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High-risk Profile and Individual, Interpersonal, and Contextual Factors Associated with Maternal Psychological Adjustment after Perinatal Death. A Systematic PRISMA Review

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Systematic Review

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Abstract

Perinatal death is a disruptive event in the biography of mothers that has profound implications for their psychological adjustment and mental health after the loss, with the presence of complex grief, depressive symptoms and post-traumatic symptoms being very common in this population. This systematic review explores the factors that influence psychological adjustment after loss and establishes a high-risk profile to facilitate early detection of women with a high probability of developing severe and prolonged psychopathology. A PRISMA systematic review of the literature of the last 10 years (2015-2025) was carried out in the databases Academic Search Ultimate, MEDLINE, Psychology and Behavioral Sciences Collection, APA PsycInfo, APA PsycArticles and PSICODOC. Based on the 22 quantitative articles analyzed, a) information is provided on the most commonly used instruments to assess the symptoms of PTSD, grief, depression and anxiety in the context of perinatal grief, b) a total of 59 contextual, care, individual and interpersonal factors related to psychological adjustment after loss are extracted and analyzed, and c) a high-risk profile is developed to facilitate the adoption of preventive measures or early intervention in women with a worse prognosis. The implications and scope of these findings are discussed.

Keywords: perinatal death; post-traumatic stress; perinatal grief; psychological adjustment; postnatal depression; high-risk profile

1. Introduction

The loss of a child during pregnancy is a disruptive event in the lives of parents that significantly affects their psychological adjustment and mental health status. It is a phenomenon regarding which, although there has been a recent increase in research, there is still a great lack of knowledge about the processes by which it impacts psychological well-being (Zeng et al., 2025)

In a broad sense, perinatal death is defined as a clinical situation in which the death of a fetus occurs during pregnancy or of a newborn. There is a great disparity about what is considered perinatal death and what is not: from studies that consider perinatal death any involuntary interruption of pregnancy from gestation to 28 days after delivery (e.g.: Al - Maharma et al., 2016; Caldwell et al., 2024; Köneş & Yıldız, 2021) to more restrictive definitions, which include it between 22 full weeks of gestation – or a weight of at least 500 grams – and the first 7 days of life, thus covering only late intrauterine death and early neonatal death (World Health Organization, 2019).

There are also differences between articles that include voluntary termination of pregnancy as perinatal death as a consequence of medical conditions (e.g.: Sartel-Raviv et al., 2025) and those that only include spontaneous abortions, not deliberate abortions (e.g.: Khoori et al., 2025).

This disparity in criteria also affects the accuracy with which we can perform epidemiological analyses on the presence of perinatal death. If miscarriages, ectopic pregnancies, prenatal death, and neonatal death are included, perinatal death affects between 20 and 25% of pregnancies internationally (Côte-Arsenault et al., 2007, as cited in Köneş & Yıldız, 2021). It is estimated that 1 in 10 women will suffer a perinatal death and, of the women who experience it, 25% - 30% will have intense symptoms of complex grief that will last for a long time (Lancet, 2021; Zang et al., 2024, as cited in Khoori et al., 2025). Other studies estimate that this percentage is between 21% and 49.1% (Ordonez et al., 2020; Farren et al., 2020; Farren et al., 2016, as cited in Zeng et al., 2025). Perinatal death is, therefore, a public mental health problem that needs to be addressed and investigated.

There is great heterogeneity in terms of the state of the art on psychological adjustment after perinatal loss (Zeng et al., 2025) and a great disparity of information regarding the factors that influence it. In this context, there is a need to be able to identify which factors are related to the subsequent adjustment after suffering a perinatal loss and to be able to incorporate such information into the health care provided to women who are exposed to a life event of these characteristics.

Therefore, the overall objective of this systematic review is to gather information on the factors affecting psychological adjustment in mothers suffering perinatal death. Specifically, it is intended to cover the following three objectives:

- **O1**. To provide information about the most common way to assess symptoms of post-traumatic stress, perinatal grief and psychological adjustment in this population.
- **O2**. Extract and analyse factors related to psychological adjustment after perinatal death and synthesize them in a category-based model
- **O3**. To design, based on the factors extracted, a risk profile of worse clinical prognosis in terms of depressive and post-traumatic psychopathology in women victims of perinatal loss, so that it can serve as support for future decisions on actions aimed at preventing and improving their health status.

2. Materials and Methods

2.1. Research Question and Framework

A systematic review of the scientific literature on prenatal, perinatal and postnatal factors associated with subjective well-being, psychological adjustment and psychopathology of women victims of perinatal death has been carried out. The PRISMA 2020 methodology (Page et al., 2021) has been used, which includes a set of guidelines and indications to correctly conduct a systematic review of the literature and reduce the risk of bias. The review protocol has not been pre-registered.

For this systematic review, the PECO framework was followed, which includes the following elements: identification of the population (P), exposure variable (E), comparative group (C), and observation of outcomes (O). The framework was applied as follows:

- **P:** mothers who have suffered perinatal death
- **E:** exposure to individual, interpersonal, and contextual factors
- **C:** absence or less exposure to these factors
- **O:** Measured differences in psychopathology -perinatal grief, PTSD, depression and anxiety disorders- measured via validated and standardized PROMs (Patient Reported Outcome Measures)

From this structure, the research question was: *Which factors affect the maternal psychological adjustment posterior to having suffered a perinatal death?* The search process was conducted as follows:

2.2. Initial Search

In November 2025, a first initial search was carried out in which the terms "perinatal death" and "psychological well-being" were launched in the MEDLINE database with the aim of making a first exploratory approach and identifying those keywords frequently used in the literature on perinatal death and psychological adjustment to design the subsequent systematic search equation.

2.3. Systematic Search

The systematic search was carried out in January 2026. Publications from 2015 to 2025 were included and the EBSCO-Host aggregator has been used, and the selected databases were: Academic Search Ultimate, Psychology and Behavioral Sciences Collection, APA PsycArticles, APA PsicInfo, PSICODOC and MEDLINE. The search equation that has been designed for this study has been the following:

TI (("perinatal death" OR "perinatal loss" OR stillbirth* OR stillborn* OR "fetal death" OR "fetal demise" OR "intrauterine fetal death" OR IUFD OR "neonatal death" OR "early neonatal death") AND (grief OR bereav* OR mourn* OR "complicated grief" OR "prolonged grief" OR depress* OR anxiety OR anxious OR "posttraumatic stress" OR PTSD OR trauma* OR "psychological adjustment" OR "psychological adaptation" OR "mental health" OR "psychological distress" OR "emotional distress" OR psych*)) OR **AB** (("perinatal death" OR "perinatal loss" OR stillbirth* OR stillborn* OR "fetal death" OR "fetal demise" OR "intrauterine fetal death" OR IUFD OR "neonatal death" OR "early neonatal death") AND (grief OR bereav* OR mourn* OR "complicated grief" OR "prolonged grief" OR depress* OR anxiety OR anxious

OR "posttraumatic stress" OR PTSD OR trauma* OR "psychological adjustment" OR "psychological adaptation" OR "mental health" OR "psychological distress" OR "emotional distress" OR psych*))

2.4. Eligibility criteria

The following inclusion criteria were defined:

1. Quantitative or mixed empirical studies, from which quantitative factors will be selected
2. The main event is perinatal death
3. It analyses mothers only or, if it includes couples, it provides the analysis of mothers separately
4. It measures variables with validated and standardized instruments (PROMs)

The following exclusion criteria were defined:

1. Non-empirical study
2. Exclusively qualitative designs
3. It does not analyse mothers separately
4. No psychological/mental health outcomes reported
5. It is a validation study of a tool or test
6. Reverse causality – perinatal death is not the event but the result

2.5. Study selection process

A total of 1061 unique records were retrieved. To carry out the screening phase, the ASReviewLab software was used, developed by the University of Utrecht to reduce human bias in the screening of the header and abstract for a systematic review (Van De Schoot et al., 2021). After initial training with relevant and irrelevant studies, the software iteratively presents the records with the highest probability of inclusion to the researcher, who labels them as relevant or not, feeding back into the model. The process was stopped when saturation was reached in the identification of relevant studies and 72 articles were selected and passed to full-text evaluation; 50 articles were discarded in this step and a total of 22 were finally included in the review. The PRISMA flow chart is provided in Figure 1.

2.6. Data extraction and Items

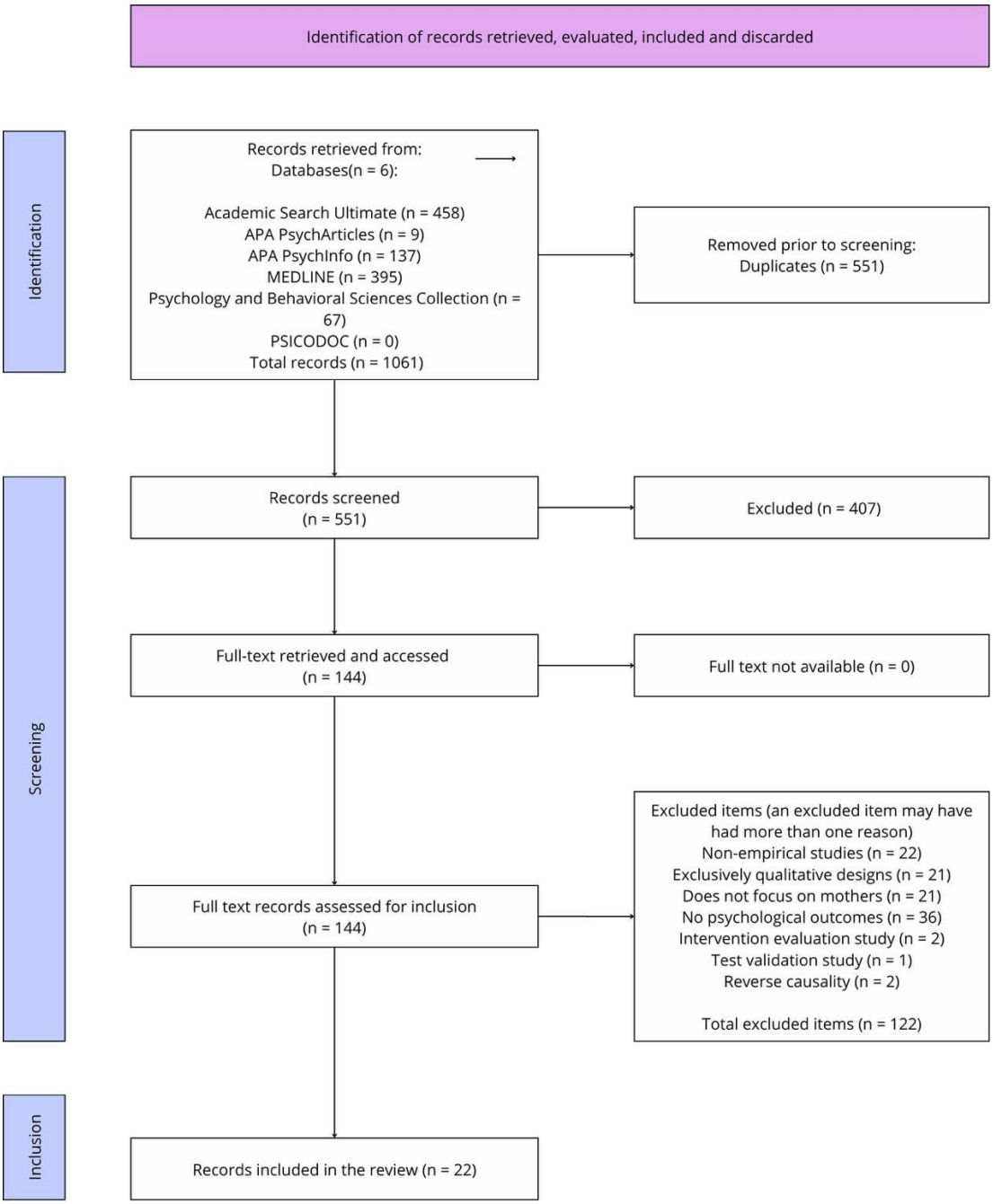
For each included study, the following variables were extracted: author, year, country, study type, sample characteristics, psychometric tests used, results, factors/variables to which women had been exposed during perinatal death process, and conclusions.

2.7. Risk of Bias assessment

The 22 registries included in the review have been individually assessed for methodological quality and potential risk of bias. To this end, the CASP Checklists (Critical Appraisal Skills Programme, 2024) have been used for cross-sectional and longitudinal quantitative studies. Based on the result in this instrument, each article was assigned one of three possibilities: "High quality – Low risk of bias", "Medium quality – Medium risk of bias" and "Low quality – high risk of bias".

Figure 1.

PRISMA 2020 flow diagram depicting the process of selection of papers



3. Results

3.1. Identification of the most used instrument to assess mental health status after a perinatal death

The most widely used instrument to assess grief symptomatology in the articles reviewed was the Perinatal Grief Scale [PGS], used in 45% of the studies. The next most used instrument was the Prolongued Grief Scale 13 – Revised [PGS13], in 18% of the articles consulted.

In relation to anxious-depressive symptomatology, no widely used instrument has been found, but there is great variation between studies. The Edinburgh Postnatal Depression Scale, [EPDS], the Patient Health Questionnaire [PHQ9], the Hospital Anxiety and Depression Scale [HADS], the Clinical Outcomes Routine Evaluation [CORE-OM], the Psychosocial Well-Being Index [PWB-I], the Beck Depression Inventory [BDI-2], the Beck Anxiety Inventory [BAI-2], and the Hopkins Symptom Checklist [HSCL-10] have been used.

Finally, regarding the assessment of post-traumatic symptoms, the most used instrument was the Revised Event Impact Scale [IES-R], in 32% of the articles consulted. The PTSD Checklist [PCL-5] has been used on occasion, appearing in 10% of the articles.

3.2. Factors related to maternal psychological adjustment after perinatal death

A total of 59 factors has been extracted that in their respective studies have shown a statistically significant relationship with psychological adjustment and the expression of psychopathology in women who have been exposed to perinatal loss. To consider a variable as an extractable factor of an article, it has been required to meet the following conditions:

1. That the variable was conceptually defined and delimited.
2. That the authors have explained with which tool has been evaluated and how the data have been obtained.
3. Adequate statistical analysis has been performed to explore the hypothesis of association and/or difference, such as group comparisons, correlations, or regression models.
4. That the variable of psychological well-being/psychopathology has been measured with a standardized and validated PROM [Patient Reported Outcome Measures].
5. Both principal and covariate variables have been admitted, if all of the above conditions have been met.

Each factor was coded in a subcategory according to the immediate domain to which it belonged, and this was in turn integrated into a higher-level category, forming a hierarchical model from lower to closer to the individual. Figure 2 presents the model resulting from categorizing the 59 factors obtained in this literature review. The factors in each category are discussed in detail below.

Figure 2

Factors identified and grouped by categories

Contextual

Normative

- Social stigma
- Social norms and social pressure
- Social withdrawal
- Psychosocial awareness

Interpersonal

- Adult attachment (secure/insecure)
- Dyadic coping
- Relational satisfaction
- Parental attachment in childhood (maternal care)
- Perceived maternal and paternal affection
- Dissolution of the relationship after the loss
- Perceived social support
- Number of children
- Childlessness
- Previous perinatal losses
- Partner support

Care-related

- Systematic psychological support in centre
- Voluntary Termination of Pregnancy
- Type of Loss
- Viewing the deceased baby's body
- Holding the deceased baby
- Time spent viewing the deceased baby's body
- Organizing the baby's funeral rites
- Performing "memorial acts" with the baby
- Repeated exposure to the baby's lifeless body
- Baby's gestational age
- Window period (time between the mother learning that the pregnancy is incompatible with life and the delivery of the baby)
- Whether the pregnancy was desired/planned
- Adherence to prenatal care

Individual

Cognitive

- Changes in Core Beliefs
- Negative Post-Traumatic Cognitions
- Deliberate Rumination
- Intrusive Rumination
- Post-Traumatic Growth (PTG)
- Locus of Control
- Moral Harm (Guilt, Violation of Personal Values)
- Religious Coping
- Subjective Perception of the Severity of the Experience
- Attribution of Personhood to the Baby
- Wishful Thinking
- Search for Meaning in Life
- Life Satisfaction
- Short-Term Coping Behaviors

Biographical

- Maternal age
- Educational level
- Marital status
- Ethnicity
- Socioeconomic status
- History of trauma
- Previous perinatal loss
- Employment/unemployment
- Rural vs. urban environment
- Time

Clinical

- Hyperarousal
- Peritraumatic dissociation
- Perinatal grief symptoms
- Postpartum depression
- Infertility following loss
- Previous or concurrent PTSD symptoms
- Alcohol and tobacco use as coping mechanisms

3.2.1. Contextual factors

3.2.1.1. Contextual-normative

The contextual-normative factors are those specific to the sociocultural environment in which mothers who suffer perinatal loss live and in which they must, therefore, go through their grieving process.

The team of Roberts et al. (2021a) reports that women who suffer perinatal loss in areas with more traditional or conservative social norms about the role that mothers should occupy in society and for/with their children tend to have a greater presence of perinatal grief symptoms. The presence of conservative social norms and the assessment of perceived social support explained 31% of the variance in the scores of the Perinatal Grief Scale (PGS). Perceiving low social support is directly related to poorer health, both general and mental health (Roberts et al., 2021b)

On the other hand, high social support is associated with less severity of anxious depressive symptoms after perinatal death and, in addition, seems to attenuate the relationship between these and post-traumatic growth (Zeng et al., 2025). That is, in people with high perceived social support, symptoms of anxiety and depression have less predictive power on post-traumatic growth. Moreover, significant positive correlation is reported between psychosocial awareness – defined as the number of unfavourable psychosocial factors identified by the person – and general affective-anxious psychopathology ($r = 0.420$, $p < 0.000$) (Roberts et al., 2021b).

Evidence at a glance

- Conservative environments regarding the maternal role are associated with greater grief symptoms and a worse clinical prognosis.
- Low perceived social support is directly related to poorer overall mental health and poorer mental health following perinatal loss.
- Buffering effect: High perceived social support appears to be inversely related to anxiety and depressive symptoms following the loss and their impact on post-traumatic development.
- Identifying multiple unfavorable social factors correlates with greater psychopathology.
- The context in which the mother experiences grief appears to influence the pressure on her subsequent psychological adjustment.

3.2.1.2. Contextual-care factors

Contextual-care factors are those that take place in the health facilities in which the woman spends her pregnancy process, from conception to loss.

First, the presence of routine, trauma-focused psychological support for women victims of perinatal death from the very device in which they receive care in pregnancy appears to be effective in reducing symptoms of psychological distress and post-traumatic stress from 77% to 29% and from 80% to 15%. respectively (Reed et al., 2025).

The degree of involvement of the mother in the termination of pregnancy also seems to be related to psychological adjustment. Those who terminated a desired pregnancy due to possible fetal abnormalities (TOP) reported greater exposure to self-directed potentially morally injurious events than

women with intrauterine fetal demise (IUFD) (ANCOVA controlling for gestational week and time since loss: $F(1,127) = 4.41$, $p < .05$, partial $\eta^2 = .03$), although the proportion endorsing at least one self-directed item only approached significance (34% vs 18.6%; $\chi^2(1) = 2.94$, $p = .06$). Within the TOP group, self-directed moral injury events were correlated with PTSD ($r = .37$) and prolonged grief symptoms ($r = .35$), but only trust violation remained significantly associated with both outcomes once moral injury outcomes were entered into the models. Overall PTSD and prolonged grief symptoms did not differ between TOP and IUFD groups (Sartel-Raviv et al., 2025).

For their part, women with neonatal deaths seem to be more likely to seek psychological help (50%, 95% CI 28.3%–72%) than women with other perinatal losses (18%, 95% CI 13.4%–23.3%) (Stanhope et al., 2024). Although no significant differences were found by type of loss in either grief or depressive symptoms (BDI: $F = 0.89$, $p = .352$; PGS total: $F = 0.05$, $p = .831$), gestational age at the time of loss was positively associated with depressive symptoms one month after the loss ($\beta = .28$, $p = .024$), but not with perinatal grief ($\beta = .20$, $p = .121$) (Ridaura et al., 2017).

This is a finding consistently reported in the literature. Thus, women who lose their children in early stages of pregnancy tend to experience fewer depressive symptoms as a result of perinatal death (Arocha & Range, 2021). A significant positive correlation has been reported between the week of gestation and the total score for post-traumatic stress ($r = 0.39$, $p < 0.05$), intrusion symptoms ($r = 0.36$, $p < 0.05$) and hyperarousal ($r = 0.38$, $p < 0.05$) of the Impact of Events Scale (IES) (De Vincenzo et al., 2024). However, it is worth mentioning that other studies have not found a significant relationship between the week of gestation and psychological adjustment variables (Freedle & Kim, 2025; Köneş & Yıldız, 2021), so the relationship may be mediated by other aspects that are not taken into account.

In relation to the interaction with the baby's body, the literature provides contradictory results. Seeing the baby's body has shown both an inverse relationship ($F = 8.42$, $p < .005$, partial eta squared = 0.12) (Arocha & Range, 2021) and the absence of it (Abiola et al., 2022; Chung & Reed, 2017) with subsequent depressive symptomatology. As for more direct interactions, such as holding the baby's body in your arms, the study by Abiola's group reported a direct and significant relationship with the intensity of post-traumatic symptoms. Thus, of the women who exceeded the cut-off point of 33 in the IES-R (possible PTSD), 71% had previously held the baby's body in their arms, compared to 48.3% of the group of women who did not exceed the cut-off point (sig. 0.035). The above data refer to a punctual exposure to the body, usually at the time of delivery. Meanwhile, women who are repeatedly exposed to the baby's lifeless body tend to have greater post-traumatic symptoms (58.1% vs 35%, $p<0.035$) (Abiola et al., 2022).

Among the women who did see the baby's body as soon as it was born, those who reported having been able to spend as long as they wanted with it showed less depressive symptomatology than those mothers who reported not having been able to have as much time as they wanted (means in PHQ9= 14.51 and 18.17, respectively, sig. 0.04, *n2 = 0.07)* presenting a large effect size (Arocha & Range, 2021).

Mothers' involvement in organizing the baby's funeral ritual is associated with greater severity of PTSD symptoms. The group of Abiola et al. (2022), when comparing mothers above and below the cut-off point of possible PTSD of the IES-R, reported a statistically significant difference in the proportion of women in both groups who had organized the funeral of the baby: 15% in the lower group vs. 32.3% in

the upper group ($p < 0.025$). On the other hand, there does not seem to be a relationship between this factor and depressive symptoms, nor does having an obituary dedicated to the baby, going to watch over the baby's body in the coffin, opting for cremation or a personal funeral rite, having a headstone or grave or keeping memorials related to the baby, such as photographs or hair clippings (Arocha & Range, 2021). This latest evidence on the absence of a relationship between memorial acts and measures of depression and subjective well-being is aligned with those reported by other research (Chung & Reed, 2017; Vivekananda et al., 2024).

Another relevant factor is the period that elapses from the mother's knowledge that the pregnancy will not be viable or that the fetus has already died to the time of delivery, called in this study *the window period*. The length of the window period is directly related to subsequent depressive symptoms ($r = 0.28$, $p < 0.03$) (Arocha & Range, 2021).

In relation to the characteristics of pregnancy and gestational follow-up, planned and desired pregnancies seem to show significantly higher scores in active grief, coping difficulties, hopelessness, and total perinatal grief on the PGS scale, both at 48 hours after death and at three months of follow-up (Köneş & Yıldız, 2021). The same is reported for planned pregnancies ($p < 0.01$ for all mean differences).

The same authors also report that women who had good adherence to gestational medical follow-up also showed higher levels of perinatal grief symptomatology than those who did not in all subscales of the PGS and at all measurement times ($p < 0.01$ for all mean differences).

Evidence at a glance

- Having access to trauma-focused psychological support in a standardized manner within the hospital drastically reduces overall distress and PTSD symptoms.
- Mothers who experience a neonatal death are much more likely to seek psychological help than those with other perinatal losses.
- Women with high adherence to prenatal care tend to present higher levels of perinatal grief symptoms.
- Feeling "moral harm" from a perceived violation of one's own values, which predicts post-traumatic symptoms and prolonged grief, is common in both spontaneous and intentional losses.
- The longer the window of opportunity for grief, the worse the subsequent psychological adjustment.
- Pregnancies that were planned and desired show significantly higher scores in active grief, hopelessness, and coping difficulties.
- The further along the pregnancy, the greater the intensity of depression and PTSD symptoms tends to be.
- If the mother decides to see the baby, it is vital that she can spend as much time with him or her as she wishes.
- Repeated exposure to the baby's lifeless body tends to increase post-traumatic symptoms compared to occasional exposure.
- The use of memorials (photos, hair clippings, or headstones) does not appear to have a direct relationship with reducing depression or improving well-being.

3.2.2. Interpersonal factors

Interpersonal-relational factors refer to those variables related to the attachment style, both the patient´s and her parents, as well as aspects related to interaction with the partner and joint coping.

The mother's attachment style is related to psychological adjustment after perinatal death. It has been reported that the secure attachment style is inversely related to active grief symptoms measured

through PGS at 6 weeks, 6 months, and 12 months ($r = -0.35; -0.44; -0.34$, $p < 0.05$) (GÜÇLÜ et al., 2021). However, it was not related to post-traumatic growth (Freedle & Oliveira, 2024).

Meanwhile, the effect of affection and control on parenting that the mother of the deceased baby perceives to have received from her parents has been studied. Neither maternal and paternal control nor affection seem to have shown a significant relationship with perinatal grief symptoms in the mother who suffers the loss, although maternal affection does correlate with her psychological well-being and general perceived quality of life ($r = 0.26$, $p < 0.01$) (Laura et al., 2024).

The disposition to anxiety in attachment influences post-traumatic growth indirectly through dyadic coping. Specifically, higher levels of attachment anxiety are associated with worse joint coping in the couple ($b = -0.98$, $p < .001$), and worse dyadic coping is related, in turn, to worse post-traumatic growth ($b = 0.21$, $p = .013$). Although attachment anxiety has a negative relationship with post-traumatic growth, this direct effect is not significant ($b = -0.19$, $p = .34$), indicating that its influence occurs mainly through the mediating mechanism. The indirect effect is significant ($b = -0.21$, 95% CI [-0.42, -0.03]), suggesting complete mediation: attachment anxiety reduces post-traumatic growth because it hinders the couple's ability to cope together with the stress derived from the trauma (Freedle & Oliveira, 2024). The same mediational phenomenon was reported for the other component of attachment, the disposition to avoid it. Along the same lines, mothers who report that the relationship has been broken since the loss have a greater anxious tendency in attachment than those who do not ($t = 2.92$, $p = .004$).

Finally, having more children alive at the time of perinatal death was associated with less intensity of perinatal grief symptoms: mothers who do not have more children alive (childlessness) in their family system at the time of loss report moderately greater perinatal grief symptoms than those who do (OR 0.22 – 0.25, $p < 0.001$) (Khoori et al., 2025; Krosch & Shakespeare-Finch, 2017; McSpedden et al., 2017).

Evidence at a glance

- Secure attachment acts as a protective factor, reducing the symptoms of grief.
- The couple's ability to cope with stress together promotes a healthy adjustment after the loss.
- Mothers who experience a breakup after the loss show a greater tendency toward anxious attachment and more severe symptoms of perinatal grief.
- Having other children alive at the time of the loss reduces the intensity of perinatal grief; not having previous children increases the risk of more severe grief symptoms.
- The affection and support received from their own parents influence the overall well-being of the mother experiencing the loss.

3.2.3. Individual factors

3.2.3.1. Cognitive factors

Individual-cognitive factors refer to those variables related to patients' mental processes or the content derived from them.

Disruptions or changes in core beliefs, i.e., the way people perceive and understand the world, are evident in women with perinatal loss and are positive predictors of perinatal grief symptoms (B = 0.79, $p < 0.001$) and presence of post-traumatic growth (B = 0.81, $p < 0.001$) (Krosch & Shakespeare-Finch, 2017). Disruptions in core beliefs are not so characteristic of general grief, but are more typical of post-traumatic or complex grief (Currier, Holland & Neimeyer, 2009, as cited in Krosch & Shakespeare-Finch, 2017).

According to the same authors, these changes in core beliefs are positively associated with the gestational age of the baby at the time of loss (r = 0.23, < 0.001), with the attribution of personhood by the mother, that is, if the mother attributes to the baby the quality of "having become a person" (r = 0.23, < 0.001) and with the perceived severity of the mother's experience of loss (r = 0.34, < 0.001). In addition, other authors report that post-traumatic beliefs (including negative beliefs about oneself, the world, and self-blame) correlate positively and significantly with postnatal depression (r = 0.5, $p < 0.001$) and post-traumatic symptoms (r = 0.56, $p < 0.01$) (Chung & Reed, 2017).

In the study carried out by the group of Sartel-Raviv et al. (2025), both beliefs of self-incrimination, such as having violated one's own principles or betrayed one's trust, and that others have acted immorally or unjustly during the perinatal period correlate positively with both post-traumatic symptoms (r = 0.25 to 0.56, $p < 0.05$) and with perinatal grief symptoms (r = 0.31 to 0.51, $p < 0.05$). These authors conclude that feelings of shame and guilt are often a central component of women's experience after experiencing perinatal loss, even if it is spontaneous.

Meanwhile, the attribution of personhood to the baby is consistently associated with greater intensity of post-traumatic symptoms and grief after the loss (Freedle & Kashubeck-West, 2021; Freedle & Oliveira, 2024; Krosch & Shakespeare-Finch, 2017).

Coping strategies, especially strategies put in place in the short term after the loss, are related to subsequent psychological adjustment. Women with perinatal loss are twice as likely to increase their alcohol consumption and three times as likely to increase their tobacco use compared to their baseline (Stanhope et al., 2024). Despair scores at 48 hours after death ($p < 0.05$) and total PGS scores at the third month ($p < 0.01$) were significantly lower in those mothers with multiple risk behaviors (smoking or alcohol) and those with none or only one risk behaviour (Stanhope et al., 2024) which could be due to the emotional regulation function acquired by these as coping strategies.

Regarding cognitive coping strategies, presence of so called “wishful thinking” is significantly associated with anxiety and depression symptomatology measured through the HSCL-10 (r = 0.343, p = 0.000). Women with a history of previous stillbirth used this type of thinking more than those without this characteristic (t = 3.28, p = 0.001). This type of thinking was significantly higher in women who requested psychological help ($p < 0.05$) compared to those who did not (Roberts et al., 2021b), so it could be interpreted as a risk factor of greater psychopathological severity after the loss.

Rumination, understood as repeated verbal processing about loss-related events, has been directly and significantly associated with post-traumatic growth, both in terms of intrusive rumination (r = 0.14, $p < 0.01$) and deliberate rumination (r = 0.43, $p < 0.01$), as well as with changes in core beliefs (r = 0.47 and r = 0.58, respectively, $p < 0.01$) (Freedle & Kashubeck-West, 2021). When it comes to fractured core beliefs and the aim is to restore or revise them, individuals need to engage in cognitive activities such

as rumination, which allow them to appreciate which aspects of their beliefs have been challenged and modified by such a devastating experience (Janoff-Bulman, 2006, as cited in Freedle & Kashubeck-West, 2021).

Psychological adjustment after suffering a perinatal loss also seems to be related to both the perception of vital meaning ($r = 0.42$, $p < 0.01$) and the perception of being in search of vital meaning ($r = 0.22$, $p < 0.05$) (Głaz, 2023), both aspects measured through the Meaning in Life Questionnaire [MLQ]. However, it should be noted that these authors have not used a specific measure of psychopathology in their article, but rather liken psychological adjustment to perceived life satisfaction.

Related to the variables of perception of vital meaning and search for vital meaning is the religious coping with loss (Głaz, 2023; Roberts et al., 2021b). According to these authors, women who suffer perinatal loss tend to report higher levels of positive religious coping (use of religious coping that fosters adaptation, meaning, and psychological well-being) compared to women who have not gone through this experience ($t = 2.23$, $p < 0.027$), but a correlation is also reported between the use of negative religious coping (use of religious coping that favors guilt, spiritual distress or conflict) with a worse general psychopathological state ($r = 0.276$, $p < 0.00$), so it seems that religious coping is based on both improvements and worsenings of the anxiety-depressive symptoms depending on the specific type of symptoms implemented.

In Catholic religious women, scores in cognitions about God's presence and cognitions about his absence (also called crises *of faith*) both correlate positively with perceived life satisfaction after the loss ($r = 0.51$, 0.29, respectively, both $p < 0.01$) (Głaz, 2023). Religious spirituality, therefore, seems to buffer the psychopathological effects derived from loss in people with religious tendencies prior to the loss.

Finally, the role of post-traumatic growth has been investigated. Post-traumatic growth is defined as "*the positive changes experienced as a result of a difficulty experienced from a major life crisis (...) which manifest themselves in the form of changes in the perception of oneself, others and philosophy of life"* (Freedle & Kim, 2025). The intensity of post-traumatic symptoms predicts post-traumatic growth at all measurement times ($ß = 1.84$, 1.19; $p < 0.001$), but post-traumatic growth does not predict subsequent post-traumatic symptoms ($p > 0.05$), suggesting a unidirectional causal relationship from post-traumatic symptoms to post-traumatic growth. Significant positive associations are also reported between the duration of post-traumatic symptoms and post-traumatic growth. To experience post-traumatic growth, individuals must have the space and time to be able to process information about what happened. Processing events in the form of deliberate and intrusive rumination is positively associated with post-traumatic growth (Freedle & Kim, 2025). There is usually a direct relationship between psychopathological clinical reactive to a traumatic event and subsequent post-traumatic growth, but this effect is cushioned by the presence of high social support (Zeng et al., 2025). Thus, in people with high perceived social support, anxiety and depression reactive to perinatal loss have less predictive power regarding post-traumatic growth than in people who report low social support.

Evidence at a glance

- Fracture of core beliefs: Altered worldview and self-perception strongly predict complex grief and post-traumatic stress.
- Attributing the identity of a "person" to the baby is consistently associated with greater intensity of grief symptoms and PTSD.
- Guilt and shame are central components of the experience, present even in cases of spontaneous perinatal loss.
- Beliefs in having violated one's own ethical principles (frequent in medical terminations of pregnancy) increase the persistence of symptoms.
- Ruminative processing of the loss, both deliberate and intrusive, promotes post-traumatic growth.
- Wishful thinking: Wishing that reality were different correlates with higher levels of anxiety, depression, and seeking help.
- A positive religious approach facilitates adaptation, but a negative one (feeling punished or experiencing spiritual conflict) worsens the clinical state.
- Perceiving a life purpose or striving to find meaning after the loss directly influences subsequent life satisfaction.

3.2.3.2. Biographical factors

Individual-biographical factors refer to sociodemographic characteristics – such as age, educational level or marital status – and the person's biographical history – previous traumatic experiences, previous perinatal losses.

In relation to sociodemographic aspects, these present a great variability of effects reported in the literature, which may indicate that rather than being directly related to psychological adjustment, they present effects mediated by other variables. Thus, for variables as the age, it has been reported both that younger women have more symptoms than older women (Freedle & Kashubeck-West, 2021) and the reverse effect (Köneş & Yıldız, 2021).

It is striking that, in relation to marital status, a significant difference has been reported in the first 48 hours of mourning, with the group of married women presenting greater symptoms of active grief compared to single women (45.7 vs 36.4, $p<0.01$) and whose significance disappears with the passage of time in the follow-up of the third month. However, it is not an effect consistent with that reported by other authors, who report greater depressive symptomatology in single women compared to married women ($F = 5.74$, $p < 0.02$) (Arocha & Range, 2021).

In relation to educational level, the reported effects are also very different from each other. The despair scores of the PGS at 48h were significantly higher at the lowest educational level than at the highest ($p = 0.04$) (Köneş & Yıldız, 2021), with the team of Khoori et al (2025) reporting the opposite effect: a higher level of perinatal grief at higher educational levels, which presented an 83% higher risk than those women with a lower educational level.

Regarding the previous history of trauma, this constitutes a relevant vulnerability factor after perinatal loss, being associated with higher and potentially more persistent levels of post-traumatic symptomatology (Freedle & Kim, 2025). According to the authors, the results support a cumulative effect of trauma, whereby recent loss adds to previous traumatic experiences increasing the severity of

psychological distress. However, previous trauma does not seem to intensify the relationship between post-traumatic symptoms and growth ($p > 0.05$).

It should be considered that, although previous perinatal losses are associated with greater psychological distress after the most recent loss, they also seem to have some "inoculation" effect or prior learning of coping strategies (Köneş & Yıldız, 2021). According to these authors, women without a history of previous losses have more coping difficulties than those with a history ($p = 0.05, 0.04$).

Finally, socioeconomic status also presents different and inconsistent results: in some studies it does not seem to be related to measures of symptoms of anxiety, depression or post-traumatic stress after perinatal loss (Ridaura et al., 2017), while in other studies they report an inverse relationship between socioeconomic status ($r = -.251$, $p = .000$) and anxiety-depressive symptoms (Roberts et al., 2021).

Evidence at a glance

- Prior history of trauma: has a cumulative effect that increases the severity of current distress.
- Inoculation of coping mechanisms from previous loss: having suffered previous losses can facilitate learning coping strategies for the current loss.
- Educational level and age: show disparate results, often acting as mediating variables.
- Marital status: Relationship status particularly influences the intensity of grief in the first 48 hours, although contradictory effects have been found.
- Socioeconomic vulnerability: A lower socioeconomic level is often associated with greater anxiety and depression.
- Socioeconomic variables in a broad sense show inconsistent effects, suggesting that the relationship between them is not direct and is mediated by other variables.

3.2.3.3. Clinical factors

Clinical factors include the set of variables related to the expression of post-traumatic, dissociative and anxiety-depressive symptoms, and their relationship with the prognosis of psychological adjustment after perinatal loss.

First, regarding peritraumatic dissociation, a study carried out by Abiola et al. (2022) compared women who exceeded the cut-off point of possible PTSD in the IES-R (score above 32) with women below this threshold. 100% of the most severe patients had presented an episode of peritraumatic dissociation at the time of loss, compared to 81.7% of the less severe group ($p = 0.014$), suggesting that presenting this characteristic is a specific risk factor for subsequent post-traumatic symptoms, although this factor was investigated only in this article and no information is available from other studies.

For their part, the team of GÜÇLÜ et al. (2021) looked for correlations between scores on different clinical variables at six weeks after loss and scores on the Perinatal Grief Scale [PGS] at 6 weeks, 6 months, and 12 months after loss. Hyperarousal symptoms at the sixth week after loss correlated directly and significantly with hopelessness scores both at baseline ($r = 0.46$, $p < 0.05$) and at six months

(r = 0.33, p < 0.05) and at one year (r = 0.30, p < 0.05), being the only post-traumatic variable to demonstrate this pattern of direct association consistent over time.

Of great note is the finding that the presence and intensity of postnatal depression at 6 weeks measured using the Edinburgh Postnatal Depression Scale correlated negatively and significantly with hopelessness at all measurement time points (r = -0.48, p < 0.001; r = -0.32, p < 0.05; r = -0.30, p < 0.05), indicating a possible inverse relationship between postnatal depression symptoms in the first six weeks and the intensity of perinatal grief in the following 12 months. If we take into account that other authors report a direct and significant relationship between postnatal depression with the same measurement instrument and general, non-specific symptoms of anxiety and depression of perinatal grief (r = 0.77, p < 0.000) (Roberts et al., 2021b), it is possible that perinatal grief, although it has some overlap with depressive symptoms, has an essentially different quality.

In relation to anxiety symptoms, the Beck Anxiety Inventory score in the first six weeks [BAI] correlated positively and significantly with active grief (r = 0.39, p < 0.05), coping difficulties (r = 0.36, p < 0.05), hopelessness (r = 0.39, p < 0.05), and perinatal grief total score (r = 0.44, p < 0.05) at baseline, with only the relationship with hopelessness remaining significant at six months (r = 0.30, p < 0.05). At one year of follow-up, no statistically significant association was maintained.

Finally, in cases where infertility occurs as a secondary phenomenon to complications after the loss, they can also impact women's mental health. Thus, women with this condition report more depressive symptoms than those who do not suffer from it (F = 6.74, p < 01, $n2$ = 0.09 –large effect size–) (Arocha & Range, 2021).

Evidence at a glance

- Peritraumatic dissociation: present at the time of the loss is a critical predictor of subsequent PTSD.
- Symptoms of hyperarousal in the sixth week consistently predict hopelessness at one year of follow-up.
- Experiencing complications that prevent future pregnancies significantly increases the risk of depression.
- Anxiety levels in the first few weeks correlate with worsens in coping with grief.
- Perinatal grief appears to have a fundamentally different character than postnatal depression.

3.3. Development of a special clinical risk profile in cases of perinatal loss

The third objective of this review is to develop a proposal for a profile of special clinical risk of mental health after exposure to perinatal death based on factors extracted from the literature. It should be taken into consideration that, although the factors identified may pose a specific risk for a worse mental health prognosis, it is not the object of this review to establish causal associations between the factors identified and the clinical prognosis, since most of the relationships reported are correlational or predictive.

This profile proposal is presented below, in Figure 3.

Figure 3.

Proposal for a Profile of High Clinical Risk of Mental Health after Perinatal Loss

Proposed factors for a High Risk Profile for psychological complications after perinatal death

- Reporting low social support and living in environments with traditional or conservative social norms regarding the maternal role.
- Having had to make the decision to terminate the pregnancy due to fetal medical conditions, which is linked to beliefs of moral harm.
- Loss occurring at an advanced gestational age.
- Prolonged window period between learning of fetal death and delivery.
- Having had a planned and desired pregnancy.
- Having held the baby's body or having had repeated exposure to the lifeless body.
- Having been in charge of organizing the baby's funeral ritual.
- Reporting the absence of other living children in the family system at the time of the loss.
- Exhibiting insecure attachment styles, especially those with high attachment anxiety or avoidance.
- Reporting the breakdown of the couple's relationship as a consequence of the loss.
- Reporting a profound disruption of core beliefs (worldview and self-perception) after the event.
- Attributing the status of a "person" to the deceased infant.
- Reporting persistent feelings of guilt, shame, self-blame, and a sense of injustice.
- Reporting frequent use of intrusive rumination and wishful thinking.
- Using negative religious coping mechanisms, characterized by feelings of divine punishment or spiritual conflict.
- A prior history of trauma, which has a cumulative effect on current distress.
- Experiencing an episode of peritraumatic dissociation at the time of the loss or delivery.
- Experiencing elevated levels of hyperarousal and anxiety during the first six weeks after the death.
- Experiencing secondary infertility due to complications arising from the perinatal loss.

Some variables of this profile are not known unless they are specifically assessed, so it is a recommendation of this review to incorporate in health care the routine assessment of aspects such as the modification of cognitive beliefs, the mother's attachment style, presence of dissociative episodes, maladaptive coping strategies (alcohol, tobacco) or perceived social support. The systematic evaluation of these characteristics will allow early detection of those women with a high-risk profile who could require specialized intervention by mental health after a perinatal loss.

4. Conclusions

This systematic review shows that perinatal death is a profoundly disruptive event that significantly impacts maternal mental health and can generate intense symptoms of complex grief in up to 49.1% of cases, according to previous literature. The results obtained allow us to formulate a hierarchical model of factors that affect the psychological adjustment after the loss.

It is essential to highlight that cognitive and clinical variables are those that report the most consistent and robust effects throughout the literature consulted. From the cognitive level, the fracture of core beliefs and the attribution of "personhood" to the baby emerge as positive and constant predictors of the intensity of grief and post-traumatic stress. Likewise, the role of rumination has been shown to be relevant in achieving post-traumatic growth through both deliberate rumination and intrusive rumination. Regarding clinical aspects, early indicators such as peritraumatic dissociation and hyperarousal in the first weeks after loss are consolidated as predictors of a worse long-term psychopathological prognosis.

In contrast, sociodemographic variables (such as age, educational level, socioeconomic level or marital status) present very disparate and inconsistent results. The literature shows obvious contradictions; For example, while some studies suggest that younger mothers have more symptoms, others report the opposite effect. Similar disparities are seen in education level and socioeconomic status, where results range from no relationship to opposite correlations depending on the study. This lack of consensus suggests that the impact of these variables is not direct, but appears to be mediated by other individual, contextual or other mechanisms.

Finally, contextual and care factors underline the importance of the social and health environment. Traditional social contexts with rigid expectations about the role that mothers should occupy and live negatively affect their clinical state, while, on the contrary, perceived social support acts as a buffer of psychopathology and improves the general prognosis. The availability of specialized and routine psychological support in health centres demonstrates great efficacy in reducing general psychological distress and PTSD.

Finally, incorporating the routine evaluation of the aforementioned characteristics and the identification of high-risk profiles will make it possible to identify early those

women with a possible worse mental health prognosis, allowing the early implementation of the necessary therapeutic measures to facilitate their adaptation and psychological well-being after exposure to a life event as disruptive in one's own biography as a perinatal death.

5. Limitations and future directions

Although this review has methodological strengths, such as a faithful adherence to the PRISMA guidelines for the preparation of systematic reviews, it has some limitations that must be taken into account:

There is a wide disparity in the literature on what is considered perinatal death. While some studies include any loss from gestation to 28 days after delivery, others are more restrictive (from 22 weeks). In addition, the inclusion or exclusion of voluntary termination of pregnancy for medical reasons varies between articles, making it difficult to directly compare results and to ensure the accuracy of analyses.

The search for articles was carried out only in peer-reviewed publications with access to full text, so there may be selection bias as a) potentially relevant grey literature and b) potentially relevant literature without the text available from the consulted electronic resources were not included.

Finally, some factors considered to be key in the relationship with post-loss adjustment have been analyzed in only one article, such as peritraumatic dissociation, which increases the risk of bias of this factor and requires interpreting its results with caution.

As they exceed the intended scope of this review, no qualitative studies have been included. Qualitative studies can be a valuable source of information about the processes by which quantitative relationships emerge and it is proposed as a future line of action to deepen this area.

6. Declarations

Clinical Trial Number: not applicable.

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