor exposición a ACEs presentaron mayor ansiedad relacional, caracterizada por miedo al abandono y desregulación emocional, lo que a su vez se relacionó con menor CD (Höltge et al., 2023; Shahab et al., 2021; Widom et al., 2018; Zumdahl et al., 2025). En el contexto de la pérdida perinatal, esta hiperactivación puede intensificar la angustia y la tensión relacional, dificultando el afrontamiento conjunto incluso cuando existe deseo de cercanía.

Los estilos de apego fueron los predictores más robustos del CD, confirmando la hipótesis 3. En particular, la evitación del apego mostró una asociación negativa más fuerte, mientras que la ansiedad también se relacionó con menor CD, aunque con menor intensidad. Estos hallazgos subrayan el papel central de los procesos de regulación emocional asociados al apego en la adaptación de las parejas a la pérdida perinatal (Albuquerque et al., 2018; Caldwell et al., 2023; Christiansen et al., 2013; Condon, 1993; Kersting y Wagner, 2012; Scheidt et al., 2012) y son coherentes con la teoría del apego de Bowlby (1978), que plantea que el apego inseguro compromete la regulación emocional y la confianza en las figuras significativas durante situaciones de estrés.

Los análisis configuracionales mostraron además que niveles bajos de evitación del apego constituyen una condición clave para altos niveles de CD. Desde

la perspectiva de la “base segura” (Mikulincer y Shaver, 2018), el CD positivo requiere que los miembros de la pareja se perciban como emocionalmente disponibles y accesibles, facilitando la expresión de vulnerabilidad y la regulación conjunta del estrés. Sin embargo, la evitación del apego —caracterizada por autosuficiencia defensiva, incomodidad ante la intimidad y supresión de necesidades emocionales (Brandão et al., 2020; Wendołowska et al., 2022)— dificulta estos procesos, limitando la búsqueda de proximidad y la apertura emocional. A nivel neurobiológico, además, las personas con apego evitativo tienden a desactivar el sistema de apego ante situaciones de angustia, inhibiendo la revelación emocional y la búsqueda de apoyo (Mikulincer y Shaver, 2018). En el contexto del duelo perinatal, esta desactivación puede interferir con la construcción compartida de significado y la correulación emocional que caracterizan un CD eficaz (Freedle y Oliveira, 2024; Wendołowska et al., 2022).

Por el contrario, aunque la ansiedad de apego también se asoció con menor CD positivo, su efecto fue menos pronunciado. Esto podría explicarse porque las personas con alta ansiedad tienden a buscar activamente cercanía y apoyo, aunque de forma hiperactivada o menos regulada (Leroy et al., 2020). Esta búsqueda de conexión puede mantener cierto nivel de comunicación diádica, mientras que la evitación favorece la desconexión emocional y el aislamiento, procesos más perjudiciales para el CD positivo (Bröning y Wartberg, 2024; Freedle y Oliveira, 2024).

La ausencia de un efecto indirecto significativo a través de la evitación sugiere que las estrategias evitativas reflejan orientaciones relacionales más estables y menos directamente condicionadas por las ACEs, mientras que la ansiedad de apego

parece más sensible a experiencias tempranas de trauma relacional. En este sentido, adversidades como el abuso, el abandono o la exposición a violencia pueden generar modelos internos caracterizados por hipervigilancia relacional y preocupación por la disponibilidad de la pareja (Höltge et al., 2023; Shahab et al., 2021; Widom et al., 2018; Zumdahl et al., 2025). Asimismo, se ha observado que distintos tipos de ACEs pueden relacionarse diferencialmente con ansiedad o evitación en el apego adulto (Höltge et al., 2023; Zumdahl et al., 2025).

Además de los efectos mediados por el apego, las ACEs también mostraron asociaciones directas con el CD, lo que sugiere que la adversidad temprana puede afectar al afrontamiento diádico a través de múltiples vías, incluyendo dificultades persistentes en la regulación emocional, creencias relacionadas con el trauma, mayor culpa y vulnerabilidad a problemas de salud mental (Shahab et al., 2021; Widom et al., 2018).

Confirmando la hipótesis 2, los problemas de salud mental también se asociaron con perfiles de afrontamiento menos adaptativos. Las mujeres que reportaron estos problemas mostraron mayor exposición a ACEs, mayor inseguridad de apego y menor CD, lo que sugiere vías acumulativas de vulnerabilidad que limitan los recursos de afrontamiento relacional durante el duelo.

En esta línea, la culpa se asoció negativamente con el CD positivo, lo que respalda la evidencia previa que vincula la autculpa con mayor malestar tras la pérdida perinatal. Aunque se evaluó mediante un único ítem debido a la ausencia de instrumentos validados en castellano, su asociación con el CD sugiere que la culpa puede inhibir el intercambio emocional y el apoyo mutuo al favorecer sentimientos de vergüenza, aislamiento o temor a convertirse en una carga para la pareja.

Más allá de las asociaciones lineales, el análisis fsQCA mostró que el CD en el contexto de la pérdida perinatal sigue una lógica equifinal y asimétrica: múltiples combinaciones de ACEs, patrones de apego, culpa y problemas de salud mental pueden conducir a niveles altos o bajos de CD, sin que ningún factor por sí solo sea suficiente. En este sentido, la ausencia de condiciones de riesgo clave —especialmente baja evitación del apego— resultó más determinante que la mera presencia de factores protectores.

Estos resultados sugieren la existencia de múltiples perfiles de adaptación. Por ejemplo, niveles altos de CD pueden observarse incluso en presencia de ACEs cuando la evitación del apego es baja y no existen problemas de salud mental, mientras que niveles bajos pueden aparecer incluso con pocas ACEs cuando la evitación coexiste con altos niveles de culpa.

En términos clínicos, pueden distinguirse tres perfiles generales: (1) alta vulnerabilidad (alta ansiedad, alta evitación y alta culpa), asociado con mayor riesgo de desconexión emocional y duelo complicado (Scheidt et al., 2012); (2) vulnerabilidad centrada en el apego (alta ansiedad o evitación sin problemas de salud mental), que sugiere la utilidad de intervenciones de pareja basadas en el apego para fortalecer la base segura (Bröning y Wartberg, 2024; Wendołowska et al., 2022); y (3) perfiles protectores (baja ansiedad y evitación, con o sin ACEs), caracterizados por mayor CD y beneficiados por el fortalecimiento de recursos diádicos y comunitarios.

Por ello, los resultados ponen de relieve la necesidad de implementar intervenciones preventivas y terapéuticas centradas en la promoción de un apego más seguro a lo largo del ciclo vital. El desarrollo de programas psicoeducativos orientados a mejorar la regulación emocional, la expresión afectiva y el CD positivo

podría mitigar el impacto de las ACEs y facilitar una respuesta más adaptativa ante situaciones altamente estresantes como la PP.

En relación con el **tercer objetivo específico**, el **estudio 5** pretende examinar la influencia conjunta de vulnerabilidades individuales (ACEs, apego inseguro), de recursos relacionales (CD positivo) y de factores contextuales sobre el DP y el CPT en mujeres tras la PP.

En este sentido, los resultados confirman el papel central de las ACEs y del apego adulto en la adaptación al duelo perinatal, respaldando la hipótesis 1 del estudio 5. Una mayor frecuencia de pérdidas y una mayor exposición a ACEs se asociaron con un DP más intenso y con patrones de apego más inseguros. En particular, la ansiedad de apego emergió como un factor de vulnerabilidad relevante, asociado de manera consistente con mayor intensidad del duelo y menores niveles de CD positivo, en línea con investigaciones previas (Maccallum y Bryant, 2018; Scheidt et al., 2012). Desde la teoría del apego, este patrón puede explicarse porque las personas con apego ansioso tienden a experimentar mayor malestar emocional y dificultades en la regulación afectiva debido a la hiperactivación del sistema de apego, lo que puede amplificar las respuestas de duelo (Lenzo et al., 2025; Smith et al., 2025). Asimismo, el apego evitativo se asoció con menores niveles de CD, sugiriendo que las estrategias de desactivación emocional pueden limitar el acceso a recursos relacionales de afrontamiento en contextos de pérdida (LeRoy et al., 2019).

En cuanto a los factores que explican la intensidad del duelo, los resultados respaldan la hipótesis 2, mostrando que el DP se relaciona principalmente con el tiempo transcurrido desde la pérdida, las ACEs, la ansiedad de apego y el CD. La asociación entre mayor proximidad temporal a la pérdida y mayor intensidad del

duelo coincide con la evidencia longitudinal que describe una disminución progresiva del duelo con el paso del tiempo (Mørk et al., 2023; Tseng et al., 2017). La relación positiva observada entre CD y DP puede interpretarse como una movilización relacional ante el malestar agudo en las primeras fases del duelo, de modo que las parejas con mayor intensidad de sufrimiento activan estrategias de afrontamiento diádico como respuesta al estrés, más que como un amortiguador inmediato del malestar (Tseng et al., 2017). No obstante, el diseño transversal impide establecer la dirección causal de estas asociaciones.

A diferencia del DP, el CPT evidenció una menor proporción de varianza explicada por los modelos lineales, lo que sugiere que este proceso puede depender de mecanismos adicionales no plenamente captados en los análisis, como la rumiación deliberada, la reconstrucción de creencias fundamentales o la búsqueda de sentido tras la pérdida (Álvarez-Calle y Chaves, 2023; Freedle et al., 2021; Ryninks et al., 2022). Sin embargo, el CD positivo emergió como el único predictor significativo del CPT, lo que respalda los modelos interpersonales que destacan el papel de los recursos relacionales y la construcción compartida de significado en los procesos de crecimiento tras la adversidad (Albuquerque et al., 2018; Freedle y Oliveira, 2024). Los análisis mediacionales sugirieron además que el CD podría actuar como un mecanismo que conecta la seguridad del apego con el desarrollo de CPT.

Desde una perspectiva configuracional, los resultados respaldan la hipótesis 3, mostrando que la adaptación al duelo perinatal es una cuestión de diferencias individuales. Los perfiles caracterizados por pérdida reciente y alta ansiedad de apego se asociaron con niveles elevados de DP, así como aquellos en los que convergían las altas ACEs, con la evitación del apego y con el bajo CD, lo que pone de

relieve el papel del apego ansioso como factor transversal de vulnerabilidad en distintos contextos de duelo (Maccallum y Bryant, 2018). Un subgrupo especialmente vulnerable combinaba altos niveles de ACEs, evitación del apego y bajos niveles de CD, reflejando la convergencia entre adversidad temprana y desvinculación relacional (Mackle et al., 2023; McDonnell y Valentino, 2016). En contraste, los niveles más bajos de duelo se asociaron con configuraciones caracterizadas por baja exposición a ACEs, menor ansiedad de apego y presencia de CD, lo que subraya el papel protector de los recursos relacionales en la adaptación al duelo.

Asimismo, el tiempo transcurrido desde la pérdida mostró un papel diferencial según el tipo de resultado analizado: mientras que se relacionó con la intensidad del duelo, su influencia fue más flexible en los procesos de crecimiento, lo que refleja la naturaleza no lineal e individualizada de la adaptación tras la pérdida perinatal (Mørk et al., 2023; Tseng et al., 2017). Por su parte, los niveles elevados de crecimiento postraumático tendieron a emerger en configuraciones donde estaban presentes recursos relacionales, especialmente el CD positivo. Estos resultados refuerzan la idea de que el crecimiento tras la pérdida depende en gran medida de procesos interpersonales y de construcción compartida de significado (Albuquerque et al., 2018; Freedle y Oliveira, 2024).

Los predictores diferenciales del DP y del CPT respaldan los modelos de proceso dual e integradores (Stroebe y Schut, 1999, 2010), que plantean que los procesos orientados a la pérdida y a la restauración pueden coexistir (Álvarez-Calle y Chaves, 2023). Mientras que el DP parece estar impulsado principalmente por factores de vulnerabilidad —como las ACEs, la ansiedad de apego o la proximidad temporal a la pérdida—, el CPT parece depender en mayor medida de recursos

relacionales, especialmente del apego seguro y del CD eficaz. En este sentido, el apego seguro emergió como un posible factor protector de carácter transdiagnóstico, asociado tanto a menor intensidad del duelo como a mayor potencial de crecimiento, probablemente a través de mecanismos como una mejor regulación emocional, mayor búsqueda de apoyo y un procesamiento cognitivo más adaptativo (Freedle y Oliveira, 2024; Smith et al., 2025).

Añadido a lo anterior, los resultados sugieren una doble función de las ACEs: como factor de riesgo para un duelo más intenso y, en determinadas configuraciones, como posible catalizador de crecimiento cuando coexisten con recursos relacionales protectores. Este patrón coincide con los efectos paradójicos de la adversidad descritos en la literatura sobre resiliencia, según los cuales niveles moderados de adversidad en presencia de relaciones de apoyo pueden favorecer la flexibilidad psicológica y la búsqueda de sentido, mientras que una adversidad elevada en ausencia de dichos recursos incrementa la vulnerabilidad (Osofsky et al., 2021).

Por último, la ausencia de condiciones necesarias en los análisis fsQCA refuerza una visión no determinista de la adaptación a la pérdida perinatal, subrayando la existencia de múltiples trayectorias de ajuste y la necesidad de evaluaciones e intervenciones individualizadas (Scheidt et al., 2012). En este sentido, las personas con alta ansiedad de apego y bajo CD podrían beneficiarse de intervenciones centradas en la pareja orientadas a mejorar la comunicación y el afrontamiento conjunto, mientras que aquellas con patrones evitativos podrían requerir enfoques más individualizados centrados en la expresión emocional y el compromiso relacional (LeRoy et al., 2019; Albuquerque et al., 2018).

En relación con el cuarto objetivo específico, el Estudio 6 examinó cómo las vulnerabilidades individuales (ACEs, apego inseguro), los recursos relacionales (cohesión y adaptabilidad familiar), la resiliencia y los factores contextuales — especialmente la VO— se relacionan con la DPP y el TEPTP.

En primer lugar, los hallazgos respaldan la hipótesis 1, al mostrar que una mayor exposición a factores de vulnerabilidad se asocia con mayor sintomatología posparto. En particular, las ACEs, la VO y el apego romántico inseguro se relacionaron con niveles más elevados de DPP y TEPTP, en consonancia con investigaciones previas (Armer et al., 2024; Bielas et al., 2016). Estos resultados sugieren que el periodo perinatal puede actuar como un contexto especialmente sensible para la reactivación de traumas previos, especialmente cuando se ve agravado por experiencias de VO, cuyos efectos pueden manifestarse a nivel individual, relacional e institucional (Araujo-Cuauro, 2019; Silva-Fernández et al., 2023).

En relación con los recursos protectores, los resultados también respaldan la hipótesis 2. La resiliencia emergió como el factor protector más consistente, reduciendo significativamente el riesgo de DPP y TEPTP tanto en los análisis de regresión jerárquica como en los configuracionales (Sexton et al., 2015; Finch et al., 2024). Del mismo modo, el funcionamiento familiar mostró un efecto protector, aunque únicamente la cohesión familiar se asoció significativamente con menores niveles de DPP. Estos resultados ponen de relieve la relevancia de los recursos personales y relacionales para mitigar el impacto de las vulnerabilidades previas durante el posparto.

Asimismo, en línea con la hipótesis 3, la DPP y el TEPTP presentaron una fuerte asociación entre sí, lo que resulta coherente con la superposición parcial de su

sintomatología (Dekel et al., 2020). No obstante, los patrones explicativos mostraron algunas diferencias. Mientras que la DPP se relacionó con todos los factores analizados, el TEPTP se explicó de forma más específica por la combinación de ACEs, apego ansioso, baja resiliencia y VO. En particular, la VO emergió como el predictor más robusto del TEPTP en ambos enfoques analíticos, en línea con la literatura previa (Ortiz-Esquinas et al., 2025; Vega-Sanz et al., 2024). En contraste, la etiología de la DPP parece más heterogénea y multifactorial, involucrando una mayor diversidad de factores psicosociales y obstétricos (Fu et al., 2024; Souch et al., 2025).

Desde una perspectiva predictiva, estos resultados respaldan parcialmente la hipótesis 4, al mostrar que las ACEs, el apego inseguro, la VO, la resiliencia y el funcionamiento familiar contribuyen de manera significativa a explicar la sintomatología posparto, aunque con diferentes niveles de especificidad según el resultado considerado.

Finalmente, los análisis configuracionales apoyan la hipótesis 5, al evidenciar que no existe un único factor necesario o suficiente para explicar los niveles de DPP o TEPTP. En particular, los niveles elevados de DPP se caracterizaron por la presencia conjunta de apego inseguro y baja resiliencia, mientras que el TEPTP alto se vinculó principalmente con la combinación de VO, ACEs y falta de resiliencia. Por el contrario, las configuraciones asociadas con niveles bajos de síntomas incluyeron resiliencia, apego seguro y ausencia de VO.

En conjunto, estos hallazgos ponen de relieve la importancia de considerar simultáneamente factores individuales (resiliencia), relacionales (apego y funcionamiento familiar) y estructurales (ACEs y VO) en la comprensión y prevención de los problemas de salud mental durante el posparto. Desde esta

perspectiva, las estrategias preventivas deberían incorporar enfoques informados por el trauma y priorizar la detección e intervención temprana en mujeres en situación de mayor vulnerabilidad.

Limitaciones y fortalezas

A pesar de los hallazgos obtenidos, esta tesis doctoral presenta algunas **limitaciones** que deben considerarse al interpretar los resultados. En primer lugar, varios de los estudios empíricos presentan diseños transversales, lo que limita la posibilidad de establecer relaciones causales entre las variables analizadas y de determinar la dirección temporal de los efectos observados. En consecuencia, futuras investigaciones deberían incorporar diseños longitudinales prospectivos, especialmente en el estudio de procesos dinámicos como el DP, el CPT o la adaptación psicológica a lo largo del periodo perinatal.

En segundo lugar, la composición de las muestras constituye otra limitación relevante. La mayoría de las participantes fueron mujeres españolas, heterosexuales y con niveles educativos medios o altos, lo que restringe la diversidad sociodemográfica y cultural de las muestras y limita la generalización de los resultados a otros contextos socioculturales. Asimismo, existe una infrarepresentación de configuraciones familiares diversas, como parejas LGTBIQ+, personas trans o no binarias, familias monoparentales u otras estructuras familiares no heteronormativas. Esta limitación resulta especialmente relevante desde una perspectiva interseccional, dado que variables como la orientación sexual, la identidad de género, la clase social, la situación migratoria o el acceso diferencial a recursos sanitarios pueden interactuar y generar experiencias perinatales

significativamente distintas. La escasa representación de estas realidades limita la comprensión de cómo los procesos de apego, CD o ajuste psicológico pueden manifestarse en contextos relacionales diversos.

En tercer lugar, gran parte de los datos se obtuvieron mediante medidas de autoinforme, en algunos casos retrospectivas, lo que podría introducir sesgos de recuerdo, deseabilidad social o efectos asociados al estado emocional actual. Este aspecto resulta especialmente relevante en la evaluación de variables como las ACEs. No obstante, la literatura ha señalado que, a pesar de estas limitaciones, las medidas retrospectivas de ACEs presentan niveles aceptables de fiabilidad y validez en investigación clínica y epidemiológica, y siguen siendo ampliamente utilizadas en estudios poblacionales (Pinto et al., 2014).

Del mismo modo, en algunos casos se utilizaron instrumentos con limitaciones metodológicas, particularmente debido a la ausencia de escalas validadas específicamente para ciertos constructos en el contexto perinatal. Por ejemplo, actualmente no existen instrumentos validados en castellano diseñados específicamente para evaluar la culpa asociada a la PP, lo que obligó a utilizar ítems ad hoc. De manera similar, la VO continúa siendo un constructo relativamente reciente en la investigación psicológica y sanitaria, y la disponibilidad de instrumentos validados y culturalmente adaptados sigue siendo limitada en contextos hispanohablantes. Esta carencia metodológica pone de relieve la necesidad de desarrollar herramientas de evaluación psicométricamente robustas y culturalmente sensibles para el estudio de estos fenómenos.

En cuarto lugar, algunos estudios contaron con tamaños muestrales relativamente reducidos, en parte debido a la dificultad de acceso a poblaciones

sensibles o poco visibles, como mujeres que han experimentado PP o personas implicadas en TRA. Con el objetivo de ampliar la captación de participantes, se estableció contacto con más de 60 asociaciones, organizaciones y profesionales relacionados con la salud perinatal y el apoyo al duelo gestacional y neonatal. A pesar de estos esfuerzos, la naturaleza sensible del tema y el carácter vulnerable de estas poblaciones dificultaron la obtención de muestras más amplias.

Asimismo, varios estudios evaluaron variables relacionales —como el CD— desde la perspectiva de un único miembro de la pareja. Aunque se intentó recoger información de ambos miembros de la díada, la tasa de respuesta de las parejas fue muy baja, lo que impidió realizar análisis diádicos más complejos, como los modelos Actor–Partner Interdependence Models (APIM). La inclusión sistemática de datos de ambos miembros de la pareja constituye una línea de investigación futura relevante para comprender con mayor precisión los procesos interdependientes propios del funcionamiento relacional.

Finalmente, en el caso del estudio del posparto, el periodo de evaluación se limitó al primer año tras el nacimiento, cuando investigaciones recientes sugieren que el riesgo de problemas de salud mental materna puede extenderse hasta dos años después del parto (Adhikari et al., 2023; Jones et al., 2025; Rosander et al., 2021; Stewart y Vigod, 2019).

A pesar de estas limitaciones, la presente tesis doctoral presenta diversas **fortalezas** relevantes. En primer lugar, destaca la adopción de un enfoque integral del ciclo vital perinatal, que abarca distintas etapas del proceso reproductivo, desde el acceso a la maternidad mediante TRA o gestación subrogada (GS), pasando por la PP y el DP, hasta la salud mental durante el posparto. Este enfoque permite

comprender la adaptación psicológica como un proceso dinámico influido tanto por experiencias actuales como por factores distales del desarrollo, como las ACEs.

En segundo lugar, la investigación integra una perspectiva ecológica multinivel, considerando simultáneamente factores individuales (p. ej., apego adulto, resiliencia, ACEs), relacionales (p. ej., CD o funcionamiento familiar) y contextuales o institucionales (p. ej., VO). Esta aproximación permite una comprensión más compleja y realista de los procesos de adaptación psicológica durante el periodo perinatal.

En tercer lugar, constituye una fortaleza relevante el uso de una metodología mixta, que combina revisiones sistemáticas de la literatura con estudios empíricos y emplea tanto enfoques analíticos lineales como configuracionales. Esta estrategia metodológica ha permitido identificar no solo asociaciones entre variables, sino también configuraciones complejas de factores de riesgo y protección que caracterizan diferentes trayectorias de adaptación.

Asimismo, las revisiones sistemáticas incluidas en esta tesis se realizaron mediante procedimientos rigurosos de búsqueda, selección y evaluación de la calidad metodológica de los estudios, siguiendo las directrices internacionales y con registro previo del protocolo en PROSPERO, lo que aumenta la transparencia y reproducibilidad del proceso de revisión.

Otra fortaleza relevante es el estudio de poblaciones de difícil acceso, como mujeres que han experimentado PP o parejas sometidas a TRA, lo que contribuye a ampliar el conocimiento en áreas aun escasamente exploradas en la literatura. Igualmente, esta tesis incorpora variables poco estudiadas en el contexto perinatal español, como las ACEs, el CD o la VO, ampliando el marco explicativo tradicional centrado exclusivamente en la sintomatología psicológica.

Finalmente, esta investigación contribuye a fortalecer el desarrollo del campo de la salud mental perinatal en España, un ámbito que, en comparación con otros contextos internacionales, sigue siendo relativamente incipiente y con una producción científica limitada. En este sentido, los resultados aportan evidencia empírica relevante para el desarrollo de futuras líneas de investigación, así como para la elaboración de protocolos clínicos, programas preventivos y políticas sanitarias orientadas a mejorar la atención psicológica durante el periodo perinatal.

Implicaciones prácticas.

En consonancia con los resultados obtenidos, se derivan implicaciones teóricas y prácticas. En primer lugar, la evaluación en salud mental perinatal debería adoptar un enfoque integral y multidimensional que trascienda la etapa estrictamente gestacional y el posparto inmediato. Desde una perspectiva del ciclo vital, el acompañamiento psicológico debería estar disponible incluso antes de la concepción, especialmente en contextos de TRA, en personas con historia de PP o con alta carga de ACEs. La transición a la maternidad/paternidad implica reorganizaciones identitarias, relacionales y contextuales que pueden beneficiarse de espacios de orientación, ajuste de expectativas y fortalecimiento de recursos emocionales antes de que se active el estrés biológico y social del embarazo.

En esta línea, la incorporación sistemática de la evaluación de apego adulto, ACEs, recursos relacionales (p. ej., CD, cohesión y adaptabilidad familiar), resiliencia y factores contextuales (p. ej., VO, tipo de PP o exposición a TRA) permitiría identificar perfiles de riesgo diferenciados y diseñar intervenciones más personalizadas. Los análisis fsQCA apoyan que la adaptación perinatal se explica por configuraciones de

vulnerabilidades y recursos, más que por un único factor determinante; por tanto, la intervención clínica debería ser flexible y ajustarse a las combinaciones específicas presentes en cada sistema familiar.

Desde una lógica preventiva, los programas deberían implementarse de forma temprana y continuada, acompañando todo el proceso reproductivo —desde TRA y/o contextos de GS cuando proceda, hasta el seguimiento posnatal— y no solo cuando la psicopatología ya se ha manifestado. Esto resulta especialmente relevante en TRA y PP, donde el riesgo psicológico es elevado y el apoyo suele llegar tarde o de forma fragmentada. Además, aunque las ACEs no pueden modificarse retrospectivamente, la prevención en los hijos y futuras generaciones sí es posible mediante programas de parentalidad, dado su carácter intergeneracional (Narayan et al., 2021). En este sentido, las intervenciones centradas en trauma y en la parentalidad han mostrado eficacia reduciendo riesgo de transmisión intergeneracional, mejorando salud mental parental y bienestar infantil, incluso en poblaciones de alto riesgo (Ahmed y Shaban, 2025; Edwards et al., 2024; Johnson et al., 2023; Narayan et al., 2021). Programas con respaldo empírico como CPP, PCIT y Triple P reducen síntomas de TEPT y depresión en cuidadores y contribuyen a disminuir prácticas coercitivas y recurrencia de maltrato (Ahmed y Shaban, 2025; Stirling et al., 2024). En consecuencia, el enfoque debería priorizar la prevención y el acompañamiento, y no limitarse a una respuesta exclusivamente remedial.

En cuanto a la adaptación de las intervenciones, en personas con apego evitativo resultaría prioritario establecer un marco de seguridad emocional y respeto por la autonomía antes de introducir estrategias explícitas de CD. En perfiles con apego ansioso, el foco debería situarse en regulación emocional, habilidades

comunicativas y reestructuración de creencias asociadas a abandono y pérdida. Además, los resultados respaldan la conveniencia de integrar a la pareja desde fases tempranas, dada la relevancia del CD como recurso protector.

Especial atención merece la VO, que emerge como predictor robusto del TEPTP y como factor contextual de impacto sustantivo en la salud mental posparto. A diferencia de las ACEs, la VO es prevenible y debe entenderse como un indicador de calidad asistencial. La implementación de modelos de atención informados en trauma, junto con formación del personal en comunicación respetuosa, consentimiento informado, privacidad y acompañamiento continuo durante el parto, debería constituir un estándar asistencial orientado también a la prevención del TEPTP y otras complicaciones psicológicas.

Finalmente, los hallazgos apuntan a la necesidad de fortalecer los recursos de salud mental perinatal en todo el sistema (AP, unidades de TRA, servicios obstétricos y seguimiento posnatal) y a lo largo de todo el proceso. La integración de equipos multidisciplinarios que incluyan profesionales de la psicología no debería reservarse a casos graves, sino incorporarse de forma estructural para prevenir complicaciones y favorecer trayectorias de ajuste más adaptativas.

En suma, estas implicaciones refuerzan que la salud mental perinatal debe abordarse de forma preventiva, sistémica y centrada en el fortalecimiento de recursos relacionales, así como en la reducción de factores institucionales evitables.

CONCLUSIONES

La salud mental perinatal y la formación del vínculo materno-fetal constituyen procesos complejos y multifactoriales que se despliegan a lo largo de distintas etapas del periodo perinatal, desde el acceso a la maternidad hasta el posparto. Los estudios que componen esta tesis recorren este continuo, abordando tanto contextos reproductivos específicos —como los TRA y la GS— como eventos críticos, entre ellos la PP, así como distintos factores individuales, relacionales y contextuales que modulan el ajuste psicológico.

En la fase de acceso a la maternidad, los resultados indican que los TRA y la GS implican demandas emocionales y relacionales particulares. En el contexto de los TRA, el CD emerge como un recurso protector relevante frente al estrés asociado al proceso médico y a la incertidumbre reproductiva. En la GS, los patrones de apego materno-fetal y las experiencias emocionales aparecen modulados por factores culturales, motivacionales y legales, lo que pone de manifiesto la necesidad de protocolos de evaluación y acompañamiento psicológico culturalmente sensibles.

Cuando el embarazo se desarrolla o se interrumpe mediante una PP, el ajuste psicológico depende de la interacción entre vulnerabilidades previas y recursos actuales. En este contexto, las ACEs emergen como un eje de vulnerabilidad distal que incrementa el riesgo de resultados psicológicos adversos, como DPP, TEPTP o DP prolongado. No obstante, los resultados de esta tesis respaldan una perspectiva no determinista, mostrando que las ACEs no conducen inevitablemente a psicopatología, sino que su impacto se encuentra mediado por procesos relacionales y recursos actuales.

Entre estos procesos, el apego adulto emerge como un mecanismo central. El

apego inseguro, especialmente el evitativo, se asocia con mayores dificultades en la regulación emocional y en el uso del CD, incrementando el riesgo de DP prolongado y de dificultades vinculares. Por su parte, la ansiedad de apego actúa como mediador entre las ACEs y distintos resultados relacionales. En contraste, el apego seguro se configura como un recurso de carácter transdiagnóstico asociado tanto a menores niveles de psicopatología como a un mayor potencial de CPT.

Entre los factores protectores adicionales identificados, la resiliencia emerge como el recurso más consistente frente a la DPP y el TEPTP, mientras que la cohesión familiar contribuye a fortalecer los procesos de adaptación psicológica. En el plano contextual e institucional, la VO se revela como un predictor específico del TEPTP, lo que subraya la relevancia de promover modelos de atención obstétrica informados en trauma y centrados en el respeto a las necesidades psicológicas de las mujeres.

En conjunto, los hallazgos de esta tesis sugieren que el ajuste psicológico perinatal no depende de un único factor, sino de la interacción dinámica entre vulnerabilidades distales, recursos individuales y relacionales, y condiciones contextuales e institucionales. A partir de estas interacciones se configuran distintas trayectorias de adaptación que pueden manifestarse en forma de DP complejo, DPP, TEPTP o culpa, o bien, en determinados casos, en procesos de CPT.

Un hallazgo especialmente relevante es que, aunque las ACEs constituyen experiencias pasadas no modificables, los procesos relacionales actuales — especialmente los modelos de apego adulto y el CD— representan mecanismos potencialmente susceptibles de intervención. Este aspecto introduce una dimensión preventiva y terapéutica significativa, al situar el foco no únicamente en la historia adversa, sino también en los recursos relacionales presentes que pueden modular su

impacto durante el periodo perinatal.

En definitiva, esta tesis aporta una contribución teórica y empírica relevante al estudio de la salud mental perinatal desde una perspectiva ecológica y del ciclo vital. Al integrar vulnerabilidades distales como las ACEs, mecanismos relacionales como el apego adulto y el CD, y factores contextuales e institucionales como la VO, se propone un marco comprensivo que supera aproximaciones unifactoriales y ofrece una lectura más compleja del ajuste psicológico durante el periodo perinatal. Asimismo, los resultados contribuyen a ampliar el conocimiento en un campo todavía emergente en el contexto español y ofrecen una base para el desarrollo de intervenciones preventivas, informadas en trauma y centradas en el fortalecimiento de los recursos relacionales. De este modo, la tesis avanza hacia un modelo de atención perinatal más integral, preventivo y fundamentado en evidencia científica.

REFERENCIAS

- Abidin, R. R. (1983). *The Parenting Stress Index*. Pediatric Psychology Press.
- Abidin, R. R. (1995). *Parenting stress Index* (3rd ed.). Psychological Assessment Resource.
- Abidin, R. R. (2012). *Parenting Stress Index* (4th ed.). Psychological Assessment Resources.
- Adhikari, K., Racine, N., Hetherington, E., McDonald, S., & Tough, S. (2023). Women's mental health up to eight years after childbirth and associated risk factors: Longitudinal findings from the all our families cohort in Canada. *Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie*, 68(4), 269–282.
<https://doi.org/10.1177/07067437221140387>
- Ahmed, R. S., & Shaban, M. (2025). Breaking the cycle: A systematic review of intergenerational transmission of child maltreatment and preventive parenting interventions. *Child Abuse & Neglect*, 169(Pt 1), 107743.
<https://doi.org/10.1016/j.chiabu.2025.107743>
- Ainsworth, M. D. S., Blehai; M. C, Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Lawrence Erlbaum Associates.
- Akangah, R., Der, A. D., Sefogah, P. E., & Ganle, J. (2025). Socio-ethical and legal issues regarding surrogacy in Ghana: a qualitative study. *Reproductive Health*, 22(1), 181. <https://doi.org/10.1186/s12978-025-02007-z>
- Akuze, J., Blencowe, H., Waiswa, P., Baschieri, A., Gordeev, V. S., Kwesiga, D, Akuze, J., Blencowe, H., Waiswa, P., Baschieri, A., Gordeev, V. S., Kwesiga, D., Fisker, A. B., Thyssen, S. M., Rodrigues, A., Biks, G. A., Abebe, S. M., Gelaye, K. A., Mengistu,

- M. Y., Geremew, B. M., Delele, T. G., Tesega, A. K., Yitayew, T. A., Kasasa, S., Galiwango, E., ... Lawn, J. E. (2020). Randomised comparison of two household survey modules for measuring stillbirths and neonatal deaths in five countries: The Every Newborn-INDEPTH study. *The Lancet Global Health*, 8(4), e555–e566. [https://doi.org/10.1016/S2214-109X\(20\)30044-9](https://doi.org/10.1016/S2214-109X(20)30044-9)
- Albuquerque, S., Narciso, I., & Pereira, M. (2017). Dyadic coping mediates the relationship between parents' grief and dyadic adjustment following the loss of a child. *Anxiety, Stress, & Coping*, 31(1), 93–106.
<https://doi.org/10.1080/10615806.2017.1363390>
- Albuquerque, S., Narciso, I., & Pereira, M. (2018). Posttraumatic growth in bereaved parents: A multidimensional model of associated factors. *Psychological Trauma: Theory, Research, Practice and Policy*, 10(2), 199–207.
<https://doi.org/10.1037/tra0000305>
- Alguacil, M., Núñez-Pomar, J., Pérez-Campos, C., & Prado-Gascó, V. (2019). Perceived value, satisfaction and future intentions in sport services: Putting congruence and brand trust in the equation – linear models vs QCA. *Academia Revista Latinoamericana de Administracion*, 32(4), 566–579.
<https://doi.org/10.1108/ARLA-04-2019-0099>
- Alhowaymel, F. M., Kalmakis, K. A., Chiodo, L. M., Kent, N. M., & Almuneef, M. (2023). Adverse childhood experiences and chronic diseases: Identifying a cut-point for ACE scores. *International Journal of Environmental Research and Public Health*, 20(2), 1651. <https://doi.org/10.3390/IJERPH20021651>
- Alkorta, I. (2020). Surrogacy in Spain: Vindication of the *mater semper certa est* rule. *The New Bioethics*, 26(4), 298–313.

<https://doi.org/10.1080/20502877.2020.1829288>

Al-Maharma, D. Y., Abujaradeh, H., Mahmoud, K. F., & Jarrad, R. A. (2016). Maternal grieving and the perception of and attachment to children born subsequent to a perinatal loss. *Infant Mental Health Journal*, 37(4), 411–423.

<https://doi.org/10.1002/imhj.21570>

Alsalem, R. (2025). *Report of the Special Rapporteur on violence against women and girls, its causes and consequences* (A/80/158). United Nations.

<https://documents.un.org/doc/undoc/gen/n25/187/89/pdf/n2518789.pdf>

Alsop, R., Bertelsen, M., & Holland, J. (2006). *Empowerment in practice: From analysis to implementation*. World Bank. [https://doi.org/10.1596/978-0-8213-6450-](https://doi.org/10.1596/978-0-8213-6450-5)

5

Álvarez, M., Claramunt, M. A., Carrascosa, L. G., & Silvente, C. (2012). *Las voces olvidadas: Pérdidas gestacionales tempranas*. Obstore.

Álvarez-Calle, M., & Chaves, C. (2023). Posttraumatic growth after perinatal loss: A systematic review. *Midwifery*, 121, 103651.

<https://doi.org/10.1016/j.midw.2023.103651>

Alves, C., Jenkins, S. M., & Rapp, A. (2023). Early pregnancy loss (spontaneous abortion). En *StatPearls*. StatPearls Publishing.

<https://www.ncbi.nlm.nih.gov/books/NBK560521/>

Alves, S., Fonseca, A., Canavarro, M. C., & Pereira, M. (2020). Does dyadic coping predict couples' postpartum psychosocial adjustment? A dyadic longitudinal study. *Frontiers in Psychology*, 11, 561091.

<https://doi.org/10.3389/fpsyg.2020.561091>

Alves, S., Pratas, M., Sousa, M., Fidalgo, D., Morais, A., Jongenelen, I., Lamela, D., Pinto,

- T. M., & Costa, R. (2025). Prenatal couple relationship satisfaction, romantic attachment, and childbirth-related posttraumatic stress symptoms. *Journal of Reproductive and Infant Psychology*. 1-17. Advance online publication. <https://doi.org/10.1080/02646838.2025.2452908>
- American Psychiatric Association (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). American Psychiatric Publishing.
- American Psychological Association . (2025). *APA clinical practice guideline for the treatment of posttraumatic stress disorder (PTSD) in adults*. <https://www.apa.org/about/policy/guideline-ptsd-in-adults.pdf>
- Anda, R. F., Croft, J. B., Felitti, V. J., Nordenberg, D., Giles, W. H., Williamson, D. F., & Giovino, G. A. (1999). Adverse childhood experiences and smoking during adolescence and adulthood. *Journal of American Medical Association*, 282(17), 1652–1658. <https://doi.org/10.1001/JAMA.282.17.1652>
- Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., Dube, S. R., & Giles, W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood. A convergence of evidence from neurobiology and epidemiology. *European Archives of Psychiatry and Clinical Neuroscience*, 256(3), 174–186. <https://doi.org/10.1007/s00406-005-0624-4>
- Andersen, L. B., Melvaer, L. B., Videbech, P., Lamont, R. F., & Joergensen, J. S. (2012). Risk factors for developing post-traumatic stress disorder following childbirth: a systematic review. *Acta Obstetrica et Gynecologica Scandinavica*, 91(11), 1261–1272. <https://doi.org/10.1111/J.1600-0412.2012.01476.X>
- Anderson, M. A. (2021). *Childhood experiences, adult attachment styles and maternal outcomes* (Publication No. 2669184509) [Doctoral dissertation, Oklahoma

State University]. ProQuest One Academic.

<https://www.proquest.com/dissertations-theses/childhood-experiences-adult-attachment-styles/docview/2669184509/se-2>

Andrews, B., Qian, M., & Valentine, J. (2002). Predicting depressive symptoms with a new measure of shame: The experience of shame scale. *British Journal of Clinical Psychology*, 41(1), 29–42.

<https://doi.org/10.1348/014466502163778>

Araujo-Cuauro, J. C. (2019). Violencia obstétrica: una práctica oculta deshumanizadora, ejercida por el personal médico asistencial. ¿Es un problema de salud pública y de derechos humanos? *Revista Mexicana de Medicina Forense y Ciencias de La Salud*, 4(2), 1–11.

Arditi-Arbel, B., Hamdan, S., Winterman, M., & Gvion, Y. (2022). Suicidal ideation and behavior among perinatal women and their association with sleep disturbances, medical conditions, and known risk factors. *Frontiers in Psychiatry*, 13, 987673. <https://doi.org/10.3389/fpsy.2022.987673>

Arguedas, G. (2014). La violencia obstétrica: propuesta conceptual a partir de la experiencia costarricense. *Cuadernos Intercambio Sobre Centroamérica y El Caribe*, 11(1), 145–169. <https://doi.org/10.15517/C.A.V11I1.14238>

Armer, J. S., Oh, W., Davis, M. T., Issa, M., Sexton, M. B., & Muzik, M. (2024). Post-traumatic change and resilience after childhood maltreatment: Impacts on maternal mental health over the postpartum period. *Journal of Affective Disorders*, 361, 1–9. <https://doi.org/10.1016/J.JAD.2024.06.010>

Armstrong, D. S. (2002). Emotional distress and prenatal attachment in pregnancy after perinatal loss. *Journal of Nursing Scholarship*, 34(4), 339–345.

<https://doi.org/10.1111/j.1547-5069.2002.00339.x>

Armstrong, D. S. (2004). Impact of prior perinatal loss on subsequent pregnancies.

Journal of Obstetric, Gynecologic, and Neonatal Nursing, 33(6), 765–773.

<https://doi.org/10.1177/0884217504270714>

Armstrong, D., & Hutti, M. (1998). Pregnancy after perinatal loss: The relationship between anxiety and-prenatal attachment. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 27(2), 183–189. <https://doi.org/10.1111/j.1552-6909.1998.tb02609.x>

Arnett, J. J., Žukauskiene, R., & Sugimura, K. (2014). The new life stage of emerging adulthood at ages 18-29 years: Implications for mental health. *The Lancet Psychiatry*, 1(7), 569-576. [https://doi.org/10.1016/S2215-0366\(14\)00080-7](https://doi.org/10.1016/S2215-0366(14)00080-7)

Artini, P. G., Obino, M. E., Vergine, F., Sergiampietri, C., Papini, F., & Cela, V. (2018). Assisted reproductive technique in women of advanced fertility age. *Minerva Ginecologica*, 70(6), 738-749. <https://doi.org/10.23736/S0026-4784.18.04247-8>

Athan A. M. (2024). A critical need for the concept of matrescence in perinatal psychiatry. *Frontiers in Psychiatry*, 15, 1364845.

<https://doi.org/10.3389/fpsy.2024.1364845>

Austin, A. E., Anderson, K. N., Goodson, M., Niolon, P. H., Swedo, E. A., Terranella, A., & Bacon, S. (2024). Screening for adverse childhood experiences: A critical appraisal. *Pediatrics*, 154(6), e2024067307.

<https://doi.org/10.1542/peds.2024-067307>

Axfors, C., Sylén, S., Ramklint, M., & Skalkidou, A. (2017). Adult attachment's unique contribution in the prediction of postpartum depressive symptoms, beyond

personality traits. *Journal of Affective Disorders*, 222, 177–184.

<https://doi.org/10.1016/j.jad.2017.07.005>

Ayers, S., Bond, R., Bertullies, S., & Wijma, K. (2016). The aetiology of post-traumatic stress following childbirth: a meta-analysis and theoretical framework.

Psychological Medicine, 46(6), 1121–1134.

<https://doi.org/10.1017/S0033291715002706>

Ayers, S., Horsch, A., Garthus-Niegel, S., Nieuwenhuijze, M., Bogaerts, A., Hartmann, K., Karlsdottir, S. I., Oosterman, M., Tecirli, G., Turner, J. D., & Lalor, J. (2024).

Traumatic birth and childbirth-related post-traumatic stress disorder:

International expert consensus recommendations for practice, policy, and research. *Women and Birth*, 37(2), 362– 367.

<https://doi.org/10.1016/j.wombi.2023.11.006>

Bai, J., Zheng, J., Dong, Y., Wang, K., Cheng, C., & Jiang, H. (2022). Psychological distress, dyadic coping, and quality of life in infertile clients undergoing assisted reproductive technology in China: A single-center, cross-sectional study. *Journal of Multidisciplinary Healthcare*, 15, 2715-2723.

<https://doi.org/10.2147/JMDH.S393438>

Bakermans-Kranenburg, M. J., Schuengel, C., & Van Ijzendoorn, M. H. (1999).

Unresolved loss due to miscarriage: An addition to the adult attachment interview. *Attachment & Human Development*, 1(2), 157–170.

<https://doi.org/10.1080/14616739900134211>

Baldwin, J. R., Reuben, A., Newbury, J. B., & Danese, A. (2019). Agreement between prospective and retrospective measures of childhood maltreatment: A

systematic review and meta-analysis. *JAMA psychiatry*, 76(6), 584–593.

<https://doi.org/10.1001/jamapsychiatry.2019.0097>

Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science*, 1(2), 164–180. <https://doi.org/10.1111/j.1745-6916.2006.00011.x>

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, 61(2), 226–244. <https://doi.org/10.1037/0022-3514.61.2.226>

Baschieri, A., Gordeev, V. S., Akuze, J., Kwesiga, D., Blencowe, H., Cousens, S., Waiswa, P., Fisker, A. B., Thysen, S. M., Rodrigues, A., Biks, G. A., Abebe, S. M., Gelaye, K. A., Mengistu, M. Y., Geremew, B. M., Delele, T. G., Tesega, A. K., Yitayew, T. A., Kasasa, S., ... Lawn, J. E. (2019). Every Newborn-INDEPTH” (EN-INDEPTH) study protocol for a randomised comparison of household survey modules for measuring stillbirths and neonatal deaths in five health and demographic surveillance sites. *Journal of Global Health*, 9(1), 010901. <https://doi.org/10.7189/jogh.09.010901>

Baslington, H. (2002). The social organization of surrogacy: Relinquishing a baby and the role of payment in the psychological detachment process. *Journal of Health Psychology*, 7(1), 57–71. <https://doi.org/10.1177/1359105302007001652>

Beato, B. V. G., Machado-Kayzuka, G. C., Neris, R. R., Payne, E., de Andrade Alvarenga, W., Leite, A. C. A. B., Silva-Rodrigues, F. M., Polita, N. B., deMontigny, F., Silverio, S. A., & Nascimento, L. C. (2025). Experiences and long-term repercussions of perinatal grief in women after perinatal bereavement: a

meta-ethnography. *Frontiers in Psychiatry*, 16, 1661483.

<https://doi.org/10.3389/fpsy.2025.1661483>

Beauquier-Maccotta, B., Shulz, J., De Wailly, D., Meriot, M. E., Soubieux, M. J., Lisa, O., Grosmaître, C., Salomon, L. J., Golse, B., Ville, Y., & Missonnier, S. (2022).

Prenatal attachment, anxiety and grief during subsequent pregnancy after medical termination of pregnancy. Attachment to which child? *Journal of Gynecology Obstetrics and Human Reproduction*, 51(4), 102353.

<https://doi.org/10.1016/j.jogoh.2022.102353>

Bellhouse, C., Temple-Smith, M., Watson, S., & Bilardi, J. (2018). “The loss was traumatic. . . some healthcare providers added to that”: Women’s experiences of miscarriage. *Women and Birth*, 32(2), 137–146.

<https://doi.org/10.1016/j.wombi.2018.06.006>

Belli, L. F. (2017). La violencia obstétrica: Otra forma de violación a los derechos humanos. *Revista Redbioética UNESCO*, 4(7), 25–34.

Bellón, S. (2015). La violencia obstétrica desde los aportes de la crítica feminista y la biopolítica. *Dilemata*, 7(18), 93–111.

Benavides, M. T., & Guerra, C. A. (2024). El duelo perinatal. Un estudio fenomenológico sobre la percepción y el significado desde la perspectiva de los padres. *Enfermería Investiga*, 9(4), 22–30.

<https://doi.org/10.31243/ei.uta.v9i4.2661.2024>

Bergeron, S., & Rosen, N. O. (2023). Sexual growth and destiny beliefs: Longitudinal associations with dyadic coping among couples seeking medically assisted reproduction. *Journal of Sexual Medicine*, 20(10), 1–11.

<https://doi.org/10.1093/jsxmed/qdad098>

- Berk, H. L. (2015). The legalization of emotion: Managing risk by managing feelings in contracts for surrogate labor. *Law & Society Review*, 49(1), 143–177.
<https://doi.org/10.1111/lasr.12125>
- Berry, S. N. (2022). The trauma of perinatal loss: A scoping review. *Trauma Care*, 2(3), 392–407. <https://doi.org/10.3390/traumacare2030032>
- Bhatnagar, P., Singh, M., Pandey, M., & Sandhya, A. (2011). *Manual for anxiety, depression and stress scale*. National Psychological Corporation.
- Bielas, H., Barra, S., Skrivanek, C., Aebi, M., Steinhausen, H. C., Bessler, C., & Plattner, B. (2016). The associations of cumulative adverse childhood experiences and irritability with mental disorders in detained male adolescent offenders. *Child and Adolescent Psychiatry and Mental Health*, 10(34).
<https://doi.org/10.1186/S13034-016-0122-7>
- Bifulco, A., Kwon, J., Jacobs, C., Moran, P. M., Bunn, A., & Beer, N. (2006). Adult attachment style as mediator between childhood neglect/abuse and adult depression and anxiety. *Social Psychiatry and Psychiatric Epidemiology*, 41(10), 796–805. <https://doi.org/10.1007/S00127-006-0101-Z>
- Bifulco, A., Mahon, J., Kwon, J. H., Moran, P. M., & Jacobs, C. (2003). The Vulnerable Attachment Style Questionnaire (VASQ): an interview-based measure of attachment styles that predict depressive disorder. *Psychological Medicine*, 33(6), 1099–1110. <https://doi.org/10.1017/S0033291703008237>
- Bjertrup, A. J., Rasmussen, K. H. E., & Miskowiak, K. W. (2025). Psychological prevention of postpartum depression for expectant parents. *Journal of Affective Disorders*, 378, 58–73. <https://doi.org/10.1016/j.jad.2025.02.077>
- Black, J., Belicki, K., Emberley-Ralph, J., & McCann, A. (2022). Internalized versus

externalized continuing bonds: Relations to grief, trauma, attachment, openness to experience, *Death Studies*, 46(2), 399-414.

<https://doi.org/10.1080/07481187.2020.1737274>

Blanke, E. S., Schmiedek, F., Siebert, S., Richter, D., & Brose, A. (2023). Perspectives on resilience: Trait resilience, correlates of resilience in daily life, and longer-term change in affective distress. *Stress and Health: Journal of the International Society for the Investigation of Stress*, 39(1), 59–73.

<https://doi.org/10.1002/smi.3164>

Block, J. H. (1965). *Child-Rearing Practices Report*. [Database record]. APA PsycTests.

<https://doi.org/10.1037/t00815-000>

Bodenmann, G. (2005). Dyadic coping and its significance for marital functioning. En T. A. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 33–49). American Psychological Association. <https://doi.org/10.1037/11031-002>

Bodenmann, G. (2008). *Dyadisches Coping Inventar: Test manual* [Dyadic coping inventory: Test manual]. Huber.

Bodenmann, G., Falconier, M. K., & Randal, A. K. (2019). Editorial: Dyadic coping. *Frontiers in Psychology*, 10, 1498. <https://doi.org/10.3389/fpsyg.2019.01498>

Bodenmann, G., Randal, A. K., & Falconier, M. K. (2017). Coping as a couple: The systemic transactional model (SCM). En M. K. Falconier, A. K. Randall, & G. Bodenmann (Eds.), *Couples coping with stress: A intercultural perspective* (pp. 5–22). Routledge.

Bolger, K. E., & Patterson, C. J. (2003). Sequelae of child maltreatment: Vulnerability and resilience. En S. S. Luthar (Ed.), *Resilience and vulnerability: Adaptation in*

- the context of childhood adversities* (pp. 156–181). Cambridge University Press. <https://doi.org/10.1017/CB09780511615788.009>
- Bollen, K., & Lennox, R. (1991). Conventional wisdom on measurement: A structural equation perspective. *Psychological Bulletin*, 110(2), 305–314. <https://doi.org/10.1037/0033-2909.110.2.305>
- Bonanno, G. A., & Kaltman, S. (1999). Toward an integrative perspective on bereavement. *Psychological Bulletin*, 125(6), 760–776. <https://doi.org/10.1037/0033-2909.125.6.760>
- Bonanno, G.A., Westphal, M., & Mancini, A.D. (2011). Resilience to loss and potential trauma. *Annual Review of Clinical Psychology*, 7, 511–35. <https://doi.org/10.1146/annurev-clinpsy-032210-104526>
- Bowlby, J. (1969). *Attachment* (Vol. 1). Basic Books.
- Bowlby, J. (1973). *Attachment and loss: Separation, anxiety, and anger* (Vol. 2). Basic Books.
- Bowlby, J. (1978). Attachment theory and its therapeutic implications. *Adolescent Psychiatry*, 6, 5–33.
- Bowlby, J. (1980). *Loss: Sadness and depression* (Vol. 3). Paidós Ibérica.
- Bradford, A. B., Xu, M., Johnson, L. N., Anderson, S. R., Miller, R. B., Witting, A. B., Bean, R. A., & Hunt, Q. A. (2025). Past to present: The role of ACEs in emotion regulation and emotion regulation's subsequent association with relationship satisfaction in couple therapy. *Family Process*, 64(3), e70064. <https://doi.org/10.1111/famp.70064>
- Brandon, A. R., Pitts, S., Denton, W. H., Stringer, C. A., & Evans, H. M. (2009). A history of the theory of prenatal attachment. *Journal of Prenatal & Perinatal*

Psychology & Health, 23(4), 201–222.

Brandt, P. A., & Weinert, C. (1981). The PRQ—A social support measure. *Nursing Research*, 30(5), 277–280.

Branjerdporn, G., Meredith, P., Wilson, T., & Strong, J. (2021). Maternal–fetal attachment: Associations with maternal sensory processing, adult attachment, distress and perinatal loss. *Journal of Child and Family Studies*, 30(2), 528–541. <https://doi.org/10.1007/s10826-020-01876-1>

Branjerdporn, G., Meredith, P., Wilson, T., & Strong, J. (2022). Infant developmental outcomes: Influence of prenatal maternal–fetal attachment, adult attachment, maternal well-being, and perinatal loss. *International Journal of Environmental Research and Public Health*, 19(4), 2433. <https://doi.org/10.3390/ijerph19042433>

Brassard, A. (2023). “We’re in this together”: Attachment insecurities, dyadic coping strategies, and relationship satisfaction in couples involved in medically assisted reproduction. *Journal of Marital and Family Therapy*, 49(1), 92–110. <https://doi.org/10.1111/jmft.12608>

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.

Browne, V. (2022). A pregnant pause: Pregnancy, miscarriage, and suspended time. *Hypatia*, 37(2), 447–468. <https://doi.org/10.1017/hyp.2022.5>

Brummelte, S., & Galea, L. (2010). Depression during pregnancy and postpartum: contribution of stress and ovarian hormones. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, 34(5), 766–776. <https://doi.org/10.1016/J.PNPBP.2009.09.006>

- Brunet, L., Carruthers, J., Daviki, K., King, D., Marzo, C., & McCandless, J. (2013). *A comparative study on the regime of surrogacy in EU Member States*. European Parliament, Policy Department C.
- Büchi, S., Mörgeli, H., Schnyder, U., Jenewein, J., Glaser, A., Fauchère, J. C., Ulrich Bucher, H., & Sensky, T. (2009). Shared or discordant grief in couples 2-6 years after the death of their premature baby: effects on suffering and posttraumatic growth. *Psychosomatics*, 50(2), 123–130.
<https://doi.org/10.1176/appi.psy.50.2.123>
- Buur, C., Zachariae, R., Komischke-Konnerup, K. B., Mareello, M. M., Schierff, L. H., & O'Connor, M. (2024). Risk factors for prolonged grief symptoms: A systematic review and meta-analysis. *Clinical Psychology Review*, 107, 102375.
<https://doi.org/10.1016/j.cpr.2023.102375>
- Cabrera, O. A., Hoge, C. W., Bliese, P. D., Castro, C. A., & Messer, S. C. (2007). Childhood adversity and combat as predictors of depression and post-traumatic stress in deployed troops. *American Journal of Preventive Medicine*, 33(2), 77–82. <https://doi.org/10.1016/j.amepre.2007.03.019>
- Cacciatore J. (2024). The most painful estrangement: Death at birth. *Seminars in Perinatology*, 48(1), 151870.
<https://doi.org/10.1016/j.semperi.2023.151870>
- Caldwell, J. M., Meredith, P. J., Whittingham, K., Ziviani, J., & Wilson, T. (2024). Women pregnant after previous perinatal loss: Relationships between adult attachment, shame, and prenatal psychological outcomes. *Journal of Reproductive and Infant Psychology*, 42(4), 653–667.
<https://doi.org/10.1080/02646838.2023.2180142>

Callister, L. C. (2006). Perinatal loss: A family perspective. *The Journal of Perinatal & Neonatal Nursing*, 20(3), 227–234. <https://doi.org/10.1097/00005237-200607000-00009>

Calvo, V. (2008). *Aspetti di validazione della Security Scale in ambito italiano: Consistenza interna e distribuzione dei punteggi* [Manuscrito no publicado]. Università degli Studi di Padova.

Camacho-Ávila, M., Fernández-Sola, C., Jiménez-López, F. R., Granero-Molina, J., Fernández-Medina, I. M., Martínez-Artero, L., & Hernández-Padilla, J. M. (2019). Experience of parents who have suffered a perinatal death in two Spanish hospitals: a qualitative study. *BMC Pregnancy and Childbirth*, 19(1), 512. <https://doi.org/10.1186/s12884-019-2666-z>

Caprara, G. V., Alessandri, G., Eisenberg, N., Kupfer, A., Steca, P., Caprara, M. G., Yamaguchi, S., Fukuzawa, A., & Abela, J. (2012). The Positivity Scale. *Psychological Assessment*, 24(3), 701–712. <https://doi.org/10.1037/a0026681>

Carone, N. (2022). Family alliance and intergenerational transmission of coparenting in gay and heterosexual single-father families through surrogacy: Associations with child attachment security. *International Journal of Environmental Research and Public Health*, 19(13), 7713. <https://doi.org/10.3390/ijerph19137713>

Carone, N., Baiocco, R., Lingiardi, V., & Kerns, K. (2020). Child attachment security in gay father surrogacy families: Parents as safe havens and secure bases during middle childhood. *Attachment & Human Development*, 22(3), 269–289.

<https://doi.org/10.1080/14616734.2019.1588906>

Carone, N., Barone, L., Manzi, D., Baiocco, R., Lingardi, V., & Kerns, K. (2020).

Children's exploration of their surrogacy origins in gay two-father families: Longitudinal associations with child attachment security and parental scaffolding during discussions about conception. *Frontiers in Psychology*, 11, Article 112. <https://doi.org/10.3389/fpsyg.2020.00112>

Carone, N., Manzi, D., Barone, L., Lingardi, V., Baiocco, R., & Bos, H. (2021). Father-child bonding and mental health in gay fathers using cross-border surrogacy during the COVID-19 pandemic. *Reproductive BioMedicine Online*, 43(4), 756–764. <https://doi.org/10.1016/j.rbmo.2021.05.023>

Carone, N., Manzi, D., Barone, L., Mirabella, M., Speranza, A. M., Baiocco, R., & Lingardi, V. (2024). Disclosure and child exploration of surrogacy origins in gay father families: Fathers' Adult Attachment Interview coherence of mind matters. *Journal of Reproductive and Infant Psychology*, 42(5), 977–992. <https://doi.org/10.1080/02646838.2023.2214583>

Carone, N., Mirabella, M., Innocenzi, E., Quintigliano, M., Antonucci, C., Manzi, D., Fortunato, A., Giovanardi, G., Speranza, A. M., & Lingardi, V. (2023). The intergenerational transmission of attachment during middle childhood in lesbian, gay, and heterosexual parent families through assisted reproduction: The mediating role of reflective functioning. *Attachment & Human Development*, 25(1), 1–27. <https://doi.org/10.1080/14616734.2023.2292053>

Carone, N., Quintigliano, M., Benzi, I. M. A., Brumariu, L. E., Speranza, A. M., &

- Lingiardi, V. (2025). Parental sensitivity and child–parent attachment security in lesbian and gay parent families through assisted reproduction. *Journal of Family Psychology*, 39(3), 429–442.
<https://doi.org/10.1037/fam0001324>
- Carrera, C. A., Cabezas, E. V., Godoy, V. T., Arias, D. S., & Conce, E. A. (2023). Violencia obstétrica y su impacto en la salud materna. Revisión bibliográfica. *Ciencia Latina Revista Científica Multidisciplinar*, 7(6), 8748–8757.
https://doi.org/10.37811/CL_RCM.V7I6.9537
- Cassidy, R. (2021). *Estadísticas de mortalidad intrauterina, perinatal e infantil en España 1996-2020*. Umamanita. <https://www.umamanita.es/estadisticas-de-mortalidad-perinatal-e-infantil-en-espana/>
- Castro, M. C., & Rates, S. S. (2021). Validation and factorial invariance test of obstetric violence scale in women from Chile. *Interdisciplinaria*, 38(2), 209–223. <https://doi.org/10.16888/INTERD.2021.38.2.14>
- Casu, G., Zaia, V., Fernandes Martins, M. D. C., Parente Barbosa, C., & Gremigni, P. (2019). A dyadic mediation study on social support, coping, and stress among couples starting fertility treatment. *Journal of Family Psychology: Journal of the Division of Family Psychology of the American Psychological Association (Division 43)*, 33(3), 315–326. <https://doi.org/10.1037/fam0000502>
- Cattaneo, M. F., Vallone, F., & Zurlo, M. C. (2022). Predictors of psychological health in couples diagnosed with Male infertility: A dyadic approach. *Mediterranean Journal of Clinical Psychology*, 10(2), 1-25. <https://doi.org/10.13129/2282-1619/mjcp-3305>
- Cena, L., Trainini, A., Tralli, N., Nodari, L. S., Iacona, E., Ronconi, L., & Testoni, I.

- (2022). The impact of the COVID-19 pandemic on perinatal loss experienced by the parental couple: Protocol for a mixed methods study. *Journal of Medical Internet Research-Research Protocols*, 11(9), e38866.
<https://doi.org/10.2196/38866>
- Centers for Disease Control and Prevention. (2021). *About the CDC-Kaiser ACE Study*. U.S. Department of Health & Human Services.
<https://www.cdc.gov/violenceprevention/aces/about.html>
- Centers for Disease Control and Prevention. (2021). *Preventing adverse childhood experiences (ACEs): Leveraging the best available evidence*. U.S. Department of Health and Human Services. <https://stacks.cdc.gov/view/cdc/82316>
- Chang, J. J., Ji, Y., Li, Y. H., Yuan, M. Y., & Su, P. Y. (2021). Childhood trauma and depression in college students: Mediating and moderating effects of psychological resilience. *Asian Journal of Psychiatry*, 65, 102824.
<https://doi.org/10.1016/J.AJP.2021.102824>
- Chaves, C., Canavarro, M. C., & Moura-Ramos, M. (2019). The role of dyadic coping on the marital and emotional adjustment of couples with infertility. *Family Process*, 58(2), 509–523. <https://doi.org/10.1111/famp.12364>
- Chen, J., Wang, S., Lai, X., Zou, L., Wen, S. W., Krewski, D., & Xie, R. H. (2024). The association between social support and postpartum post-traumatic stress disorder. *BMC Pregnancy and Childbirth*, 24(1), 874.
<https://doi.org/10.1186/s12884-024-07088-5>
- Christiansen, D. M., Elklit, A., & Olf, M. (2013). Parents bereaved by infant death: PTSD symptoms up to 18 years after the loss. *General Hospital Psychiatry*, 35(6), 605–611. <https://doi.org/10.1016/j.genhosppsych.2013.06.006>

- Christiansen, D. M., Olff, M., & Elklit, A. (2014). Parents bereaved by infant death: Sex differences and moderation in PTSD, attachment, coping and social support. *General Hospital Psychiatry, 36*(6), 655–661.
<https://doi.org/10.1016/j.genhosppsych.2014.07.012>
- Claude, R., & Christopher, R. (2014). *Acq [computer Programme]*. University of Houston-Downtown.
<https://www.socsci.uci.edu/~cragin/fsQCA/software.shtml>
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Lawrence Erlbaum Associates.
- Condon, J. T. (1993). The assessment of antenatal emotional attachment: Development of a questionnaire instrument. *British Journal of Medical Psychology, 66*(2), 167–183. <https://doi.org/10.1111/j.2044-8341.1993.tb01739.x>
- Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety, 18*(2), 76–82. <https://doi.org/10.1002/DA.10113>
- Cook, N., Ayers, S., & Horsch, A. (2018). Maternal posttraumatic stress disorder during the perinatal period and child outcomes: A systematic review. *Journal of Affective Disorders, 225*, 18–31.
<https://doi.org/10.1016/J.JAD.2017.07.045>
- Cooke, J. E., Racine, N., Plamondon, A., Tough, S., & Madigan, S. (2019). Maternal adverse childhood experiences, attachment style, and mental health: Pathways of transmission to child behavior problems. *Child Abuse &*

- Neglect*, 93, 27–37. <https://doi.org/10.1016/j.chiabu.2019.04.011>
- Côté-Arsenault, D., & Denney-Koelsch, E. (2011). “My baby is a person”: Parents’ experiences with life-threatening fetal diagnosis. *Journal of Palliative Medicine*, 14(12), 1302–1308. <https://doi.org/10.1089/jpm.2011.0165>
- Côté-Arsenault, D., Leerkes, E. M., & Zhou, N. (2020). Individual differences in maternal, marital, parenting and child outcomes following perinatal loss: A longitudinal study. *Journal of Reproductive and Infant Psychology*, 38(1), 3–15. <https://doi.org/10.1080/02646838.2019.1579897>
- Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression scale. *British Journal of Psychiatry*, 150(JUNE), 782–786. <https://doi.org/10.1192/bjp.150.6.782>
- Cranley, M. S. (1981). Development of a tool for the measurement of maternal attachment during pregnancy. *Nursing Research*, 30(5), 281–284. <https://doi.org/10.1097/00006199-198109000-00008>
- Cuenca D. (2023). Pregnancy loss: Consequences for mental health. *Frontiers in Global Women's Health*, 3, 1032212. <https://doi.org/10.3389/fgwh.2022.1032212>
- Cunen, N. B., McNeill, J., & Murray, K. (2013). A systematic review of midwife-led interventions to address postpartum post-traumatic stress. *Midwifery*, 30(2), 170–184. <https://doi.org/10.1016/j.midw.2013.09.003>
- Cutrona, C. E., & Russell, D. W. (2017). Autonomy promotion, responsiveness, and emotion regulation promote effective social support in times of stress. *Current Opinion in Psychology*, 13, 126–130.

<https://doi.org/10.1016/j.copsyc.2016.07.002>

da Rosa, K. M., Scholl, C. C., Ferreira, L. A., Trettim, J. P., da Cunha, G. K., Rubin, B. B., Martins, R. D L., Motta, J. V. D S., Fogaça, T. B., Ghisleni, G., Pinheiro, K. A. T., Pinheiro, R. T., Quevedo, L. D A., & de Matos, M. B. (2021). Maternal-fetal attachment and perceived parental bonds of pregnant women. *Early Human Development*, 154, 105310.

<https://doi.org/10.1016/j.earlhumdev.2021.105310>

Daníelsdóttir, H. B., Aspelund, T., Shen, Q., Halldorsdottir, T., Jakobsdóttir, J., Song, H., Lu, D., Kuja-Halkola, R., Larsson, H., Fall, K., Magnusson, P. K. E., Fang, F., Bergstedt, J., & Valdimarsdóttir, U. A. (2024). Adverse childhood experiences and adult mental health outcomes. *JAMA Psychiatry*, 81(6), 586–594.

<https://doi.org/10.1001/jamapsychiatry.2024.0039>

Darwiche, J., Milek, A., Antonietti, J. P., & Vial, Y. (2019). Partner support during the prenatal testing period after assisted conception. *Women and Birth*, 32(2), e264–e271. <https://doi.org/10.1016/j.wombi.2018.07.006>

Dávila, U., Evelia, L., Rivera, C., & Julio, R. (2022). Violencia obstétrica y síndrome de depresión post parto en centros maternos públicos. *Ciencia Latina Revista Científica Multidisciplinar*, 6(6), 6639–6653.

https://doi.org/10.37811/CL_RCM.V6I6.3911

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113–126. <https://doi.org/10.1037/0022-3514.44.1.113>

Davoudian, T., Gibbins, K., & Cirino, N. H. (2021). Perinatal Loss: The Impact on Maternal Mental Health. *Obstetrical & Gynecological Survey*, 76(4), 223.

<https://doi.org/10.1097/OGX.0000000000000874>

Deater-Deckard, K., Pylas, M. V., & Petrill, S. (1997). *Parent–Child Interaction System (PARCHISY)*. Institute of Psychiatry.

Dekel, S., Ein-Dor, T., Dishy, G. A., & Mayopoulos, P. A. (2020). Beyond postpartum depression: posttraumatic stress-depressive response following childbirth. *Archives of Women's Mental Health*, 23(4), 557–564.

<https://doi.org/10.1007/S00737-019-01006-X>

Delgado, L., Cobo, J., Giménez, C., Fucho-Rius, G. F., Sammut, S., Martí, L., Lesmes, C., Puig, S., Obregón, N., Canet, Y., & Palao, D. J. (2023). Initial impact of perinatal loss on mothers and their partners. *International Journal of Environmental Research and Public Health*, 20(2), 1304.

<https://doi.org/10.3390/ijerph2002130434>

Della Vedova, A. M., & Burro, R. (2017). Surveying prenatal attachment in fathers: The Italian adaptation of the Paternal Antenatal Attachment Scale (PAAS-IT). *Journal of Reproductive and Infant Psychology*, 35(5), 493–508.

<https://doi.org/10.1080/02646838.2017.1371284>

Demakakos, P., Linara-Demakakou, E., & Mishra, G. D. (2020). Adverse childhood experiences are associated with increased risk of miscarriage in a national population-based cohort study in England. *Human Reproduction*, 35(6), 1451–1460. <https://doi.org/10.1093/humrep/deaa113>

DeMier, R. L., Hynan, M. T., Harris, H. B., & Manniello, R. L. (1996). Perinatal Stressors as Predictors of Symptoms of Posttraumatic Stress in Mothers of Infants at High Risk. *Journal of Perinatology*, 16(4), 276–280.

Deomampo, D. (2015). Defining parents, making citizens: Nationality and citizenship in transnational surrogacy. *Medical Anthropology*, 34(3), 210–225.

<https://doi.org/10.1080/01459740.2014.890195>

Diamond, D. J., & Diamond, M. O. (2017). Parenthood after reproductive loss: How psychotherapy can help with postpartum adjustment and parent-infant attachment. *Psychotherapy*, 54(4), 373–379.

<https://doi.org/10.1037/pst0000127>

Donato, S., Parise, M., Iafrate, R., Bertoni, A., Finkenauer, C., & Bodenmann, G. (2015). Dyadic coping responses and partners' perceptions for couple satisfaction: An actor–partner interdependence analysis. *Journal of Social and Personal Relationships*, 32(5), 580–

600. <https://doi.org/10.1177/0265407514541071>

Donegan, G., Noonan, M., & Bradshaw, C. (2023). Parents experiences of pregnancy following perinatal loss: An integrative review. *Midwifery*, 121, 103673.

<https://doi.org/10.1016/j.midw.2023.103673>

Dong, M., Dube, S. R., Felitti, V. J., Giles, W. H., & Anda, R. F. (2003). Adverse childhood experiences and self-reported liver disease: new insights into the causal pathway. *Archives of Internal Medicine*, 163(16), 1949–1956.

<https://doi.org/10.1001/ARCHINTE.163.16.1949>

Dube, S. R., Anda, R. F., Felitti, V. J., Chapman, D. P., Williamson, D. F., & Giles, W. H. (2001). Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the life span: Findings from the adverse childhood experiences study. *Journal of the American Medical Association*, 286(24),

3089–3096. <https://doi.org/10.1001/jama.286.24.3089>

- Dube, S. R., Anda, R. F., Felitti, V. J., Edwards, V. J., & Croft, J. B. (2002). Adverse childhood experiences and personal alcohol abuse as an adult. *Addictive Behaviors, 27*(5), 713–725. [https://doi.org/10.1016/S0306-4603\(01\)00204-0](https://doi.org/10.1016/S0306-4603(01)00204-0)
- Dube, S. R., Felitti, V. J., Dong, M., Chapman, D. P., Giles, W. H., & Anda, R. F. (2003). Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The adverse childhood experiences study. *Pediatrics, 111*(3), 564–572. <https://doi.org/10.1542/peds.111.3.564>
- Dugan, K. A., Kunkel, J. J., Fraley, R. C., Simpson, J. A., McCormick, E. M., Bleil, M. E., Booth-LaForce, C., & Roisman, G. I. (2026). A prospective longitudinal study of the associations between childhood and adolescent interpersonal experiences and adult attachment orientations. *Journal of Personality and Social Psychology, 130*(2), 260–290. <https://doi.org/10.1037/pspi0000502>
- Dumitru, A. E., Gică, C., Iordăchescu, D. A., Panaitescu, A. M., Peltecu, G., Botezatu, R., & Gică, N. (2021). Gestational surrogacy: Medical, psychological and legal aspects. *Romanian Journal of Legal Medicine, 29*(3), 323–327. <https://doi.org/10.4323/rjlm.2021.323>
- Ďuríčeková, B., Škodová, Z., & Bašková, M. (2024). Risk factors associated with postpartum depression and PTSD after birth in a sample of Slovak women. *Heliyon, 10*(1), e23560. <https://doi.org/10.1016/J.HELIYON.2023.E23560>
- Edelmann, R. J. (2004). Surrogacy: The psychological issues. *Journal of Reproductive and Infant Psychology, 22*(2), 123–136. <https://doi.org/10.1080/0264683042000205981>
- Edwards, K. M., Waterman, E. A., Wheeler, L. A., Herrington, R., Mullet, N., Xu, W.,

- Hopfauf, S., Charge, L. L., & Trujillo, P. (2024). Preventing adverse childhood experiences in a sample of largely indigenous children. *Pediatrics*, 154(3), e2023065412. <https://doi.org/10.1542/peds.2023-065412>
- Edwards, V. J., Holden, G. W., Felitti, V. J., & Anda, R. F. (2003). Relationship between multiple forms of childhood maltreatment and adult mental health in community respondents: Results from the adverse childhood experiences study. *American Journal of Psychiatry*, 160(8), 1453–1460. <https://doi.org/10.1176/appi.ajp.160.8.1453>
- Eisma, M. C., & Stroebe, M. S. (2021). Emotion regulatory strategies in complicated grief: A systematic review. *Behavior Therapy*, 52(1), 234–249. <https://doi.org/10.1016/j.beth.2020.04.004>
- El Amiri, S., Rosen, N. O., Brassard, A., Rossi, M. A., Bergeron, S., & Péloquin, K. (2023). Dyadic coping and sexual well-being in couples seeking assisted reproductive technology. *Family Relations*, 72(5), 3134–3151. <https://doi.org/10.1111/fare.12874>
- Eng, S., & Woodside, A. G. (2012). Configural analysis of the drinking culture and tourism consumption: A complexity theory approach. *Journal of Business Research*, 65(5), 674–682. <https://doi.org/10.1016/j.jbusres.2011.09.008>
- Ettenberger, M., Bieleninik, Ł., Epstein, S., & Elefant, C. (2021). Defining attachment and bonding: Overlaps, differences and implications for music therapy clinical practice and research in the neonatal intensive care unit (NICU). *International Journal of Environmental Research and Public Health*, 18(4), 1733. <https://doi.org/10.3390/ijerph1804173>
- Facão, R., & Madeira, L. (2024). Interpretative phenomenology of grief following

reproductive loss: A narrative review and considerations on improving support. *Psychopathology*, 57(1), 45–52.

<https://doi.org/10.1159/000533323>

Facchin, F., Buggio, L., Vercellini, P., Frassinetti, A., Beltrami, S., & Saita, E. (2021).

Quality of intimate relationships, dyadic coping, and psychological health in women with endometriosis: Results from an online survey. *Journal of Psychosomatic Research*, 146, 1-7.

<https://doi.org/10.1016/j.jpsychores.2021.110502>

Fagundes, C. P., Bennett, J. M., Derry, H. M., & Kiecolt-Glaser, J. K. (2011).

Relationships and inflammation across the lifespan: Social developmental pathways to disease. *Social and Personality Psychology Compass*, 5(11), 891–903. <https://doi.org/10.1111/j.1751-9004.2011.00392.x>

Falconier, M. K., & Kuhn, R. (2019). Dyadic coping in couples: A conceptual

integration and a review of the empirical literature. *Frontiers in Psychology*, 10, Article 571. <https://doi.org/10.3389/fpsyg.2019.00571>

Falconier, M. K., Jackson, J. B., Hilpert, P., & Bodenmann, G. (2015). Dyadic coping and

relationship satisfaction: A meta-analysis. *Clinical Psychology Review*, 42, 28–46. <https://doi.org/10.1016/j.cpr.2015.07.002>

Falconier, M. K., Nussbeck, F., & Bodenmann, G. (2012). Dyadic coping in Latino

couples: validity of the Spanish version of the Dyadic Coping Inventory. *Anxiety Stress & Coping*, 26(4), 447–466.

<https://doi.org/10.1080/10615806.2012.699045>

Faleschini, S., Aubuchon, O., Champeau, L., & Matte-Gagné, C. (2021). History of

perinatal loss: A study of psychological outcomes in mothers and fathers

- after subsequent healthy birth. *Journal of Affective Disorders*, 280(Pt A), 338–344. <https://doi.org/10.1016/j.jad.2020.11.016>
- Farrugia B. (2019). WASP (write a scientific paper): An introduction to set-theoretic methods and qualitative comparative analysis. *Early Human Development*, 133, 43–47. <https://doi.org/10.1016/j.earlhumdev.2019.03.010>
- Favez, N., Scaiola, C. L., Tissot, H., Darwiche, J., & Frascarolo, F. (2011). The Family Alliance Assessment Scales: Steps toward validity and reliability of an observational assessment tool for early family interactions. *Journal of Child and Family Studies*, 20(1), 23–37. <https://doi.org/10.1007/s10826-010-9374-7>
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, 14(4), 245–258. [https://doi.org/10.1016/s0749-3797\(98\)00017-8](https://doi.org/10.1016/s0749-3797(98)00017-8)
- Fenstermacher, K., & Hupcey, J. E. (2013). Perinatal bereavement: A principle-based concept analysis. *Journal of Advanced Nursing*, 69(11), 2389–2400. <https://doi.org/10.1111/jan.12119>
- Fernández-Alcántara, M., Cruz-Quintana, F., Pérez-Marfil, N., & Robles-Ortega, H. (2012). Factores psicológicos implicados en el duelo perinatal. *Index De Enfermería*, 21(1–2), 48–52. <https://doi.org/10.4321/s1132-12962012000100011>
- Fernández-Fuertes, A. A., Orgaz, B., Fuertes, A., & Carcedo, R. (2011). La evaluación

del apego romántico en adolescentes españoles: Validación de la versión reducida del *Experiences in Close Relationships-Revised* (ECR-R). *Anales de Psicología / Annals of Psychology*, 27(3), 827–833.

Finch, K., Lawrence, D., Williams, M. O., Thompson, A. R., & Hartwright, C. (2024). Relationships between adverse childhood experiences, attachment, resilience, psychological distress and trauma among forensic mental health populations. *Journal of Forensic Psychiatry and Psychology*, 35(5), 660-684.
<https://doi.org/10.1080/14789949.2024.2365149>

Finzi-Dottan, R., & Abadi, H. (2024). From emotional abuse to a fear of intimacy: A preliminary study of the mediating role of attachment styles and rejection sensitivity. *International Journal of Environmental Research and Public Health*, 21(12), 1679. <https://doi.org/10.3390/ijerph21121679>

Fischer, S., & Gillman, I. (1991). Surrogate motherhood: Attachment, attitudes and social support. *Psychiatry*, 54(1), 13–20.

Fitzgerald, M., & Gallus, K. L. (2025). Conceptualizing and measuring childhood adversity: A comprehensive critique of the adverse childhood experiences measure and offering a new conceptualization of childhood adversity. *The American Journal of Orthopsychiatry*, 95(3), 274–287.
<https://doi.org/10.1037/ort0000785>

Fonagy, P., Campbell, C., & Luyten, P. (2023). Attachment, mentalizing and trauma: Then (1992) and now (2022). *Brain Sciences*, 13(3), 459.
<https://doi.org/10.3390/brainsci13030459>

Fonagy, P., Target, M., Steele, H., & Steele, M. (1998). *Reflective functioning manual (Version 5.0, updated 2012) for application to Adult Attachment Interviews*.

University College London. <https://doi.org/10.1037/t03490-000>

Fonseca-Rondón, A. C., Fajardo-Guzmán, L. N., Gutiérrez-Royo, C. L., Mogollón-

Pulido, V., Grau-González, I. A., & Ortega, L. (2023). Experiencias adversas y protectoras durante el desarrollo temprano: Un modelo transaccional de mecanismos psicobiológicos. *Revista de Psicopatología y Psicología Clínica*, 28(2), 151–165. <https://doi.org/10.5944/rppc.36344>

Fortunato, A., Quintigliano, M., Carone, N., de Simone, S., Lingiardi, V., & Speranza, A.

M. (2023). Parenting, dyadic coping, and child emotion regulation in lesbian, gay, and heterosexual parent families through assisted reproduction. *Journal of Reproductive and Infant Psychology*, 1-17.

<https://doi.org/10.1080/02646838.2023.2287678>

Fraley, R. C. (2013). *Information on the Experiences in Close Relationships—Revised (ECR-R) adult attachment questionnaire* [Supplementary material]. University of Illinois at Urbana-Champaign.

<https://labs.psychology.illinois.edu/~rcfraley/measures/ecrr.htm>

Fraley, R. C., & Shaver, P. R. (2000). Adult romantic attachment: Theoretical developments, emerging controversies, and unanswered questions. *Review of General Psychology*, 4(2), 132–154. <https://doi.org/10.1037/1089-2680.4.2.132>

Fraley, R. C., Heffernan, M. E., Vicary, A. M., & Brumbaugh, C. C. (2011). The experiences in close relationships—Relationship Structures Questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment*, 23(3), 615–625.

<https://doi.org/10.1037/a0022898>

- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, 78(2), 350–365. <https://doi.org/10.1037/0022-3514.78.2.350>
- Fрати, P., La Russa, R., Santurro, A., Di Paolo, M., Scopetti, M., Turillazzi, E., & Fineschi, V. (2021). Bioethical issues and legal frameworks of surrogacy: A global perspective about the right to health and dignity. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 258, 1–8. <https://doi.org/10.1016/j.ejogrb.2020.12.020>
- Freedle, A., & Oliveira, E. (2024). Interpersonal and intrapersonal factors contributing to women's posttraumatic growth following perinatal loss. *Psychological Trauma: Theory, Research, Practice and Policy*, 16(2), 193–200. <https://doi.org/10.1037/tra0001395>
- Frøen, J. F., Cacciatore, J., McClure, E. M., Kuti, O., Jokhio, A. H., Islam, M., Shiffman, J., & Lancet's Stillbirths Series steering committee (2011). Stillbirths: why they matter. *Lancet*, 377(9774), 1353–1366. [https://doi.org/10.1016/S0140-6736\(10\)62232-5](https://doi.org/10.1016/S0140-6736(10)62232-5)
- Fu, C., Li, C., Wan, X., Yang, Y., Zhang, S., & Hu, J. (2024). The relationship between adverse childhood experiences and postpartum depression: A systematic review and meta-analysis. *Trauma, Violence & Abuse*, 25(4), 3066–3081. <https://doi.org/10.1177/15248380241235639>
- Fuentetaja, A. M. L., & Villaverde, O. I. (2018). Sentir y pensar el duelo perinatal: acompañamiento emocional de un grupo de padres. *Clínica Contemporánea*, 9(3), E25, 1–24. <https://doi.org/10.5093/cc2018a21>
- Galhardo, A., Cunha, M., & Pinto-Gouveia, J. (2011). Aspects psychologiques des

couples infertiles. *Sexologies*, 20(4), 255-260.

<https://doi.org/10.1016/j.sexol.2011.08.006>

Galhardo, A., Cunha, M., Pinto-Gouveia, J., & Matos, M. (2013). The mediator role of emotion regulation processes on infertility-related stress. *Journal of Clinical Psychology in Medical Settings*, 20(4), 497-507.

<https://doi.org/10.1007/s10880-013-9370-3>

Gan, Y., Xiong, R., Song, J., Xiong, X., Yu, F., Gao, W., Hu, H., Zhang, J., Tian, Y., Gu, X., Zhang, J., & Chen, D. (2019). The effect of perceived social support during early pregnancy on depressive symptoms at 6 weeks postpartum: a prospective study. *BMC Psychiatry*, 19, 1-8. <https://doi.org/10.1186/s12888-019-2188-2>

Garcia-Esteve, L., Ascaso, C., Ojuel, J., & Navarro, P. (2003). Validation of the Edinburgh Postnatal Depression Scale (EPDS) in Spanish mothers. *Journal of Affective Disorders*, 75(1), 71-76. [https://doi.org/10.1016/S0165-0327\(02\)00020-4](https://doi.org/10.1016/S0165-0327(02)00020-4)

García-Quintáns, L., Limiñana-Gras, R. M., Sánchez-López, M. P., & Patró-Hernández, R. M. (2023). Dyadic and emotional adjustment in infertile couples. *Family Relations*, 72(5), 3152-3166. <https://doi.org/10.1111/fare.12837>

Gaudet, C., Séjourné, N., Camborieux, L., Rogers, R., & Chabrol, H. (2010). Pregnancy after perinatal loss: Association of grief, anxiety and attachment. *Journal of Reproductive and Infant Psychology*, 28(3), 240-251.
<https://doi.org/10.1080/02646830903487342>

Geisler, M., Meaney, S., Waterstone, J., & O'Donoghue, K. (2020). Stress and the impact on the outcome of medically assisted reproduction. *European Journal of*

- Obstetrics and Gynecology and Reproductive Biology*, 248, 187-192.
<https://doi.org/10.1016/j.ejogrb.2020.03.006>
- Gentzler, A. L., Contreras-Grau, J. M., Kerns, K. A., & Weimer, B. L. (2005). Parent-child emotional communication and children's coping in middle childhood. *Social Development*, 14(4), 591-612. <https://doi.org/10.1111/j.1467-9507.2005.00319.x>
- George, C., Main, M., & Kaplan, N. (1985). *Adult Attachment Interview (AAI)* [Database record]. APA PsycTests. <https://doi.org/10.1037/t02879-000>
- Ghadimi, T. R., & McCormack, C. (2025). Executive functioning in matrescence and implications for perinatal depression. *Frontiers in Psychiatry*, 16, 1663017. <https://doi.org/10.3389/fpsy.2025.1663017>
- Giles, L., & Khoury, J. E. (2025). Emotion regulation during pregnancy: A pathway from maternal childhood maltreatment to perinatal mental health. *Journal of Affective Disorders*, 385, 119417. <https://doi.org/10.1016/j.jad.2025.119417>
- Gingras, A. S., Brassard, A., Péloquin, K., Lafontaine, M. F., Brault-Labbé, A., & Gosselin, P. (2024). Anxiety and depressive symptoms in first-time parents: A dyadic longitudinal study based on attachment theory. *Journal of affective disorders*, 355, 122-130. <https://doi.org/10.1016/j.jad.2024.01.275>
- Glonti, K., Gordeev, V. S., Goryakin, Y., Reeves, A., Stuckler, D., McKee, M., & Roberts, B. (2015). A systematic review on health resilience to economic crises. *PLOS ONE*, 10(4), e0123117. <https://doi.org/10.1371/journal.pone.0123117>
- gold, k. j., sen, a., & leon, i. (2017). whose Fault Is It Anyway? Guilt, blame, and death attribution by mothers after stillbirth or infant death. *Illness, Crisis & Loss*,

26(1), 40-57. <https://doi.org/10.1177/1054137317740800> (Original work published 2018)

Goldsmith, R. E., Barlow, M. R., & Freyd, J. J. (2009). Knowing and not knowing about trauma: Implications for therapy. *Psychotherapy: Theory, Research, Practice, Training*, 46(4), 450–460. <https://doi.org/10.1037/a0017007>

Goldstein, R. D., Petty, C. R., Morris, S. E., Human, M., Odendaal, H., Elliott, A., Tobacco, D., Angal, J., Brink, L., Kinney, H. C., & Prigerson, H. G. (2019). Pre-loss personal factors and prolonged grief disorder in bereaved mothers. *Psychological Medicine*, 49(14), 2370–2378. <https://doi.org/10.1017/S0033291718003264>

Golombok, S., Jones, C., Hall, P., Foley, S., Imrie, S., & Jadvá, V. (2023). A longitudinal study of families formed through third-party assisted reproduction: Mother-child relationships and child adjustment from infancy to adulthood. *Developmental Psychology*, 59(6), 1059–1073. <https://doi.org/10.1037/dev0001526>

Gomis-Pomares, A., Lacomba-Trejo, L., & Villanueva, L. (2025). Using avoidant emotion-focused coping and being a woman with adverse childhood experiences as the worst-case scenario for internalising problems. *Journal of Child and Adolescent Trauma*, 18, 319–329. <https://doi.org/10.1007/S40653-025-00688-Z>

Grabow, A., & Becker-Blease, K. (2023). Acquiring psychopathy and callousness traits: Examining the influence of childhood betrayal trauma and adult dissociative experiences in a community sample. *Journal of Trauma & Dissociation*, 24(2), 268–283. <https://doi.org/10.1007/s10826-023-01526-0>

org/10.1080/15299732.2023.2168827

Grady, M. D., Levenson, J. S., & Bolder, T. (2017). Linking adverse childhood effects and attachment: A theory of etiology for sexual offending. En *Trauma, Violence, and Abuse*, 18(4), 433–444.

<https://doi.org/10.1177/1524838015627147>

Grotevant, H. D., & McRoy, R. G. (1997). The Minnesota/Texas Adoption Research Project: Implications of openness in adoption for development and relationships. *Applied Developmental Science*, 1(4), 168–186.

https://doi.org/10.1207/s1532480xads0104_2

Guan, Z., Wang, Y., Hu, X., Chen, J., Qin, C., Tang, S., & Sun, M. (2021). Postpartum depression and family function in Chinese women within 1 year after childbirth: A cross-sectional study. *Research in nursing & health*, 44(4), 633–642. <https://doi.org/10.1002/nur.22159>

Guarino, A., Di Blasio, P., D'Alessio, M., Camisasca, E., & Serantoni, M. (2008). *Parenting Stress Index–Short Form: Adattamento italiano*. Giunti OS.

Güçlü, O., Şenormanci, G., Tüten, A., Gök, K., & Şenormanci, Ö. (2021). Perinatal grief and related factors after termination of pregnancy for fetal anomaly: One-year follow-up study. *Noro Psikiyatri Arsivi*, 58(3), 221–227. <https://doi.org/10.29399/npa.25110>

Güleç, G., Hassa, H., Yalçın, E. G., & Yenilmez, C. (2011). The effects of infertility on sexual functions and dyadic adjustment in couples that present for infertility treatment. *Turkish Journal of Psychiatry*, 22(3), 166–176.

Gunnarsson Payne, J., Korolczuk, E., & Mezinska, S. (2020). Surrogacy relationships:

A critical interpretative review. *Upsala Journal of Medical Sciences*, 125(3), 183–191. <https://doi.org/10.1080/03009734.2020.1725935>

- Haar, K., El-Khani, A., Mostashari, G., Hafezi, M., Malek, A., & Maalouf, W. (2021). Impact of a brief family skills training programme (“strong families”) on parenting skills, child psychosocial functioning, and resilience in Iran: A multisite controlled trial. *International Journal of Environmental Research and Public Health*, 18(21), 11137. <https://doi.org/10.3390/IJERPH182111137>
- Hajure, M., Alemu, S. S., Abdu, Z., Tesfaye, G. M., Workneh, Y. A., Dule, A., Adem Hussen, M., Wedajo, L. F., & Gezimu, W. (2024). Resilience and mental health among perinatal women: a systematic review. *Frontiers in Psychiatry*, 15, 1373083. <https://doi.org/10.3389/fpsyt.2024.1373083>
- Halperin, O., Sarid, O., & Cwikel, J. (2015). The influence of childbirth experiences on women's postpartum traumatic stress symptoms: A comparison between Israeli Jewish and Arab women. *Midwifery*, 31(6), 625–632. <https://doi.org/10.1016/j.MIDW.2015.02.011>
- Handelzalts, J. E., Levy, S., Molmen-Lichter, M., Ayers, S., Krissi, H., Wiznitzer, A., & Peled, Y. (2021). The association of attachment style, postpartum PTSD and depression with bonding- A longitudinal path analysis model, from childbirth to six months. *Journal of Affective Disorders*, 280(Pt A), 17–25. <https://doi.org/10.1016/j.jad.2020.10.068>
- Hannon, S. E., Daly, D., & Higgins, A. (2022). Resilience in the perinatal period and early motherhood: A principle-based concept analysis. *International Journal of Environmental Research and Public Health*, 19(8), 4754. <https://doi.org/10.3390/ijerph19084754>

- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52(3), 511–524.
<https://doi.org/10.1037/0022-3514.52.3.511>
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52(3), 511–524.
<https://doi.org/10.1037//0022-3514.52.3.511>
- Hazan, C., & Shaver, P. R. (1994). Attachment as an organizational framework for research on close relationships. *Psychological Inquiry*, 5(1), 1–22.
https://doi.org/10.1207/S15327965PLI0501_1
- Hazan, C., & Zeifman, D. (1994). Sex and the psychological tether. En D. Perlman & K. Bartholomew (Eds.), *Advances in personal relationships* (Vol. 5, pp. 151–180). Jessica Kingsley.
- Heller, S. S., & Zeanah, C. H. (1999). Attachment disturbances in infants born subsequent to perinatal loss: A pilot study. *Infant Mental Health Journal*, 20(2), 188–199.
[https://doi.org/10.1002/\(SICI\)1097-0355\(199922\)20:2<188::AID-IMHJ6>3.0.CO;2-H](https://doi.org/10.1002/(SICI)1097-0355(199922)20:2<188::AID-IMHJ6>3.0.CO;2-H)
- Hennessy, M., & O'Donoghue, K. (2024). Bridging the gap between pregnancy loss research and policy and practice: Insights from a qualitative survey with knowledge users. *Health Research Policy and Systems*, 22(1), 15.
<https://doi.org/10.1186/s12961-024-01103-z>
- Henrichs, J., de Kroon, M., Walker, A., Witteveen, A., Westerneng, M., van Baar, A., & de Jonge, A. (2023). Maternal prenatal distress, maternal pre- and postnatal bonding and behavioral and emotional problems in toddlers: A secondary

analysis of the IRIS study. *Journal of Child and Family Studies*, 32, 2113–2126.

<https://doi.org/10.1007/s10826-022-02529-1>

Herbert, D., Young, K., Pietrusińska, M., & MacBeth, A. (2022). The mental health impact of perinatal loss: A systematic review and meta-analysis. *Journal of Affective Disorders*, 297, 118–129. <https://doi.org/10.1016/j.jad.2021.10.026>

Hernández Vargas, M. (2019). *Impacto psicosocial de la violencia obstétrica a través de relatos de vida de mujeres*. [Tesis de grado, Universidad de Costa Rica]. <https://repositorio.sibdi.ucr.ac.cr/handle/123456789/18799>

Hernández, M. (2021). Pasar por la carnicería: relatos de mujeres costarricenses sobre violencia obstétrica. *Wimbu Revista de Estudiantes de Psicología UCR*, 16(2), 93–118. <https://doi.org/10.15517/WL.V16I2.48101>

Hernández-Martínez, A., Martínez-Vázquez, S., Rodríguez-Almagro, J., Khan, K. S., Delgado-Rodríguez, M., & Martínez-Galiano, J. M. (2021). Validation of perinatal post-traumatic stress disorder questionnaire for Spanish women during the postpartum period. *Scientific Reports*, 11(1), 5567. <https://doi.org/10.1038/S41598-021-85144-2>

Hernández-Martínez, A., Rodríguez-Almagro, J., Molina-Alarcón, M., Infante-Torres, N., Donate Manzanares, M., & Martínez-Galiano, J. M. (2019). Postpartum post-traumatic stress disorder: Associated perinatal factors and quality of life. *Journal of Affective Disorders*, 249, 143–150. <https://doi.org/10.1016/J.JAD.2019.01.042>

Hernández-Nieto, R. A. (2002). *Contribuciones al análisis estadístico: Sensibilidad, estabilidad y consistencia de varios coeficientes de variabilidad relativa y el coeficiente de variación proporcional (CVP)*. CreateSpace Independent

Publishing Platform.

Hildyard, K. L., & Wolfe, D. A. (2002). Child neglect: developmental issues and outcomes☆. *Child Abuse & Neglect*, 26(6–7), 679–695.

[https://doi.org/10.1016/S0145-2134\(02\)00341-1](https://doi.org/10.1016/S0145-2134(02)00341-1)

Hobzová, H. (2018). Surrogate motherhood: The contradictions in terminology.

Česká Gynekologie, 83(6), 464–467.

Horsch, A., Garthus-Niegel, S., Ayers, S., Chandra, P., Hartmann, K., Vaisbuch, E., &

Lalor, J. (2024). Childbirth-related posttraumatic stress disorder: Definition, risk factors, pathophysiology, diagnosis, prevention, and treatment. *American Journal of Obstetrics and Gynecology*, 230(3S), S1116–S1127.

<https://doi.org/10.1016/j.ajog.2023.09.089>

Howard, L. M., Molyneaux, E., Dennis, C. L., Rochat, T., Stein, A., & Milgrom, J. (2014).

Non-psychotic mental disorders in the perinatal period. *Lancet*, 384(9956), 1775–1788. [https://doi.org/10.1016/S0140-6736\(14\)61276-9](https://doi.org/10.1016/S0140-6736(14)61276-9)

Howard, S., Witt, C., Martin, K., Bhatt, A., Venable, E., Buzhardt, S., Chapple, A. G., &

Sutton, E. F. (2023). Co-occurrence of depression, anxiety, and perinatal posttraumatic stress in postpartum persons. *BMC Pregnancy and Childbirth*, 23(1), 232. <https://doi.org/10.1186/s12884-023-05555-z>

Huang, Y., Liu, Y., Wang, Y., & Liu, D. (2021). Family function fully mediates the relationship between social support and perinatal depression in rural Southwest China. *BMC psychiatry*, 21(1), 151.

<https://doi.org/10.1186/s12888-021-03155-9>

Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., Jones, L., &

Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on

- health: a systematic review and meta-analysis. *The Lancet Public Health*, 2(8), e356–e366. [https://doi.org/10.1016/s2468-2667\(17\)30118-4](https://doi.org/10.1016/s2468-2667(17)30118-4)
- Hughes, P., Turton, P., Hopper, E., & Evans, C. D. (2002). Assessment of guidelines for good practice in psychosocial care of mothers after stillbirth: A cohort study. *Lancet*, 360(9327), 114–118. [https://doi.org/10.1016/s0140-6736\(02\)09410-2](https://doi.org/10.1016/s0140-6736(02)09410-2)
- Hughes, P., Turton, P., Hopper, E., McGauley, G. A., & Fonagy, P. (2001). Disorganised attachment behaviour among infants born subsequent to stillbirth. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 42(6), 791–801. <https://doi.org/10.1111/1469-7610.00776>
- Hughes, P., Turton, P., Hopper, E., McGauley, G. A., & Fonagy, P. (2004). Factors associated with the unresolved classification of the Adult Attachment Interview in women who have suffered stillbirth. *Development and Psychopathology*, 16(1), 215–230. <https://doi.org/10.1017/s0954579404044487>
- Hughes, P., Turton, P., McGauley, G. A., & Fonagy, P. (2006). Factors that predict infant disorganization in mothers classified as U in pregnancy. *Attachment & Human Development*, 8(2), 113–122. <https://doi.org/10.1080/14616730600785660>
- IBM Corp. (2023). *IBM SPSS Statistics for Windows* (Version 29.0.2.0) [Software]. IBM Corp.
- Ilioi, E., Blake, L., Jadv, V., Roman, G., & Golombok, S. (2017). The role of age of disclosure of biological origins in the psychological wellbeing of adolescents conceived by reproductive donation: a longitudinal study from age 1 to age

14. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 58(3), 315–324. <https://doi.org/10.1111/jcpp.12667>

Imrie, S., & Jadvá, V. (2014). The long-term experiences of surrogates: Relationships and contact with surrogacy families in genetic and gestational surrogacy arrangements. *Reproductive BioMedicine Online*, 29(4), 424–435.
<https://doi.org/10.1016/j.rbmo.2014.06.004>

Instituto Nacional de Estadística. (2025, 19 de febrero). *Estimación mensual de nacimientos*. [Comunicado de prensa]
https://www.ine.es/dyngs/Prensa/EDES_EMN2024.htm

Isobel, S. (2023). Trauma and the perinatal period: A review of the theory and practice of trauma-sensitive interactions for nurses and midwives. *Nursing Open*, 10(12), 7585– 7595. <https://doi.org/10.1002/nop2.2017>

Ivers, N. N., Johnson, D. A., Casares, D. R., Lonn, M. R., Duffey, T., & Haberstroh, S. (2024). Understanding prolonged grief from an existential counseling perspective. *Journal of Counseling & Development*, 102(3), 370–381.
<https://doi.org/10.1002/jcad.1251>

Jacob, M. C., Klock, S. C., & Maier, D. (1999). Lesbian couples as therapeutic donor insemination recipients: Do they differ from other patients? *Journal of Psychosomatic Obstetrics and Gynaecology*, 20(4), 203-215.
<https://doi.org/10.3109/01674829909075597>

Jadvá, V. (2020). Postdelivery adjustment of gestational carriers, intended parents, and their children. *Fertility and sterility*, 113(5), 903–907.
<https://doi.org/10.1016/j.fertnstert.2020.03.010>

Jadvá, V., & Imrie, S. (2014). Children of surrogate mothers: Psychological well-

being, family relationships and experiences of surrogacy. *Human Reproduction*, 29(1), 90–96. <https://doi.org/10.1093/humrep/det410>

Jadva, V., Imrie, S., & Golombok, S. (2015). Surrogate mothers 10 years on: a longitudinal study of psychological well-being and relationships with the parents and child. *Human Reproduction*, 30(2), 373–379.
<https://doi.org/10.1093/humrep/deu339>

Jadva, V., Jones, C., Hall, P., Imrie, S., & Golombok, S. (2023). “I know it’s not normal but it’s normal to me, and that’s all that matters”: Experiences of young adults conceived through egg donation, sperm donation, and surrogacy. *Human Reproduction*, 38(5), 908–916.
<https://doi.org/10.1093/humrep/dead048>

Jadva, V., Shaw, K., Hall, P., Ross, S., & Imrie, S. (2026). Surrogates 20 years on: long-term psychological health, contact with surrogacy families, and thoughts and feelings about post-birth contact. *Human Reproduction*, 41(2), 239–245.
<https://doi.org/10.1093/humrep/deaf234>

Jain, M., Fang, E., & Singh, M. (2025). Assisted reproductive technology (ART) techniques. En *StatPearls*. StatPearls Publishing.
<https://www.ncbi.nlm.nih.gov/books/NBK576409/>

Jayawickreme, E., Infurna, F. J., Alajak, K., Blackie, L. E. R., Chopik, W. J., Chung, J. M., Dorfman, A., Fleeson, W., Forgeard, M. J. C., Frazier, P., Furr, R. M., Grossmann, I., Heller, A. S., Laceulle, O. M., Lucas, R. E., Luhmann, M., Luong, G., Meijer, L., McLean, K. C., Park, C. L., Roepke, A. M., al Sawaf, Z., Tennen, H., White, R. M., y Zonneveld, R. (2021). Post-traumatic growth as positive personality change:

- Challenges, opportunities, and recommendations. *Journal of Personality*, 89(1), 145–165. <https://doi.org/10.1111/jopy.12591>
- Ji, Y., Xue, L., & Chen, L. (2025). Cross-lagged analysis of interdependence and psychological symptom clusters in postpartum women: A prospective study. *Medicine*, 104(44), e45709. <https://doi.org/10.1097/MD.00000000000045709>
- Johnson, S., Kasparian, N. A., Cullum, A. S., Flanagan, T., Ponting, C., Kowalewski, L., & Main, E. K. (2023). Addressing adverse childhood and adult experiences during prenatal care. *Obstetrics and Gynecology*, 141(6), 1072–1087. <https://doi.org/10.1097/AOG.00000000000005199>
- Jojoa-Tobar, E., Cuchumbe-Sánchez, Y. D., Ledesma-Rengifo, J. B., Muñoz-Mosquera, M. C., Campo, A. M. P., & Suarez-Bravo, J. P. (2019). Violencia obstétrica: haciendo visible lo invisible. *Revista de la Universidad Industrial de Santander. Salud*, 51(2), 135-146.
- Jones, E., Quinn, L., Tanner, J. R., Jankovic, J., Berrisford, G., MacArthur, C., & Taylor, B. (2025). Prevalence and incidence of moderate and severe mental illness in the second postpartum year in England (1995-2020): a national retrospective cohort study using primary care data. *The Lancet Regional Health. Europe*, 53, 101312. <https://doi.org/10.1016/j.lanepe.2025.101312>
- Jones, R. K., Jerman, J., & Charlton, B. M. (2018). Sexual orientation and exposure to violence among U.S. patients undergoing abortion. *Obstetrics and Gynecology*, 132(3), 605–611. <https://doi.org/10.1097/AOG.00000000000002732>,
- Kadri, A., Gracey, F., & Leddy, A. (2022). What factors are associated with posttraumatic growth in older adults? A systematic review. *Clinical*

Gerontologist. 48(1), 4–21.

<https://doi.org/10.1080/07317115.2022.2034200>

Kelmanson, I. A. (2024). Manifest anxiety and maternal–fetal attachment in pregnant women with previous fetal losses. *Journal of Reproductive and Infant*

Psychology, 42(1), 45–61. <https://doi.org/10.1080/02646838.2022.2056882>

Kent, G., Pitsia, V., & Colton, G. (2020). Cognitive development during early childhood: Insights from families living in areas of socio-economic

disadvantage. *Early Child Development and Care*, 190(12), 1863–1877.

<https://doi.org/10.1080/03004430.2018.1543665>

Kerns, K. A., Klepac, L., & Cole, A. (1996). Peer relationships and preadolescents' perceptions of security in the child–mother relationship. *Developmental*

Psychology, 32(3), 457–466. <https://doi.org/10.1037/0012-1649.32.3.457>

Kerns, K. A., Mathews, B. L., Koehn, A. J., Williams, C. T., & Siener-Ciesla, S. (2015).

Assessing both safe haven and secure base support in parent–child relationships. *Attachment & Human Development*, 17(4), 337–353.

<https://doi.org/10.1080/14616734.2015.1042487>

Kersting, A., & Wagner, B. (2012). Complicated grief after perinatal loss. *Dialogues in Clinical Neuroscience*, 14(2), 187–194.

<https://doi.org/10.31887/dcns.2012.14.2/akersting>

Khaleque, A., & Rohner, R. P. (2002). Perceived parental acceptance–rejection and psychological adjustment: A meta-analysis of cross-cultural and intracultural studies. *Journal of Marriage and Family*, 64(1), 54–64.

<https://doi.org/10.1111/j.1741-3737.2002.00054.x>

- Khayyat-Abuaita, U., Paivio, S., Pascual-Leone, A., & Harrington, S. (2019). Emotional processing of trauma narratives is a predictor of outcome in emotion-focused therapy for complex trauma. *Psychotherapy*, 56(4), 526–536.
<https://doi.org/10.1037/pst0000238>
- Kheirabadi, G. R., Maracy, M. R., Akbaripour, S., & Masaeli, N. (2012). Psychometric properties and diagnostic accuracy of the Edinburgh Postnatal Depression Scale in a sample of Iranian women. *Iranian Journal of Medical Sciences*, 37(1), 32. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3470287/>
- Khodarahimi, S. (2013). The role of family typology on mental health, positive and negative emotions, self-esteem, and wife physical abuse in an Iranian sample. *Journal of Comparative Family Studies*, 44(1), 41–56.
<https://doi.org/10.3138/JCFS.44.1.41>
- Kingston, D., Heaman, M., Fell, D., Dzakupasu, S., & Chalmers, B. (2012). Factors associated with perceived stress and stressful life events in pregnant women: findings from the Canadian Maternity Experiences Survey. *Maternal and Child Health Journal*, 16(1), 158–168. <https://doi.org/10.1007/S10995-010-0732-2>
- Kinsey, C. B., Baptiste-Roberts, K., Zhu, J., & Kjerulff, K. H. (2014). Effect of miscarriage history on maternal-infant bonding during the first year postpartum in the First Baby Study: A longitudinal cohort study. *BMC Women's Health*, 14(1), 83. <https://doi.org/10.1186/1472-6874-14-83>
- Kishimoto, M., Yamaguchi, A., Niimura, M., Mizumoto, M., Hikitsuchi, T., Ogawa, K., Ozawa, N., & Tachibana, Y. (2021). Factors affecting the grieving process after

- perinatal loss. *BMC Women's Health*, 21(1), 313.
<https://doi.org/10.1186/s12905-021-01457-4>
- Kneebone, E., Beilby, K., & Hammarberg, K. (2022). Experiences of surrogates and intended parents of surrogacy arrangements: a systematic review. *Reproductive Biomedicine Online*, 45(4), 815–830.
<https://doi.org/10.1016/j.rbmo.2022.06.006>
- Kobak, R., & Rosenthal, N. (2003). *The important people interview* [Manuscrito no publicado]. Department of Psychology, University of Delaware.
- Kobak, R., Rosenthal, N., & Serwik, A. (2005). The attachment hierarchy in middle childhood: Conceptual and methodological issues. En K. A. Kerns & R. A. Richardson (Eds.), *Attachment in middle childhood* (pp. 71–88). Guilford Press.
- Kock, N. (2014). Advanced mediating effects tests, multi-group analyses, and measurement model assessments in PLS-Based SEM. *International Journal of E-Collaboration*, 10(1), 1–13. <https://doi.org/10.4018/IJEC.2014010101>
- Kohan, S., Mena-Tudela, D., & Youseflu, S. (2025). The impact of obstetric violence on postpartum quality of life through psychological pathways. *Scientific Reports*, 15(1), 4799. <https://doi.org/10.1038/S41598-025-88708-8>
- Kokkinen L. (2022). Studying social determinants of health using fuzzy-set Qualitative Comparative Analysis: A worked example. *Social Science & Medicine* (1982), 309, 115241.
<https://doi.org/10.1016/j.socscimed.2022.115241>
- Kokou-Kpolou, K., Megalakaki, O., & Nieuviarts, N. (2018). Persistent depressive and grief symptoms for up to 10 years following perinatal loss: Involvement of

negative cognitions. *Journal of Affective Disorders*, 241, 360–366.

<https://doi.org/10.1016/j.jad.2018.08.063>

Koukopoulos, A. E., Angeletti, G., Sani, G., Janiri, D., Manfredi, G., Kotzalidis, G. D., & De Chiara, L. (2019). Perinatal mixed affective state. *Psychiatric Clinics of North America*, 43(1), 113–126. <https://doi.org/10.1016/j.psc.2019.10.004>

Koyama, Y., Fujiwara, T., Murayama, H., Machida, M., Inoue, S., & Shobugawa, Y. (2022). Association between adverse childhood experiences and brain volumes among Japanese community-dwelling older people: Findings from the NEIGE study. *Child Abuse & Neglect*, 124, 105456. <https://doi.org/10.1016/J.CHIABU.2021.105456>

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2002). The PHQ-15: Validity of a new measure for evaluating the severity of somatic symptoms. *Psychosomatic Medicine*, 64(2), 258–266. <https://doi.org/10.1097/00006842-200203000-00008>

Krosch, D. J., & Shakespeare-Finch, J. (2017). Grief, traumatic stress, and posttraumatic growth in women who have experienced pregnancy loss. *Psychological Trauma: Theory, Research, Practice and Policy*, 9(4), 425–433. <https://doi.org/10.1037/tra0000183>

Kubany, E. S., Haynes, S. N., Abueg, F. R., Manke, F. P., Brennan, J. M., & Stahura, C. (1996). Development and validation of the Trauma-Related Guilt Inventory (TRGI). *Psychological Assessment*, 8(4), 428–444. <https://doi.org/10.1037/1040-3590.8.4.428>

Kübler-Ross, E. (2006). *On death and dying* (2nd ed.). Random House Mondadori, S.A. de C.V.

Kukulskienė, M., & Žemaitienė, N. (2022). Postnatal depression and post-traumatic stress risk following miscarriage. *International Journal of Environmental Research and Public Health*, 19(11), 6515.
<https://doi.org/10.3390/ijerph19116515>

Kumar, R., Robson, K. M., & Smith, A. M. R. (1984). Development of a self-administered questionnaire to measure maternal adjustment and maternal attitudes during pregnancy and after delivery. *Journal of Psychosomatic Research*, 28(1), 43–51. [https://doi.org/10.1016/0022-3999\(84\)90039-4](https://doi.org/10.1016/0022-3999(84)90039-4)

La Rosa, V.L.; Alparone, D.; Commodari, E. (2025). Psychological and social factors influencing mother–child bonding in the first year after birth: A model for promoting infant and maternal well-being. *Frontiers in Psychology*, 16, 1588433. <https://doi.org/10.3389/fpsyg.2025.1588433>.

Lacey, R. E., & Minnis, H. (2020). Practitioner Review: Twenty years of research with adverse childhood experience scores - Advantages, disadvantages and applications to practice. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 61(2), 116–130. <https://doi.org/10.1111/jcpp.13135>

Lacomba-Trejo, L., Quezada-Gaibor, K., Gomis-Pomares, A., Prado-Gascó, V., & Villanueva, L. (2024). Adverse childhood experiences and coping strategies: do they make a difference in psychopathic traits and altruism for young adults? *Current Psychology*, 43(39), 30926–30936.
<https://doi.org/10.1007/S12144-024-06680-4>

Lacomba-Trejo, L., Valero-Moreno, S., Montoya-Castilla, I., & Pérez-Marín, M. (2023). Adolescents with and without chronic disease: Emotional skills and emotional distress. *Revista de Psicología de la Salud*, 11(1), 36–47.

<https://doi.org/10.21134/pssa.v11i1.315>

Lakatos, E., Szigeti, J. F., Ujma, P. P., Sexty, R., & Balog, P. (2017). Anxiety and depression among infertile women: A cross-sectional survey from Hungary. *BMC Women's Health*, 17(1), 1-9. <https://doi.org/10.1186/s12905-017-0410-2>

Lamba, N., Jadv, V., Kadam, K., & Golombok, S. (2018). The psychological well-being and prenatal bonding of gestational surrogates. *Human Reproduction*, 33(4), 646–653. <https://doi.org/10.1093/humrep/dey048>

Landolt, S. A., Weitkamp, K., Roth, M., Sisson, N. M., & Bodenmann, G. (2023). Dyadic coping and mental health in couples: A systematic review. *Clinical Psychology Review*, 106, 102344. <https://doi.org/10.1016/j.cpr.2023.102344>

LaNoue, M. D., & Hass, R. W. (2025). Conceptualizing self-reported adverse childhood experiences: From epidemiologic exposure to psychometric latent variable. *Social Science & Medicine*, 366, 117664. <https://doi.org/10.1016/j.socscimed.2024.117664>

Leahy-Warren, P., McCarthy, G., & Corcoran, P. (2012). First-time mothers: Social support, maternal parental self-efficacy and postnatal depression. *Journal of Clinical Nursing*, 21(3–4), 388–397. <https://doi.org/10.1111/J.1365-2702.2011.03701.X>

Ledermann, T., Bodenmann, G., Gagliardi, S., Charvoz, L., Verardi, S., Rossier, J., Bertoni, A., & Iafrate, R. (2010). Psychometrics of the Dyadic Coping Inventory in three language groups. *Swiss Journal of Psychology*, 69(4), 201–212.

Leibowitz, J., Ramos-Marcuse, F., & Arsenio, W. F. (2002). Parent–child emotion

communication, attachment, and affective narratives. *Attachment & Human Development*, 4(1), 55–67. <https://doi.org/10.1080/14616730210123157>

Lenzo, V., Triscari, S., Quattropiani, M. C., Bordino, V., Cibelli, F., Lombardo, L., Caretti, V., Schimmenti, A., & Sideli, L. (2025). When the body speaks of loss: psychosomatic dysregulation as a mediator between insecure attachment and prolonged grief symptoms in oncological and traumatic bereavement. *Frontiers in Psychology*, 16, 1708285. <https://doi.org/10.3389/fpsyg.2025.1708285>

LeRoy, A. S., Gabert, T., Garcini, L., Murdock, K. W., Heijnen, C., & Fagundes, C. P. (2020). Attachment orientations and loss adjustment among bereaved spouses. *Psychoneuroendocrinology*, 112, 104401. <https://doi.org/10.1016/j.psyneuen.2019.104401>

Levi-Belz, Y., & Lev-Ari, L. (2019). Is there anybody out there? attachment style and interpersonal facilitators as protective factors against complicated grief among suicide-loss survivors. *The Journal of Nervous and Mental Disease*, 207(3), 131–136. <https://doi.org/10.1097/NMD.0000000000000940>

Ley 41/2002, de 14 de noviembre, básica reguladora de la autonomía del paciente y de derechos y obligaciones en materia de información y documentación clínica. *Boletín Oficial del Estado*, núm. 274, de 15 de noviembre de 2002, pp. 40126-40132. <https://www.boe.es/buscar/doc.php?id=BOE-A-2002-22188>

Li, B., Liu, T., Ma, D., Sun, J., & Liu, J. (2025). Association of fear of childbirth and postpartum depression with perceived partner response during pregnancy. *BMC Pregnancy and Childbirth*, 25(1), 211. <https://doi.org/10.1186/S12884-025-07332-6>

- Li, M. (2026). Why do mood disturbances often occur in early postpartum? An integrative neurobiological and evolutionary perspective. *Hormones and Behavior*, 177, 105857. <https://doi.org/10.1016/j.yhbeh.2025.105857>
- Liang, S., Yan, J., Zhang, T., Zhu, C., Situ, M., Du, N., Fu, X., & Huang, Y. (2014). Differences between non-suicidal self injury and suicide attempt in Chinese adolescents. *Asian Journal of Psychiatry*, 8(1), 76–83. <https://doi.org/10.1016/J.AJP.2013.11.015>
- Llobera, R., & Ferrer, V. A. (2019). Violencia obstétrica. La perspectiva de mujeres que la han sufrido. *Investigaciones Feministas*, 10(1), 167–184. <https://doi.org/10.5209/INFE.60886>
- Lopes, V., Canavarro, M. C., Verhaak, C. M., Boivin, J., & Gameiro, S. (2014). Are patients at risk for psychological maladjustment during fertility treatment less willing to comply with treatment? Results from the Portuguese validation of the SCREENIVF. *Human Reproduction*, 29(2), 293-302. <https://doi.org/10.1093/humrep/det418>
- Lorenceanu, E. S., Mazzucca, L., Tisseron, S., & Pizitz, T. D. (2015). A cross-cultural study on surrogate mothers' empathy and maternal–foetal attachment. *Women and Birth*, 28(2), 154–159. <https://doi.org/10.1016/j.wombi.2014.11.006>
- Ma, D., Sun, S., Qian, J., Wang, M., Gu, H., Lou, J., & Yu, X. (2023). Predictors of pregnancy stress and psychological birth trauma in women undergoing vaginal delivery: a cross-sectional study in China. *BMC Pregnancy and Childbirth*, 23(1), 596. <https://doi.org/10.1186/S12884-023-05890-1>

- Maccallum, F., & Bryant, R. A. (2018). Prolonged grief and attachment security: A latent class analysis. *Psychiatry Research*, 268, 297–302.
<https://doi.org/10.1016/j.psychres.2018.07.038>
- Mackle, T., Colodro-Conde, L., de Dassel, T., Braun, A., Pope, A., Bennett, E., Kothari, A., Bruxner, G., Medland, S. E., & Patterson, S. (2023). "Echoes of a dark past" is a history of maternal childhood maltreatment a perinatal risk factor for pregnancy and postpartum trauma experiences? A longitudinal study. *BMC Pregnancy and Childbirth*, 23(1), 397. <https://doi.org/10.1186/s12884-023-05714-2>
- MacMullan, D., Berle, D., Arnáez, S., & Starcevic, V. (2019). The relationships between health anxiety, online health information seeking, and cyberchondria: Systematic review and meta-analysis. *Journal of Affective Disorders*, 245, 270-278. <https://doi.org/10.1016/j.jad.2018.11.037>
- Madigan, S., Deneault, A. A., Racine, N., Park, J., Thiemann, R., Zhu, J., Dimitropoulos, G., Williamson, T., Fearon, P., Cénat, J. M., McDonald, S., Devereux, C., & Neville, R. D. (2023). Adverse childhood experiences: a meta-analysis of prevalence and moderators among half a million adults in 206 studies. *World Psychiatry*, 22(3), 463-471. <https://doi.org/10.1002/WPS.21122>
- Main, M., & Solomon, J. (1986). Discovery of an insecure-disorganized/disoriented attachment pattern. En T. B. Brazelton & M. W. Yogman (Eds.), *Affective development in infancy* (pp. 95–124). Ablex Publishing.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs of the Society for Research in Child Development*, 50(1–2), 66–104.

<https://doi.org/10.2307/3333827>

Malina, A., & Suwalska-Barancewicz, D. (2021). Comparison of early-stage mothers and childless women seeking pregnancy: Experienced stress, resilience and satisfaction with relationship with the partner. *International Journal of Environmental Research and Public Health*, 18(5), 2543.

<https://doi.org/10.3390/ijerph18052543>

Mamédio, C., Pimenta, C. A. D. M., & Nobre, M. R. C. (2007). The PICO strategy for the research question construction and evidence search. *Revista Latino-Americana de Enfermagem*, 15(3), 508–511. <https://doi.org/10.1590/S0104-11692007000300023>

Mamun, A., Biswas, T., Scott, J., Sly, P. D., McIntyre, H. D., Thorpe, K., Boyle, F. M., Dekker, M. N., Doi, S., Mitchell, M., McNeil, K., Kothari, A., Hardiman, L., & Callaway, L. K. (2023). Adverse childhood experiences, the risk of pregnancy complications and adverse pregnancy outcomes: a systematic review and meta-analysis. *BMJ Open*, 13(8), e063826. <https://doi.org/10.1136/bmjopen-2022-063826>

Marci, T., Lionetti, F., Moscardino, U., Pastore, M., Calvo, V., & Altoé, G. (2018). Measuring attachment security via the Security Scale: Latent structure, invariance across mothers and fathers and convergent validity. *European Journal of Developmental Psychology*, 15(4), 481–492. <https://doi.org/10.1080/17405629.2017.1317632>

Marcus, S. M. (2009). Depression during pregnancy: Rates, risks and consequences. *Journal of Population Therapeutics and Clinical Pharmacology*, 16(1), 15–22.

PMID: 19164843

Markestad, C. L., Montgomery, L. M., & Bartsch, R. A. (1998). Infertility and length of medical treatment effects on psychological, marital, and sexual functioning. *International Journal of Rehabilitation and Health*, 4(4), 233-243.

<https://doi.org/10.1023/A:1022966829561>

Marques, R., Monteiro, F., Canavarro, M. C., & Fonseca, A. (2018). The role of emotion regulation difficulties in the relationship between attachment representations and depressive and anxiety symptoms in the postpartum period. *Journal of Affective Disorders*, 238, 39–46.

<https://doi.org/10.1016/j.jad.2018.05.013>

Marschall, D., Sanftner, J., & Tangney, J. P. (1994). *The State Shame and Guilt Scale*. Unpublished manuscript, George Mason University, Fairfax, VA.

Martín-Castañeda, L. B. (2020). La violencia obstétrica desde la perspectiva de las matronas de atención primaria y hospitalaria en Barcelona. Un análisis desde la antropología. *Matronas Profesión*, 22(1), 6–11.

[https://dialnet.unirioja.es/servlet/articulo?codigo=8123382&info=resumen
&idioma=SPA](https://dialnet.unirioja.es/servlet/articulo?codigo=8123382&info=resumen&idioma=SPA)

Martínez-Galiano, J. M., Martínez-Vázquez, S., Rodríguez-Almagro, J., Hernández-Martínez, A. (2021). The magnitude of the problem of obstetric violence and its associated factors: A cross-sectional study. *Women and Birth: Journal of the Australian College of Midwives*, 34(5), e526–e536.

<https://doi.org/10.1016/J.WOMBI.2020.10.002>

Martínez-Pampliega, A., Iraurgi, I., Galindez, E., & Sanz, M. (2006). Family Adaptability and Cohesion Evaluation Scale (FACES): desarrollo de una

versión de 20 ítems en español. En *Article in International Journal of Clinical and Health Psychology*, 6(2), 317-338.

<https://www.researchgate.net/publication/28109743>

McAlearney, A. S., Walker, D., Moss, A. D., & Bickell, N. A. (2016). Using qualitative comparative analysis of key informant interviews in health services research: Enhancing a study of adjuvant therapy use in breast cancer care. *Medical Care*, 54(4), 400–405. <https://doi.org/10.1097/MLR.0000000000000503>

McDonnell, C. G., & Valentino, K. (2016). Intergenerational effects of childhood trauma: evaluating pathways among maternal ACEs, perinatal depressive symptoms, and infant outcomes. *Child Maltreatment*, 21(4), 317–326. <https://doi.org/10.1177/1077559516659556>

McLennan, J. D., MacMillan, H. L., & Afifi, T. O. (2020). Questioning the use of adverse childhood experiences (ACEs) questionnaires. *Child Abuse & Neglect*, 101, 104331. <https://doi.org/10.1016/j.chiabu.2019.104331>

Mehran, P., Simbar, M., Shams, J., Ramezani-Tehrani, F., & Nasiri, N. (2013). History of perinatal loss and maternal-fetal attachment behaviors. *Women and Birth: Journal of the Australian College of Midwives*, 26(3), 185–189. <https://doi.org/10.1016/j.wombi.2013.04.005>

Mendoza, B. N., & Meza, G. O. (2022). Adaptación del Cuestionario de Experiencias Adversas en la infancia en muestras mexicanas. *Psicología y Salud*, 32(2), 203–214.

Meredith, P. J., & Strong, J. (2019). Attachment and chronic illness. *Current Opinion in Psychology*, 25, 132–138. <https://doi.org/10.1016/j.copsy.2018.04.01836>

Mikulincer, M., & Shaver, P. R. (2019). A behavioral systems approach to romantic

love relationships: Attachment, caregiving, and sex. En R. J. Sternberg & K. Sternberg (Eds.), *The new psychology of love* (2nd ed., pp. 259–279).

Cambridge University Press.

Ministerio de Sanidad y Consumo (2007) *Estrategia de atención al Parto Normal en el Sistema Nacional de Salud*.

https://www.sanidad.gob.es/areas/calidadAsistencial/estrategias/atencionPartoNormal/docs/Estrategia_de_atencion_al_parto_normal_en_el_Sistema_Nacional_de_Salud.pdf_1.pdf

Ministerio de Sanidad, Servicios Sociales e Igualdad (2014). *Guía de práctica clínica de atención en el embarazo y puerperio*.

https://www.sanidad.gob.es/organizacion/sns/planCalidadSNS/pdf/Guia_practica_AEP.pdf

Minuchin, S. (1974). *Families and family therapy*. Harvard University Press.

Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P.,

Stewart, L. A., & PRISMA-P Group (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic reviews*, 4(1), 1. <https://doi.org/10.1186/2046-4053-4-1>.

Molina-García, L., Hidalgo-Ruiz, M., Cocera-Ruiz, E. M., Conde-Puertas, E., Delgado-

Rodríguez, M., & Martínez-Galiano, J. M. (2019). The delay of motherhood: Reasons, determinants, time used to achieve pregnancy, and maternal anxiety level. *PloS One*, 14(12), e0227063.

<https://doi.org/10.1371/journal.pone.0227063>

Molgora, S., Fenaroli, V., Acquati, C., de Donno, A., Baldini, M. P., & Saita, E. (2019).

Examining the role of dyadic coping on the marital adjustment of couples

- undergoing assisted reproductive technology (ART). *Frontiers in Psychology*, 10(415), 1-14. <https://doi.org/10.3389/fpsyg.2019.00415>
- Monk, C., Spicer, J., & Champagne, F. A. (2012). Linking prenatal maternal adversity to developmental outcomes in infants: the role of epigenetic pathways. *Development and Psychopathology*, 24(4), 1361–1376. <https://doi.org/10.1017/S0954579412000764>
- Monteiro, F., Fonseca, A., Pereira, M., Alves, S., & Canavarro, M. C. (2019). What protects at-risk postpartum women from developing depressive and anxiety symptoms? The role of acceptance-focused processes and self-compassion. *Journal of Affective Disorders*, 246, 522–529. <https://doi.org/10.1016/j.jad.2018.12.124>
- Mørk, S., Hvidtjørn, D., Möller, S., Henriksen, T. B., O'Connor, M., & Bonanno, G. A. (2023). Grief trajectories after loss in pregnancy and during the neonatal period. *Journal of Psychiatric Research*, 168, 293–299. <https://doi.org/10.1016/j.jpsychires.2023.10.052>
- Mosley-Johnson, E., Campbell, J. A., Garacci, E., Walker, R. J., & Egede, L. E. (2021). Stress that endures: Influence of adverse childhood experiences on daily life stress and physical health in adulthood. *Journal of Affective Disorders*, 284, 38–43. <https://doi.org/10.1016/J.JAD.2021.02.018>
- Muller, M. (1993). Development of the Prenatal Attachment Inventory. *Western Journal of Nursing Research*, 15(2), 199–215. <https://doi.org/10.1177/019394599301500205>
- Narayan, A. J., Lieberman, A. F., & Masten, A. S. (2021). Intergenerational transmission and prevention of adverse childhood experiences

- (ACEs). *Clinical Psychology Review*, 85, 101997.
<https://doi.org/10.1016/j.cpr.2021.101997>
- Neimeyer, R. A., & Burke, L. A. (2017). Spiritual distress and depression in bereavement: A meaning-oriented contribution. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 35(1), 38–59.
<https://doi.org/10.1007/s10942-017-0262-6>
- Neimeyer, R. A., & Sands, D. C. (2011). Meaning reconstruction in bereavement: From principles to practice. En R. A. Neimeyer, D. L. Harris, H. R. Winokuer, & G. F. Thornton (Eds.), *Grief and bereavement in contemporary society: Bridging research and practice* (pp. 9–22). Routledge/Taylor & Francis Group.
<https://doi.org/10.4324/9780203840863>
- Nevárez, B., & Ochoa-Meza, G. (2022). Adaptación del Cuestionario de Experiencias Adversas en la infancia en muestras mexicanas. *Psicología y Salud*, 32(2), 203-214. <https://doi.org/10.25009/PYS.V32I2.2742>
- Newman, A. M. (2019). Mixing and matching: Sperm donor selection for interracial lesbian couples. *Medical Anthropology: Cross Cultural Studies in Health and Illness*, 38(8), 710-724. <https://doi.org/10.1080/01459740.2019.1655737>
- Nguyen, V., Temple-Smith, M., & Bilardi, J. (2019). Men's lived experiences of perinatal loss: A review of the literature. *The Australian & New Zealand Journal of Obstetrics & Gynaecology*, 59(6), 757–766.
<https://doi.org/10.1111/ajo.13041>
- Notario-Pacheco, B., Solera-Martínez, M., Serrano-Parra, M. D., Bartolomé-Gutiérrez, R., García-Campayo, J., & Martínez-Vizcaíno, V. (2011). Reliability and validity of the Spanish version of the 10-item Connor-Davidson Resilience Scale (10-

- item CD-RISC) in young adults. *Health and Quality of Life Outcomes*, 9(1), 1–6.
<https://doi.org/10.1186/1477-7525-9-63/TABLES/3>
- O'Malley, E. G., Walsh, M. C., Reynolds, C. M., Kennelly, M., Sheehan, S. R., & Turner, M. J. (2020). A cross-sectional study of maternal-fetal attachment and perceived stress at the first antenatal visit. *Journal of Reproductive and Infant Psychology*, 38(3), 271–280.
<https://doi.org/10.1080/02646838.2019.1637516>
- Obst, K. L., Oxlad, M., Due, C., & Middleton, P. (2021). Factors contributing to men's grief following pregnancy loss and neonatal death: Further development of an emerging model in an Australian sample. *BMC Pregnancy and Childbirth*, 21(1), 29. <https://doi.org/10.1186/s12884-020-03514-6>
- Oláh, B., Fekete, Z., Kuritárné Szabó, I., & Kovács-Tóth, B. (2023). Validity and reliability of the 10-Item Adverse Childhood Experiences Questionnaire (ACE-10) among adolescents in the child welfare system. *Frontiers in Public Health*, 11, 1258798. <https://doi.org/10.3389/FPUBH.2023.1258798/FULL>
- O'Leary, J., & Thorwick, C. (2006). Fathers' perspectives during pregnancy, postperinatal loss. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 35(1), 78–86. <https://doi.org/10.1111/j.1552-6909.2006.00017.x>
- Ollis, L., Cropley, M., Plans, D., & Cogo-Moreira, H. (2022). Disentangling change across the time and true stability of employees' resilience using latent state model. *BMC Psychiatry*, 22(1), 651. <https://doi.org/10.1186/s12888-022-04294-3>
- Olson, D. H. (1993). Assessment of family functioning. En B. J. Rousenville (Ed.), *Diagnostic source book on drug abuse research and treatment* (pp. 63). US

Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute on Drug Abuse.

Olson, D. H. (2000). Circumplex model of marital and family systems. *Journal of Family Therapy*, 22(2), 144–167. <https://doi.org/10.1111/1467-6427.00144>

Olson, D. H., Portner, J. & Bell, R.Q. (1982). *FACES II: Family adaptability and cohesion evaluation scales*. University of Minnesota, Family Social Science.

Orchard, E. R., Rutherford, H. J. V., Holmes, A. J., & Jamadar, S. D. (2023).

Matrescence: lifetime impact of motherhood on cognition and the brain. *Trends in Cognitive Sciences*, 27(3), 302–316.

<https://doi.org/10.1016/j.tics.2022.12.002>

Organización Mundial de la Salud. (2022). *Vigilancia y respuesta a la muerte materna y perinatal: Material de apoyo para la implementación*.

<https://iris.who.int/handle/10665/364704>.

Organización Mundial de la Salud. (2015). *Declaración de la OMS sobre tasas de cesárea*. <https://www.who.int/es/publications/i/item/WHO-RHR-15.02>

Orsini, A., Pezzuti, L., & Picone, L. (2021). *Wechsler Intelligence Scale for Children* (4.^a ed., adaptación italiana). Giunti OS. <https://doi.org/10.1037/t74943-000>

Ortiz-Esquinas, I., Mazoterías-Pardo, V., Martínez-Galiano, J. M., Ballesta-Castillejos, A., Martínez-Rodríguez, S., & Hernández-Martínez, A. (2025). Perception of obstetric violence and risk of post-traumatic stress disorder at 6 months postpartum: an observational study. *Frontiers in Psychology*, 16, 1712911. <https://doi.org/10.3389/fpsyg.2025.1712911>

Orwin, R. (1994). Evaluating coding decisions. En H. Cooper & L. Hedges (Eds.), *The handbook of research synthesis* (pp. 139–162). Russell Sage Foundation.

- Osofsky, J. D., Osofsky, H. J., Frazer, A. L., Fields-Olivieri, M. A., Many, M., Selby, M., Holman, S., & Conrad, E. (2021). The importance of adverse childhood experiences during the perinatal period. *The American Psychologist*, 76(2), 350–363. <https://doi.org/10.1037/amp0000770>
- Pace, C. S., Muzi, S., Morganti, W., & Steele, H. (2023). Attachment stability and longitudinal prediction of psychotic-like symptoms in community adolescents over four months of COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 20(16), 6562. <https://doi.org/10.3390/ijerph20166562>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., et al. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Systematic Reviews*, 10, 89. <https://doi.org/10.1186/s13643-021-01626-4>
- Papapetrou, C., Panoulis, K., Mourouzis, I., & Kouzoupis, A. (2020). Pregnancy and the perinatal period: The impact of attachment theory. *Psychiatriki*, 31(3), 257–270. <https://doi.org/10.22365/jpsych.2020.313.257>
- Pappas, I. O., & Woodside, A. G. (2021). Fuzzy-set qualitative comparative analysis (fsQCA): Guidelines for research practice in information systems and marketing. *International Journal of Child & Adolescent Trauma*, 14(3), 301–319. <https://doi.org/10.1007/s40653-020-00332-8>
- Paramio Cuevas, J. C. (2016). *Adaptación transcultural y evaluación psicométrica de la escala de duelo perinatal* [Tesis doctoral, Universidad de Cádiz]
- Park, Y. yoon, Jeong, Y. jin, Lee, J., Moon, N., Bang, I., Kim, H., Yun, K. Sook, Kim, Y. I., & Jeon, T. Hee. (2018). The influence of family adaptability and cohesion on

anxiety and depression of terminally ill cancer patients. *Supportive Care in Cancer*, 26(1), 313–321. <https://doi.org/10.1007/S00520-017-3912-4/TABLES/5>

Pastorelli, C., & Gerbino, N. (2001). Autoefficacia genitoriale [Parental self-efficacy]. En G. V. Caprara (Ed.), *La valutazione dell'autoefficacia* (pp. 105–120). Erickson.

Pedersen, G. A., Smallegange, E., Coetzee, A., Hartog, K., Turner, J., Jordans, M., & Brown, F. L. (2019). A systematic review of the evidence for family and parenting interventions in low- and middle-income countries: Child and youth mental health outcomes. *Journal of Child and Family Studies*, 28(8), 2036–2055. <https://doi.org/10.1007/S10826-019-01399-4>

Pederson, D. R., & Moran, G. (1995). A categorical description of infant–mother relationships in the home and its relation to Q-sort measures of infant–mother interaction. *Monographs of the Society for Research in Child Development*, 60(2–3), 111–132. <https://doi.org/10.2307/1166174>

Peigné, M., & Epelboin, S. (2018). Reproducción asistida. *EMC-Tratado de Medicina*, 22(4), 1-11. [https://doi.org/10.1016/S1636-5410\(18\)41302-5](https://doi.org/10.1016/S1636-5410(18)41302-5)

Péloquin, K., Boucher, S., Benoit, Z., Jean, M., Beauvilliers, L., Carranza-Mamane, B., & Picardi, A., Giuliani, E., & Gigantesco, A. (2020). Genes and environment in attachment. *Neuroscience and Biobehavioral Reviews*, 112, 254–269. <https://doi.org/10.1016/j.neubiorev.2020.01.038>

Petri, E., Palagini, L., Bacci, O., Borri, C., Teristi, V., Corezzi, C., Faraoni, S., Antonelli, P., Cargioli, C., Banti, S., Perugi, G., & Mauri, M. (2018). Maternal-foetal attachment independently predicts the quality of maternal-infant bonding

and post-partum psychopathology. *The Journal of Maternal-fetal & Neonatal Medicine*, 31(23), 3153–3159.

<https://doi.org/10.1080/14767058.2017.1365130>

Pinto, C., Turton, P., Hughes, P., White, S., & Gillberg, C. (2006). ADHD and infant disorganized attachment: A prospective study of children next-born after stillbirth. *Journal of Attention Disorders*, 10(1), 83–91.

<https://doi.org/10.1177/1087054705286058>

Pinto, R. J., Correia, L., & Maia, Â. (2014). Assessing the reliability of retrospective reports of adverse childhood experiences among adolescents with documented childhood maltreatment. *Journal of Family Violence*, 29(4), 431–438. <https://doi.org/10.1007/s10896-014-9602-9>

Prezza, M., & Pacilli, M. G. (2002). Perceived social support from significant others, family and friends and several sociodemographic characteristics. *Journal of Community & Applied Social Psychology*, 12(6), 422–429.

<https://doi.org/10.1002/casp.696>

Price, S. K. (2008). Stepping back to gain perspective: Pregnancy loss history, depression, and parenting capacity in the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B). *Death Studies*, 32(2), 97–122.

<https://doi.org/10.1080/07481180701801170>

Quenby, S., Gallos, I. D., Dhillon-Smith, R. K., Podsek, M., Stephenson, M. D., Fisher, J., Brosens, J. J., Brewin, J., Ramhorst, R., Lucas, E. S., McCoy, R. C., Anderson, R., Daher, S., Regan, L., Al-Memar, M., Bourne, T., MacIntyre, D. A., Rai, R., ... Coomarasamy, A. (2021). Miscarriage matters: the epidemiological, physical,

- psychological, and economic costs of early pregnancy loss. *Lancet*, 397(10285), 1658–1667. [https://doi.org/10.1016/S0140-6736\(21\)00682-6](https://doi.org/10.1016/S0140-6736(21)00682-6)
- Quezada-Berumen, L., & González-Ramírez, M. T. (2020). Propiedades psicométricas del inventario de crecimiento postraumático en población mexicana. *Acción Psicológica*, 17(1), 13-28. <https://dx.doi.org/10.5944/ap.17.1.25736>
- Quinnell, F. A., & Hynae, M. T. (1999). Convergent and discriminant validity of the perinatal PTSD questionnaire (PPQ): A preliminary study. *Journal of Traumatic Stress*, 12(1), 193–199. <https://doi.org/10.1023/A:1024714903950>
- Quintigliano, M., Carone, N., Speranza, A. M., & Lingiardi, V. (2025). Factors associated with children's attachment hierarchy in lesbian, gay, and heterosexual parent families through assisted reproduction. *Current Psychology*, 44, 2114–2124. <https://doi.org/10.1007/s12144-024-07248-y>
- Racine, N., Plamondon, A., Hentges, R., Tough, S., & Madigan, S. (2019). Dynamic and bidirectional associations between maternal stress, anxiety, and social support: The critical role of partner and family support. *Journal of Affective Disorders*, 252, 19–24. <https://doi.org/10.1016/j.jad.2019.03.083>
- Racine, N., Zumwalt, K., McDonald, S., Tough, S., & Madigan, S. (2020). Perinatal depression: The role of maternal adverse childhood experiences and social support. *Journal of Affective Disorders*, 263, 576–581. <https://doi.org/10.1016/j.jad.2019.11.030>
- Radoš, S. N., Sawyer, A., Ayers, S., & Burn, E. (2018). Coping styles associated with post-traumatic stress and depression symptoms following childbirth in croatian women. *Psihologijske Teme*, 27(3), 543–559.

<https://doi.org/10.31820/PT.27.3.10>

Ragin, C. C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond*. University of Chicago Press.

Relvas, A.P., Lacomba-Trejo, L., Portugal, A., Chiaronlanza, C., Major, S., Rosa, C, Sotero, L., & Randall, A.K. (2023). *YES, WE COPE: Dyadic Coping as a mediator between perceived relationship quality and emotional representation of COVID-19. Cognitive Therapy and Research, 47*, 563–573.

<https://doi.org/10.1007/s10608-023-10379-4>

Rengel, C. (2011). La maniobra de Kristeller: revisión de las evidencias científicas. *Matronas Profesión, 12*(3), 82–91.

Reynolds, C. M., & Grünh, D. (2023). Does time heal all wounds? An investigation of time, grief, and attitudes toward death. *Death Studies, 48*(10), 1035–1045.

<https://doi.org/10.1080/07481187.2023.2297065>

Riddle, M. P. (2022). The psychological impact of surrogacy on the families of gestational surrogates: Implications for clinical practice. *Journal of Psychosomatic Obstetrics & Gynecology, 43*(2), 122–127.

<https://doi.org/10.1080/0167482X.2020.1814729>

Rizzo, R., Piccinelli, M., Mazzi, M. A., Bellantuono, C., & Tansella, M. (2000). The Personal Health Questionnaire: A new screening instrument for detection of ICD-10 depressive disorders in primary care. *Psychological Medicine, 30*(4), 831–840. <https://doi.org/10.1017/S0033291799002512>

Robinson G. E. (2014). Pregnancy loss. *Best practice & Research. Clinical Obstetrics & Gynaecology, 28*(1), 169–178.

<https://doi.org/10.1016/j.bpobgyn.2013.08.012>

- Robinson, L., Baker, L., & Nackerud, M. (1999). The relationship of attachment theory and perinatal loss. *Death Studies*, 23(3), 257–270.
<https://doi.org/10.1080/074811899201073>
- Rodríguez, J., & Martínez, A. (2021). La violencia obstétrica: una práctica invisibilizada en la atención médica en España. *Gaceta Sanitaria*, 35(3), 211–212. <https://doi.org/10.1016/J.GACETA.2020.06.019>
- Rodríguez-Garrido, P. (2024). Violencia obstétrica capacitista hacia mujeres con discapacidad: Una revisión integradora de la literatura. *Salud Colectiva*, 19, e4676. <https://doi.org/10.18294/SC.2023.4676>
- Rogers, A., Obst, S., Teague, S. J., Rossen, L., Spry, E. A., Macdonald, J. A., Sunderland, M., Olsson, C. A., Youssef, G., & Hutchinson, D. (2020). Association between maternal perinatal depression and anxiety and child and adolescent development: A meta-analysis. *JAMA Pediatrics*, 174(11), 1082–1092.
<https://doi.org/10.1001/jamapediatrics.2020.2910>
- Rohner, R. P., Khaleque, A., & Cournoyer, D. E. (2005). Parental acceptance–rejection: Theory, methods, cross-cultural evidence, and implications. *Ethos*, 33(3), 299–334. <https://doi.org/10.1525/eth.2005.33.3.299>
- Rosander, M., Berlin, A., Forslund Frykedal, K., & Barimani, M. (2021). Maternal depression symptoms during the first 21 months after giving birth. *Scandinavian Journal of Public Health*, 49(6), 606–615.
<https://doi.org/10.1177/1403494820977969>
- Rossi, M. A., Péloquin, K., Allsop, D. B., el Amiri, S., Bouzayen, R., Brassard, A., Rubin, R. (1984). *Maternal Identity and the Maternal Experience*. Springer.
- Rujas Bracamonte, S., Serrano Gallardo, P., & Martínez Marcos, M. (2021). Descubrir

la infertilidad: la experiencia de las mujeres sometidas a técnicas de reproducción asistida. *Revista Española de Salud Pública*, 95(13), e1-13. e202110131.

Ryninks, K., Wilkinson-Tough, M., Stacey, S., & Horsch, A. (2022). Comparing posttraumatic growth in mothers after stillbirth or early miscarriage. *PloS One*, 17(8), e0271314. <https://doi.org/10.1371/journal.pone.0271314>

Salgado, H.O., Andreucci, C. B., Gomes, A. C. R., & Souza, J. P. (2021). The perinatal bereavement project: development and evaluation of supportive guidelines for families experiencing stillbirth and neonatal death in Southeast Brazil—a quasi-experimental before-and-after study. *Reproductive Health*, 18(1), 5. <https://doi.org/10.1186/s12978-020-01040-4>

Samantha, A., Aguilar, G., Johanna, Y., Reyes, R., Johana, M., & Tandazo, C. (2024). Una mirada a la violencia obstétrica en las madres gestantes y no gestantes. *Ciencia Latina Revista Científica Multidisciplinar*, 8(3), 8800–8817. https://doi.org/10.37811/CL_RCM.V8I3.12037

Santamaría-Gutierrez, R., González-Sala, F., & Lacomba-Trejo, L. (2025). The role of attachment in perinatal loss: A systematic review. *Journal of Loss and Trauma*, 30(8), 813–850. <https://doi.org/10.1080/15325024.2025.2471817>

Scheidt, C. E., Hasenburger, A., Kunze, M., Waller, E., Pfeifer, R., Zimmermann, P., Hartmann, A., & Waller, N. (2012). Are individual differences of attachment predicting bereavement outcome after perinatal loss? A prospective cohort study. *Journal of Psychosomatic Research*, 73(5), 375–382. <https://doi.org/10.1016/j.jpsychores.2012.08.017>

Segovia, J. S., Ravanal, E. C., & Castillo, D. V. (2023). Experiences of gynecological

violence among binary and nonbinary chilean women. *Journal of Sexual Medicine & Research* 2(4), 1–11.

[https://doi.org/10.47363/JSMR/2023\(2\)119](https://doi.org/10.47363/JSMR/2023(2)119)

Seibert, A. C., & Kerns, K. A. (2009). Attachment figures in middle childhood.

International Journal of Behavioral Development, 33(4), 347–355.

<https://doi.org/10.1177/0165025409103872>

Sekowski, M., & Prigerson, H. G. (2022). Associations between symptoms of prolonged grief disorder and depression and suicidal ideation. *The British Journal of Clinical Psychology*, 61(4), 1211–1218.

<https://doi.org/10.1111/bjc.12381>

Sekowski, M., & Prigerson, H. G. (2022). Disorganized attachment and prolonged grief. *Journal of Clinical Psychology*, 78(9), 1806–1823.

<https://doi.org/10.1002/jclp.23325>

Sexton, M. B., Hamilton, L., McGinnis, E. W., Rosenblum, K. L., & Muzik, M. (2015). The roles of resilience and childhood trauma history: main and moderating effects on postpartum maternal mental health and functioning. *Journal of Affective Disorders*, 174, 562–568.

<https://doi.org/10.1016/J.JAD.2014.12.036>

Shaohua, L., & Shorey, S. (2021). Psychosocial interventions on psychological outcomes of parents with perinatal loss: A systematic review and meta-analysis. *International Journal of Nursing Studies*, 117, 103871.

<https://doi.org/10.1016/j.ijnurstu.2021.103871>

Sharma, G., Gaffey, A. E., Hameed, A., Kasparian, N. A., Mauricio, R., Marsh, E. B., Beck, D., Skowronski, J., Wolfe, D., & Levine, G. N. (2025). Optimizing psychological

health across the perinatal period: An update on maternal cardiovascular health: A scientific statement from the American Heart Association. *Journal of the American Heart Association*, 14, e041369.

<https://doi.org/10.1161/JAHA.125.041369>

Shaver, P. R., & Tancredy, C. M. (2001). Emotion, attachment, and bereavement: A conceptual commentary. En M. S. Stroebe, R. O. Hansson, W. Stroebe, & H. Schut (Eds.), *Handbook of bereavement research: Consequences, coping, and care* (pp. 63–88). American Psychological Association.

<https://doi.org/10.1037/10436-003>

Shear, M. K. (2015). Complicated grief. *New England Journal of Medicine*, 372(2), 153–160. <https://doi.org/10.1056/NEJMcp1315618>

Sheftall, A. H., Mathias, C. W., Furr, R. M., & Dougherty, D. M. (2013). Adolescent attachment security, family functioning, and suicide attempts. *Attachment & Human Development*, 15(4), 368–383.

<https://doi.org/10.1080/14616734.2013.782649>

Shin, S. H., Ksinan Jiskrova, G., Kimbrough, T., Dina, K. T., Lee, E. O., & Ayers, C. E. (2021). Maternal adverse childhood experiences and postpartum depressive symptoms in young, low-income women. *Psychiatry Research*, 296, 113679.

<https://doi.org/10.1016/j.psychres.2020.113679>

Shonkoff, J. P., Garner, A. S., Siegel, B. S., Dobbins, M. I., Earls, M. F., McGuinn, L., Pascoe, J., & Wood, D. L. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1), e232–e246.

<https://doi.org/10.1542/peds.2011-2663>

Shorey, S., Chee, C. Y., Ng, E. D., Chan, Y. H., Tam, W. W., & Chong, Y. S. (2018).

- Prevalence and incidence of postpartum depression among healthy mothers: A systematic review and meta-analysis. *Journal of Psychiatric Research*, 104, 235–248. <https://doi.org/10.1016/J.JPSYCHIRES.2018.08.001>
- Silva-Fernandez, C. S., de la Calle, M., Arribas, S. M., Garrosa, E., & Ramiro-Cortijo, D. (2023). Factors associated with obstetric violence implicated in the development of postpartum depression and post-traumatic stress disorder: A systematic review. *Nursing Reports*, 13(4), 1553–1576. <https://doi.org/10.3390/NURSREP13040130>
- Simon, N. M., & Shear, M. K. (2024). Prolonged Grief Disorder. *The New England Journal of Medicine*, 391(13), 1227–1236. <https://doi.org/10.1056/NEJMcp2308707>
- Simpson, J. A., & Rholes, W. S. (2017). Adult attachment, stress, and romantic relationships. *Current Opinion in Psychology*, 13, 19–24. <https://doi.org/10.1016/j.copsyc.2016.04.00>
- Sisto, A., Vicinanza, F., Campanozzi, L. L., Ricci, G., Tartaglini, D., & Tambone, V. (2019). Towards a transversal definition of psychological resilience: A literature review. *Medicina*, 55(11), 745-767. <https://doi.org/10.3390/MEDICINA55110745>
- Slack, H. R., Fovargue, I., Liu, X., & Matheron, A. (2026). Measuring adversity without harm: Survivors' critique and recommendations for trauma-informed assessment. *Child Abuse & Neglect*, 171, 107829. <https://doi.org/10.1016/j.chiabu.2025.107829>
- Smith, K. V., Skjerdingsstad, N., Ebrahimi, O. V., Maccallum, F., & Ehlers, A. (2025). Unraveling attachment - A network analysis of the cognitive pathways linking

attachment and prolonged grief. *Psychological Medicine*, 55, e276.

<https://doi.org/10.1017/S0033291725101669>

Smith, M. V., Gotman, N., & Yonkers, K. A. (2016). Early childhood adversity and pregnancy outcomes. *Maternal and Child Health Journal*, 20(4), 790–798.

<https://doi.org/10.1007/s10995-015-1909-5>

Snyder, K. S., Luchner, A. F., & Tantleff-Dunn, S. (2023). Adverse childhood experiences and insecure attachment: The indirect effects of dissociation and emotion regulation difficulties. *Psychological Trauma: Theory, Research, Practice and Policy*, 16(Suppl 1), S20–S27.

<https://doi.org/10.1037/tra0001532>

Sochos, A., & Aleem, S. (2022). Parental attachment style and young persons' adjustment to bereavement. *Child & Youth Care Forum*, 51(1), 161–179.

<https://doi.org/10.1007/s10566-021-09621-5>

Soriano, J., & Monsalve, V. (2019). Profiles of personality and resilience in chronic pain: Utility of the CD-RISC-10 to discriminate between resilient and vulnerable types. *Revista de la Sociedad Española del Dolor*, 26(2), 72–80.

<https://doi.org/10.20986/RESED.2018.3670/2018>

Souch, A. J., Jones, I. R., Shelton, K. H., & Waters, C. S. (2025). Adverse Childhood Experiences (ACEs) and childbearing and perinatal mental health outcomes in a clinical sample of women. *Journal of Affective Disorders*, 391, 120038.

<https://doi.org/10.1016/j.jad.2025.120038>

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, 166(10), 1092–1097.

<https://doi.org/10.1001/archinte.166.10.1092>

Spitzer, R. L., Williams, J. B. W., & Kroenke, K. (1999). Validation and utility of a self-report version of PRIME-MD: The PHQ Primary Care Study. *Journal of American Medicine Association*, 282(18), 1737–1744.

<https://doi.org/10.1001/jama.282.18.1737>

Sroufe, L. A. (2005). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment & Human Development*, 7(4), 349–367.

<https://doi.org/10.1080/14616730500365928>

Steel, P., Fariborzi, H., & Hendijani, R., (2023). An application of modern literature review methodology: finding needles in ever-growing haystacks. En *Sage Research Methods: Business*. SAGE Publications, Ltd.,

<https://doi.org/10.4135/9781529667417>

Steele, H., Steele, M., & Fonagy, P. (2020). Infant attachment and adult attachment: A key protective factor. En *The Routledge handbook of attachment: Implications and interventions* (pp. 109–124). Routledge.

Steele, H., Steele, M., & Kriss, A. (2015). *The Friends and Family Interview (FFI): Rating and classification system* [Manuscrito no publicado].

Steele, M., & Steele, H. (2007). *Co-construction coding scheme manual* (Updated version) [Manuscrito no publicado].

Stevenson-Hinde, J., & Shouldice, A. (1995). Maternal interactions and self-reports related to attachment classifications at 4.5 years. *Child Development*, 66(3), 583–596. <https://doi.org/10.2307/1131936>

Stewart, D. E., & Vigod, S. N. (2019). Postpartum depression: Pathophysiology, treatment, and emerging therapeutics. *Annual Review of Medicine*, 70, 183–

196. <https://doi.org/10.1146/annurev-med-041217-011106>
- Stirling, J., Gavril, A., Brennan, B., Sege, R. D., Dubowitz, H., & American Academy of Pediatrics, council on child abuse and neglect (2024). The Pediatrician's Role in Preventing Child Maltreatment: Clinical Report. *Pediatrics*, 154(2), e2024067608. <https://doi.org/10.1542/peds.2024-067608>.
- Stright, A. D., & Bales, S. S. (2003). Coparenting quality: Contributions of child and parent characteristics. *Family Relations*, 52(3), 232–240. <https://doi.org/10.1111/j.1741-3729.2003.00232.x>
- Stroebe, M. S., Abakoumkin, G., Stroebe, W., & Schut, H. (2012). Continuing bonds in adjustment to bereavement: Impact of abrupt versus gradual separation. *Personal Relationships*, 19(2), 255–266. <https://doi.org/10.1111/j.1475-6811.2011.01352.x>
- Stroebe, M., & Schut, H. (1999). The dual process model of coping with bereavement: Rationale and description. *Death Studies*, 23(3), 197–224. <https://doi.org/10.1080/074811899201046>
- Stroebe, M., & Schut, H. (2010). The dual process model of coping with bereavement: A decade on. *Omega: Journal of Death and Dying*, 61(4), 273–289. <https://doi.org/10.2190/OM.61.4.b>
- Suárez, A. M. (2023). Una mirada a la violencia obstétrica: la relación individuo-cuerpo y sociedad-cuerpos. *Eikasía Revista de Filosofía*, 114, 167–183. <https://doi.org/10.57027/EIKASIA.114.586>
- Taebi, M., Alavi, N., & Ahmadi, S. (2020). The experiences of surrogate mothers: A qualitative study. *Nursing and Midwifery Studies*, 9, 51. https://doi.org/10.4103/nms.nms_19_19

- Takács, L., Smolík, F., & Putnam, S. (2019). Assessing longitudinal pathways between maternal depressive symptoms, parenting self-esteem and infant temperament. *PLoS ONE*, 14(8), e0220633.
<https://doi.org/10.1371/JOURNAL.PONE.0220633>
- Tamarit Chuliá, A. (2023). *Ajuste psicosocial en mujeres y personas no binarias queer. Intersecciones entre género y orientación sexual*. [Tesis de doctorado, Universitat de València]. <https://hdl.handle.net/10550/88725>
- Tang, N., Jia, Y., Zhao, Q., Liu, H., Li, J., Zhang, H., Han, L., & Huangfu, C. (2022). Influencing factors of dyadic coping among infertile women: A path analysis. *Frontiers in Psychiatry*, 13, 1-11. <https://doi.org/10.3389/fpsy.2022.830039>
- Tang, N., Pei, M., Xie, L., Liang, X., Hu, J., & Gao, Y. (2023). Relationship between dyadic coping with anxiety and depression in infertile couples: Gender differences and dyadic interaction. *Psychology Research and Behavior Management*, 16, 4909-4919. <https://doi.org/10.2147/PRBM.S437808>
- Tarabulsy, G. M., Provost, M. A., Bordeleau, S., Trudel-Fitzgerald, C., Moran, G., Pederson, D. R., Trabelsi, M., Lemelin, J.-P., & Pierce, T. (2009). Validation of a short version of the maternal behavior Q-set applied to a brief video record of mother–infant interaction. *Infant Behavior and Development*, 32(1), 132–136. <https://doi.org/10.1016/j.infbeh.2008.09.006>
- Távora, L. (2022). Violence against women in the obstetric care setting. *Revista Peruana de Ginecología y Obstetricia*, 68(4), 1-4.
<https://doi.org/10.31403/RPGO.V68I2469>
- Tedeschi, R. G., & Calhoun, L. G. (1995). *Trauma & transformation: Growing in the aftermath of suffering*. Sage Publications, Inc.

<https://doi.org/10.4135/9781483326931>

- Tedeschi, R. G., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9*(3), 455–472. <https://doi.org/10.1002/jts.2490090305>
- Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15*(1), 1–18. https://doi.org/10.1207/s15327965pli1501_01
- Teman, E. (2010). *Birthing a mother: The surrogate body and the pregnant self*. University of California Press.
- Thomas, H. (2003). Quality assessment tool for quantitative studies. Effective Public Health Practice Project. *BMJ Publishing Group*.
<https://www.ehphp.ca/quality-assessment-tool-for-quantitative-studies/>
- Thurston, C., Murray, A. L., Franchino-Olsen, H., Silima, M., Hemady, C. L., & Meinck, F. (2025). Prospective longitudinal associations between adverse childhood experiences and adult mental health outcomes: Systematic review and meta-analysis. *Trauma, Violence & Abuse*. Advance online publication. <https://doi.org/10.1177/15248380251358223>
- Tian, Z., Zhang, N., Li, Y., Wu, Y., & Wang, L. (2024). Adverse childhood experiences and subsequent experiences of intimate partner violence in adulthood: a gender perspective. *Epidemiology and Psychiatric Sciences, 33*, e75. <https://doi.org/10.1017/S2045796024000775>
- Tichelman, E., Westerneng, M., Witteveen, A. B., van Baar, A. L., van der Horst, H. E., de Jonge, A., Berger, M. Y., Schellevis, F. G., Burger, H., & Peters, L. L. (2019). Correlates of prenatal and postnatal mother-to-infant bonding quality: A

systematic review. *PLOS ONE*, 14(9), e0222998.

<https://doi.org/10.1371/journal.pone.0222998>

Todorović, A., O'Higgins, A., Johnston, S., Hilton, N., Webster, G., & Kelly, B. (2025).

Navigating psychosocial aspects of pregnancy care after baby loss: A roadmap for professionals. *BJOG: An International Journal of Obstetrics and Gynaecology*, 132(8), 1019–1031. <https://doi.org/10.1111/1471-0528.18126>

Toedter, L. J., Lasker, J. N., & Alhadeff, J. M. (1988). The perinatal grief scale:

Development and initial validation. *American Journal of Orthopsychiatry*. 58 (3), 435-449.

Trenado, R., Pons-Salvador, G., & Cerezo, M. A. (2009). Protecting the family: Support and assistance for family. *Papeles del Psicólogo*, 30(1), 24–32.

Troëng, A., Dolk, J., Vinnars, M. T., Hallqvist, J., & Kristiansson, P. (2025). Maternal adverse childhood experiences and perinatal outcomes: A retrospective inception cohort study. *PloS One*, 20(11), e0333366.

<https://doi.org/10.1371/journal.pone.0333366>

Trombetta, T., Giordano, M., Santoniccolo, F., Vismara, L., Della Vedova, A. M., & Rollè,

L. (2021). Pre-natal attachment and parent-to-infant attachment: A systematic review. *Frontiers in Psychology*, 12, 620942.

<https://doi.org/10.3389/fpsyg.2021.620942>

Trombetta, T., Taccini, F., Mannarini, S., & Rollè, L. (2025). The impact of intimate partner violence on negative affect: The mediating role of adult attachment. *Journal of Aggression, Maltreatment & Trauma*, 34(3), 406–421.

<https://doi.org/10.1080/10926771.2025.2468237>

Tsartsara, E., & Johnson, M. P. (2006). The impact of miscarriage on women's

- pregnancy-specific anxiety and feelings of prenatal maternal–fetal attachment during the course of a subsequent pregnancy: An exploratory follow-up study. *Journal of Psychosomatic Obstetrics and Gynaecology*, 27(3), 173–182. <https://doi.org/10.1080/01674820600646198>
- Tseng, Y. F., Cheng, H. R., Chen, Y. P., Yang, S. F., & Cheng, P. T. (2017). Grief reactions of couples to perinatal loss: A one-year prospective follow-up. *Journal of Clinical Nursing*, 26(23-24), 5133–5142. <https://doi.org/10.1111/jocn.14059>
- Turgeon, J., Milot, T., St-Laurent, D., & Dubois-Comtois, K. (2023). Association between childhood maltreatment and attachment disorganization in young adulthood: The protective role of early mother-child interactions. *Child abuse & neglect*, 143, 106281. <https://doi.org/10.1016/j.chiabu.2023.106281>
- Turton, P., Hughes, P., Fonagy, P., & Fainman, D. (2004). An investigation into the possible overlap between PTSD and unresolved responses following stillbirth: An absence of linkage with only unresolved status predicting infant disorganization. *Attachment & Human Development*, 6(3), 241–253. <https://doi.org/10.1080/14616730412331281575>
- Uren, T. H., & Wastell, C. A. (2002). Attachment and meaning-making in perinatal bereavement. *Death Studies*, 26(4), 279–308. <https://doi.org/10.1080/074811802753594682>
- Uruk, A. Ç., Sayger, T. V., & Cogdal, P. A. (2007). Examining the influence of family cohesion and adaptability on trauma symptoms and psychological well-being. *Journal of College Student Psychotherapy*, 22(2), 51–63. https://doi.org/10.1300/J035V22N02_05
- U.S. Preventive Services Task Force. (2019). Interventions to prevent perinatal

- depression: U.S. Preventive Services Task Force recommendation statement. *Journal of American Medicine Association*, 321(6), 580–587.
<https://doi.org/10.1001/jama.2019.0007>
- Valiente, N. G., Guerra, G. Á., Najarro, D. A., Menéndez, A. F., & Flores, A. M. (2023). Consecuencias físicas y psicológicas de la violencia obstétrica en países de Latinoamérica. *Alerta, Revista Científica Del Instituto Nacional de Salud*, 6(1), 70–77. <https://doi.org/10.5377/ALERTA.V6I1.15231>
- Van den Akker, O. B. (2017). Separation and parenting a surrogate baby. En *Surrogate motherhood families* (pp. 147–168). Springer.
https://doi.org/10.1007/978-3-319-60453-4_6
- Van der Merwe, E., & Greeff, A. P. (2015). Infertility-related stress within the marital relationship. *International Journal of Sexual Health*, 27(4), 522–531.
<https://doi.org/10.1080/19317611.2015.1067275>
- Van Haeken, S., Braeken, M. A., Nuyts, T., Franck, E., Timmermans, O., & Bogaerts, A. (2020). Perinatal resilience for the first 1,000 days of life. Concept analysis and delphi survey. *Frontiers in Psychology*, 11, 563432.
<https://doi.org/10.3389/fpsyg.2020.563432>
- Van Wyk, J. A. (2023). ACEs and angst: Adverse childhood experiences, general strain theory, and adolescent male suicidal and violent behaviors. *SAGE Open*, 13(2). <https://doi.org/10.1177/21582440231176710>
- Vázquez, M. B., Pereira, B., & Míguez, M. C. (2018). Psychometric properties of the Spanish version of the Pregnancy Related Anxiety Questionnaire (PRAQ). *The Spanish Journal of Psychology*, 21, E64. <https://doi.org/10.1017/SJP.2018.67>
- Vega-Sanz, M., Halty, A., Goñi-Dengra, S., Pitillas, C., & Berástegui, A. (2025).

- Exploring traumatic childbirth: Associations between obstetric violence indicators and perinatal posttraumatic stress. *PloS One*, 20(6), e0324461. <https://doi.org/10.1371/journal.pone.0324461>
- Velez, M. P., Dayan, N., Vigod, S. N., et al. (2025). New-onset mental illness among gestational carriers. *JAMA Network Open*, 8(7), e2523428. <https://doi.org/10.1001/jamanetworkopen.2025.23428>
- Vitale, S. G., la Rosa, V. L., Rapisarda, A. M., & Laganà, A. S. (2017). Psychology of infertility and assisted reproductive treatment: the Italian situation. *Journal of Psychosomatic Obstetrics and Gynecology*, 38(1), 1-3. <https://doi.org/10.1080/0167482X.2016.1244184>
- Vowels, L. M., Vowels, M. J., Carnelley, K. B., Millings, A., & Gibson-Miller, J. (2023). Toward a causal link between attachment styles and mental health during the COVID- 19 pandemic. *The British Journal of Clinical Psychology*, 62(3), 605–620. <https://doi.org/10.1111/bjc.1242838>
- Wagner, M. (20 de octubre de 2000). *El nacimiento en el nuevo milenio*. [Presentación en papel]. I Congreso Internacional del Parto y Nacimiento en casa, Jerez de la Frontera, España.
- Wahyu, M. D., Zain, E., Watanabe, Y., Fukui, N., Hashijiri, K., Motegi, T., Ogawa, M., Egawa, J., Nishijima, K., & Someya, T. (2025). Impact of adult attachment style on bonding mediated by depression and anxiety across the perinatal period. *Journal of Affective Disorders*, 388, 119763. <https://doi.org/10.1016/j.jad.2025.119763>
- Wang, Y., Gu, J., Zhang, F., & Xu, X. (2024). The multiple mediation model of social support and postpartum anxiety symptomatology: the role of resilience,

postpartum stress, and sleep problems. *BMC Psychiatry*, 24(1), 630.

<https://doi.org/10.1186/s12888-024-06087-2>

Waters, E., & Deane, K. E. (1985). Defining and assessing individual differences in attachment relationships: Q-methodology and the organization of behavior in infancy and early childhood. *Monographs of the Society for Research in Child Development*, 50(1–2), 41–65. <https://doi.org/10.2307/3333826>

Weaver, M. S., Nasir, A., Lord, B. T., Starin, A., Linebarger, J. S., Committee on Psychosocial Aspects of Child and Family Health, & Section on Hospice and Palliative Medicine. (2023). Supporting the family after the death of a child or adolescent. *Pediatrics*, 152(6), e2023064426. <https://doi.org/10.1542/peds.2023-064426>

Wechsler, D. (2012). *Wechsler Intelligence Scale for Children* (4th ed.). The Psychological Corporation. <https://doi.org/10.1037/t15174-000>

Wermelinger, M. P., Lucchetti, A. L. G., & Lucchetti, G. (2017). Association between depression and resilience in older adults: a systematic review and meta-analysis. *International Journal of Geriatric Psychiatry*, 32(3), 237–246. <https://doi.org/10.1002/gps.4619>

Werner, E., Le, H. N., Babineau, V., & Grubb, M. (2024). Preventive interventions for perinatal mood and anxiety disorders: A review of selected programs. *Seminars in perinatology*, 48(6), 151944. <https://doi.org/10.1016/j.semperi.2024.151944>

Widom, C. S., Czaja, S. J., Kozakowski, S. S., & Chauhan, P. (2018). Does adult attachment style mediate the relationship between childhood maltreatment and mental and physical health outcomes? *Child Abuse & Neglect*, 76, 533–

545. <https://doi.org/10.1016/j.chiabu.2017.05.002>

Wijngaards-de Meij, L., Stroebe, M., Schut, H., Stroebe, W., van den Bout, J., van der Heijden, P. G., & Dijkstra, I. (2007). Patterns of attachment and parents' adjustment to the death of their child. *Personality & Social Psychology Bulletin*, 33(4), 537–548. <https://doi.org/10.1177/0146167206297400>

Wischmann, T. (2020). Psychological Impact of Infertility and Assisted Reproduction 1. En *Handbook of Perinatal Clinical Psychology* (pp. 61-81). Routledge.

Wojcik, K. D., Cox, D. W., & Kealy, D. (2019). Adverse childhood experiences and shame- and guilt-proneness: Examining the mediating roles of interpersonal problems in a community sample. *Child Abuse & Neglect*, 98, 104233. <https://doi.org/10.1016/j.chiabu.2019.104233>

Woodside, A. G. (2013). Moving beyond multiple regression analysis to algorithms: Calling for adoption of a paradigm shift from symmetric to asymmetric thinking in data analysis and crafting theory [Editorial]. *Journal of Business Research*, 66 (4), 463-472 <https://doi.org/10.1016/j.jbusres.2012.12.021>

Worden, J. W. (2018). *Grief counseling and grief therapy: A handbook for the mental health practitioner*. New York, NY: Springer Publishing Company.

Wrenn, G. L., Wingo, A. P., Moore, R., Pelletier, T., Gutman, A. R., Bradley, B., & Ressler, K. J. (2011). The effect of resilience on posttraumatic stress disorder in trauma-exposed inner-city primary care patients. *Journal of the National Medical Association*, 103(7), 560–566. [https://doi.org/10.1016/S0027-9684\(15\)30381-3](https://doi.org/10.1016/S0027-9684(15)30381-3)

Wright, K. R., Zhou, A. M., Molina, N. C., de Vos, N., Kaliush, P. R., Conradt, E., & Crowell, S. E. (2025). A multimethod longitudinal examination of the effects

- of childhood maltreatment on birth experiences and postpartum mental health. *Development and Psychopathology*, 1–13. Advance online publication. <https://doi.org/10.1017/S0954579425100369>
- Writing Group on behalf of the ESHRE Ethics Committee, Shenfield, F., Tarlatzis, B., Baccino, G., Bounartzi, T., Frith, L., Pennings, G., Provoost, V., Vermeulen, N., & Mertes, H. (2025). Ethical considerations on surrogacy†. *Human Reproduction*, 40(3), 420–425. <https://doi.org/10.1093/humrep/deaf006>
- Wrobel, G. M., Grotevant, H. D., Samek, D. R., & Von Korff, L. (2013). Adoptees' curiosity and information-seeking about birth parents in emerging adulthood: Context, motivation, and behavior. *International Journal of Behavioral Development*, 37(5), 441–450. <https://doi.org/10.1177/0165025413486420>
- Xu, M., Bradford, A. B., & Johnson, L. N. (2025). Paths to better emotion regulation in couple therapy: Exploring ACEs and attachment. *Psychotherapy Research: Journal of the Society for Psychotherapy Research*, 1–15. Advance online publication. <https://doi.org/10.1080/10503307.2025.2577211>
- Xu, X., Tahir, S. H., Khan, K. B., Sajid, M. A., & Safdar, M. A. (2024). Beyond regression: Unpacking research of human complex systems with qualitative comparative analysis. *Heliyon*, 10(10), e31457. <https://doi.org/10.1016/j.heliyon.2024.e31457>
- Yau, A., Friedlander, R. L., Petrini, A., Holt, M. C., White, D. E., Shin, J., Kalantry, S., & Spandorfer, S. (2021). Medical and mental health implications of gestational surrogacy. *American Journal of Obstetrics & Gynecology*, 225(3), 264–269. <https://doi.org/10.1016/j.ajog.2021.04.213>

- Yilmaz, S. D., & Beji, N. K. (2013). Effects of perinatal loss on current pregnancy in Turkey. *Midwifery*, 29(11), 1272–1277.
<https://doi.org/10.1016/j.midw.2012.11.015>
- Young-Wolff, K. C., Alabaster, A., McCaw, B., Stoller, N., Watson, C., Sterling, S., Ridout, K. K., & Flanagan, T. (2019). Adverse childhood Experiences and mental and behavioral health conditions during pregnancy: The role of resilience. *Journal of Women's Health*, 28(4), 452–461.
<https://doi.org/10.1089/JWH.2018.7108>
- Zadykowicz, R., Watson, K., Antsaklis, A., & FIGO Committee on Ethical Aspects of Human Reproduction and Women's Health (2025). FIGO position statement on surrogacy: Ethical considerations. *International Journal of Gynaecology and Obstetrics*, 171(2), 588–592. <https://doi.org/10.1002/ijgo.70507>
- Zayde, A., Prout, T. A., Kilbride, A., & Kufferath-Lin, T. (2021). The Connecting and Reflecting Experience (CARE): Theoretical foundation and development of mentalizing-focused parenting groups. *Attachment & Human Development*, 23(3), 293–309. <https://doi.org/10.1080/14616734.2020.1729213>
- Zhang, G.-R., Li, P.-S., & Jia, Y.-B. (2023). Relationship between family cohesion/adaptability and postpartum depressive symptoms: A single-center retrospective study. *World Journal of Psychiatry*, 13(2), 50.
<https://doi.org/10.5498/WJP.V13.I2.50>
- Zhang, L., Gu, W., Jing, X., Zhi, S., Zhou, N., Zhang, L., Wang, W., & Jiang, Y. (2023). Predicting the dyadic coping through self-esteem among infertile couples undergoing in vitro fertilization and embryo transfer: An actor-partner interdependence model. *Frontiers in Psychology*, 14, 1-10.

<https://doi.org/10.3389/fpsyg.2023.1127464>

Zhang, L., Huang, R., Lei, J., Liu, Y., & Liu, D. (2024). Factors associated with stress among pregnant women with a second child in Hunan province under China's two-child policy: a mixed-method study. *BMC Psychiatry*, 24(1).

<https://doi.org/10.1186/S12888-024-05604-7>

Zhou, Y., Hu, D., Zhang, K., Mao, J., Teng, F., Yu, T., Xu, K., Tan, R., Ding, X., & Liu, Y.

(2020). The mechanism of family adaptability and cohesion in suicidal ideation among Chinese cancer patients. *Journal of Psychosocial Oncology*,

38(5), 612–626. <https://doi.org/10.1080/07347332.2020.1757799>

Zhuang, S., Chen, M., Ma, X., Jiang, J., Xiao, G., Zhao, Y., Hou, J., & Wang, Y. (2023). The

needs of women experiencing perinatal loss: A qualitative systematic review and meta-synthesis. *Women and Birth: Journal of the Australian College of*

Midwives, 36(5), 409–420. <https://doi.org/10.1016/j.wombi.2023.03.007>

Zigmond, A. S., & Snaith, R. P. (1983). The Hospital Anxiety and Depression Scale.

Acta Psychiatrica Scandinavica, 67(6), 361–370.

<https://doi.org/10.1111/j.1600-0447.1983.tb09716.x>

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional

Scale of Perceived Social Support. *Journal of Personality Assessment*, 52(1),

30–41. https://doi.org/10.1207/s15327752jpa5201_2

Zörer, P. B., & Dirik, G. (2023). Social anxiety from an attachment theory perspective:

the mediating role of early maladaptive schema domains and rejection sensitivity. *Journal of Evidence-Based Psychotherapies*, 23(2), 25–48.

<https://doi.org/10.24193/JEBP.2023.2.9>

Zumdahl, M. G., Saxsma, M. G., & Fraley, R. C. (2025). Adult Attachment Outcomes

and the Timing of Adverse Childhood Experiences. *Personality & Social Psychology Bulletin*, Advance publication.

<https://doi.org/10.1177/01461672251336491>

Zurlo, M. C., Cattaneo, M. F., & Vallone, F. (2018). Predictors of quality of life and psychological health in infertile couples: the moderating role of duration of infertility. *Quality of Life Research*, 27(4), 945-954.

<https://doi.org/10.1007/s11136-017-1781-4>

Zurlo, M. C., Cattaneo, M. F., & Vallone, F. (2019). The association between stressful life events and perceived quality of life among women attending infertility treatments: The moderating role of coping strategies and perceived couple's dyadic adjustment. *BMC Public Health*, 19(1), 1-8.

<https://doi.org/10.1186/s12889-019-7925-4>

Zurlo, M. C., Cattaneo, M. F., & Vallone, F. (2020). Infertility-Related Stress and Psychological Health Outcomes in Infertile Couples Undergoing Medical Treatments: Testing a Multi-dimensional Model. *Journal of Clinical Psychology in Medical Settings*, 27(4), 662-676. <https://doi.org/10.1007/s10880-019-09653-z>