Psychological Interventions and Grief-Related Protocols for Infertile Couples with a History of Spontaneous and Recurrent Miscarriage: A Systematic Review

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ABSTRACT

Objective: The primary aim was to synthesize evidence on the effectiveness of psychological interventions and grief protocols for infertile couples or women with spontaneous and recurrent miscarriage. Secondary aims included identifying intervention types, evaluating reported outcomes, and exploring factors affecting effectiveness.

Materials and Methods: PubMed, Scopus, and Web of Science (Core Collection) were searched from inception to June 1, 2025. Eligible studies included randomized controlled trials, cohort, cross-sectional studies, and service evaluations on psychological interventions or grief protocols. Study quality was assessed using RoB 2 for RCTs and CASP for qualitative studies. Due to heterogeneity, findings were narratively synthesized.

Findings: Thirty-three studies were analyzed, evaluating approaches such as Interpersonal Psychotherapy (IPT), Cognitive Behavioral Therapy (CBT), brief supportive psychotherapy, Swanson's Caring Theory-based counseling, art therapy, positive self-talk, and peer support. Sample sizes ranged from 14 to 932 participants, with follow-ups from immediate post-intervention to 14 months. Overall, interventions reduced anxiety, depression, and grief, and improved quality of life. Effectiveness varied by intervention timing and participant characteristics, including baseline distress and provision of medical information.

Conclusion: Psychological interventions can significantly alleviate the mental health burden following EPL. Early screening and integrated medical-psychological care are recommended. Further robust research is needed to define optimal strategies.

Keywords: *Abortion, Habitual; Infertility; Psychological Intervention; Grief; Quality of Life*

1. Introduction

Early Pregnancy Loss (EPL), encompassing both spontaneous miscarriage and ectopic pregnancy occurring before 14 weeks of gestation, remains a profoundly distressing event that carries enduring psychological, emotional, and social repercussions for affected women and couples worldwide (Anderson et al., 2024; Barbe et al., 2023). Global epidemiological estimates suggest that approximately 23 million miscarriages occur annually, translating to nearly one in ten women experiencing at least one miscarriage during their lifetime (Barbe et al., 2023). Beyond the somatic sequelae—such as infection, pain, or excessive bleeding—the psychological aftermath of EPL is often severe and underestimated, manifesting through persistent symptoms of depression, anxiety, grief, post-traumatic stress disorder (PTSD), and emotional numbness (Anderson et al., 2024; Diamond & Roose, 2016; Hori et al., 2002; Séjourné et al., 2010).

The experience of miscarriage often represents an "ambiguous loss," an event that lacks societal recognition and rituals of mourning comparable to other forms of bereavement. This silence surrounding miscarriage can isolate women and their partners, leaving them to navigate grief privately, without validation or structured support (Anderson et al., 2024; Bramble, 2024; Johnson et al., 2016). Consequently, many report intense feelings of guilt, self-blame, inadequacy, and fear regarding future pregnancies (Hori et al., 2002; Nikčević et al., 2007). These emotional responses may be amplified among women experiencing recurrent pregnancy loss (RPL), defined as two or more consecutive miscarriages, for whom the cyclical hope and despair impose cumulative psychological strain (Li et al., 2020; Tavoli et al., 2018). Studies reveal that women with RPL exhibit significantly lower quality of life and higher levels of functional impairment compared to women without such a history (Tavoli et al., 2018).

Despite growing acknowledgment of the mental health burden associated with EPL, standardized and effective psychological care remains scarce and inconsistent across clinical settings (Barbe et al., 2023; Kong et al., 2014). Many healthcare systems continue to prioritize biomedical aspects of care while overlooking the emotional and relational dimensions of loss (Bramble, 2024; Markin, 2024). The absence of clear guidelines or structured aftercare often leaves women unsupported during the critical early weeks following miscarriage, a period shown to be pivotal for preventing chronic psychological morbidity (Barat et al., 2020; Golmakani et al., 2017). Consequently, there has been a growing international call for the integration of psychological interventions into standard post-miscarriage protocols to mitigate distress, promote adaptive coping, and enhance overall well-being (Anderson et al., 2024; Yeşildere Sağlam et al., 2025).

A variety of psychological and psychotherapeutic approaches have been developed and evaluated in response to these needs, ranging from Cognitive Behavioral Therapy (CBT) and Interpersonal Psychotherapy (IPT) to supportive counseling and art-based therapies (Johnson et al., 2016; Nakano et al., 2013; Zahmatkesh et al., 2024). Among these, CBT has emerged as one of the most empirically supported frameworks, focusing on identifying maladaptive thoughts and behaviors that perpetuate grief, anxiety, and depression (Bagheri et al., 2023; Kersting et al., 2013). Studies indicate that CBT-oriented interventions effectively reduce psychological distress among women with miscarriage, even when delivered through internet-based modalities, enhancing accessibility for those unable to attend face-to-face sessions (Kersting et al., 2013; Kersting et al., 2011). Similarly, IPT—designed to address grief-related depression through interpersonal and emotional regulation mechanisms—has demonstrated efficacy in reducing major depressive symptoms following perinatal loss (Johnson et al., 2016; Johnson et al., 2022). The HeAL protocol trial further operationalized IPT's applicability in postpartum and perinatal bereavement contexts, highlighting the therapeutic value of emotional expression, role transition, and social support restoration (Johnson et al., 2022).

Beyond formal psychotherapy, supportive counseling grounded in empathy and compassion has proven beneficial in alleviating distress and facilitating adaptive coping (Golmakani et al., 2017; Palas Karaca & Oskay, 2020). Models such as Swanson's Caring Theory emphasize five core components—knowing, being with, doing for, enabling, and maintaining belief—which foster therapeutic presence and emotional connection between provider and patient (Kheirkhah et al., 2024; Yeşildere Sağlam et al., 2025). Randomized controlled trials conducted in Iran and Turkey demonstrated that counseling based on this model significantly decreased grief, depression, and anxiety among women with miscarriage or pregnancy termination (Kheirkhah et al., 2024; Palas Karaca & Oskay, 2020). The continuity of care, as well as the emotional accessibility of healthcare providers, emerged as decisive factors in perceived recovery and satisfaction with treatment (Anderson et al., 2024; Musters et al., 2013).

Immediate interventions have also attracted scholarly attention. Barat and colleagues (Barat et al., 2020) found that brief supportive psychotherapy (BSP) administered within 24 hours of hospitalization significantly prevented psychiatric morbidity, reducing symptoms of anxiety, depression, and grief. Similarly, Séjourné and colleagues (Séjourné et al., 2010, 2011) demonstrated that even short-term supportive interventions integrating psychoeducation and cognitive reframing could mitigate acute stress reactions following miscarriage. Although the effects were most pronounced in the short term, these findings underscore the importance of early psychological response as part of medical management.

Moreover, research has highlighted the role of specific psychosocial factors in moderating the emotional outcomes of miscarriage. Hori and colleagues (Hori et al., 2002) identified personality traits such as neuroticism and low perceived social support as major predictors of distress following repeated spontaneous abortions, emphasizing the buffering role of supportive relationships. These insights align with contemporary frameworks of grief recovery that integrate cognitive, emotional, and interpersonal dimensions (Adolfsson & Larsson, 2010; Markin, 2024). In the Swedish context, structured follow-up visits with midwives were found to reduce active grief and coping difficulties among women with early miscarriage (Adolfsson et al., 2006). This finding reinforces the notion that continuity of care and empathic acknowledgment of loss are central to recovery (Adolfsson & Larsson, 2010).

Novel therapeutic modalities have also been explored to address diverse psychological needs. Art therapy, for instance, provides an expressive and symbolic medium through which women process complex emotions of grief and loss. In a randomized clinical trial, Zahmatkesh et al. (Zahmatkesh et al., 2024) reported significant improvements in quality of life across physical, psychological, social, and environmental domains among women who received art therapy after pregnancy loss. Similarly, positive self-talk interventions have demonstrated promising effects on reducing anxiety and grief among women with spontaneous abortion (Rezaee et al., 2024). Such self-directed cognitive strategies can empower women to reframe negative beliefs and enhance self-efficacy, complementing more intensive psychotherapeutic approaches.

Technology-assisted interventions have further expanded accessibility to mental health care for this population. Internet-based CBT programs, as implemented by Kersting and colleagues (Kersting et al., 2013; Kersting et al., 2017),

not only reduced PTSD and prolonged grief symptoms but also maintained high adherence and satisfaction rates. The integration of telepsychology into reproductive health services has gained particular relevance amid global shifts toward digital health platforms (Altaf Dar et al., 2023; Areas, 2024). As noted by Altaf Dar et al. (Altaf Dar et al., 2023), leveraging technology can bridge the accessibility gap for women residing in underserved or rural areas, offering flexible, stigma-free support.

Self-compassion-based interventions and mindfulness practices have also shown beneficial effects on emotional recovery after miscarriage. Maagh et al. (Maagh et al., 2023) demonstrated that self-compassion was inversely related to depression and anxiety, particularly among women who had experienced pregnancy loss. Likewise, Li et al. (Li et al., 2020) established that mindfulness moderated the impact of perceived stress on fertility-related quality of life by reducing negative emotional reactivity. These findings suggest that fostering self-compassion and present-moment awareness can cultivate psychological resilience, enabling women to integrate the loss experience more adaptively.

Peer support and community-based initiatives have proven equally crucial in fostering emotional validation. Diamond and Roose (Diamond & Roose, 2016) developed a peer-support program pairing bereaved parents, which successfully reduced isolation and normalized grief experiences. Such initiatives demonstrate that healing often emerges not solely from professional intervention but through shared empathy within peer networks. This perspective is reinforced by Musters et al. (Musters et al., 2013), who found that women valued consistent, empathetic care providers and opportunities for open dialogue about their experiences.

The variability in individual responses to miscarriage underscores the need for tailored interventions. Psychological outcomes depend on a range of factors including baseline distress, personality, social context, and previous pregnancy history (Fernlund et al., 2021; Tavoli et al., 2018). For example, Fernlund et al. (Fernlund et al., 2021) reported no significant difference in psychological impact between expectant and pharmacological management of miscarriage, suggesting that patient choice and perceived control may be more influential in recovery than the treatment modality itself. Personalized, patient-centered care frameworks are therefore essential to ensure emotional and psychological well-being.

The integration of grief theories into miscarriage research further strengthens the conceptual foundation for

psychological care. Adolfsson and Larsson (Adolfsson & Larsson, 2010) validated the applicability of Bonanno's general grief taxonomy to Swedish women's experiences, revealing that early miscarriage grief shares core characteristics with other bereavement forms yet differs in societal acknowledgment and relational context. Similarly, Johnson and Langford (Johnson & Langford, 2010) proposed a "Proof of Life" protocol emphasizing emotional support and symbolic continuity after pre-20-week pregnancy loss, reflecting the necessity for structured rituals to legitimize grief.

Despite encouraging findings, systematic reviews such as that by Murphy et al. (Murphy et al., 2012) have identified substantial methodological heterogeneity across studies, limiting definitive conclusions regarding intervention efficacy. Variations in sample size, follow-up duration, and outcome measurement tools complicate meta-analytic synthesis (Funston et al., 2018). Additionally, cultural and contextual differences—such as variations in societal attitudes toward miscarriage—further challenge the generalizability of findings (Golmakani et al., 2017; Rezaee et al., 2024). Nonetheless, the cumulative body of evidence underscores a critical consensus: psychological interventions, particularly those integrating empathy, information, and follow-up, are indispensable components of comprehensive reproductive healthcare (Anderson et al., 2024; Bramble, 2024; Yeşildere Sağlam et al., 2025).

At the theoretical level, contemporary grief models have evolved from linear, stage-based conceptions toward dynamic frameworks emphasizing meaning reconstruction, continuing bonds, and resilience (Markin, 2024). These frameworks illuminate how therapeutic interventions—whether cognitive-behavioral, interpersonal, or supportive—facilitate the integration of loss into one's evolving life narrative. Psychotherapy for pregnancy loss must therefore extend beyond symptom alleviation to encompass relational repair, existential meaning-making, and empowerment (Bramble, 2024; Markin, 2024).

Collectively, the literature points to a growing recognition of the interdependence between psychological and physiological recovery after EPL. The dual focus on emotional processing and reproductive health outcomes positions integrated care models as the future of miscarriage management (Anderson et al., 2024; Maagh et al., 2023). Clinical psychologists, midwives, and obstetricians must collaborate to deliver synchronized interventions that address not only grief but also the restoration of agency and hope (Kheirkhah et al., 2024; Yeşildere Sağlam et al., 2025).

Given the complexity and heterogeneity of psychological reactions following miscarriage, there remains an urgent need for comprehensive evidence synthesis to inform best practices and policy formulation. Despite substantial advances in recent decades, no universal protocol currently exists for the psychological management of miscarriage, and gaps persist in cross-cultural validation of interventions (Li et al., 2020; Zahmatkesh et al., 2024). Therefore, a systematic review integrating the full spectrum of therapeutic approaches—from traditional psychotherapy to emerging digital and expressive modalities—is essential for consolidating existing knowledge and identifying future research directions.

Accordingly, the present study aims to systematically review and synthesize empirical evidence regarding the effectiveness of psychological interventions and grief-related protocols for infertile couples or women with a history of spontaneous and recurrent miscarriage.

2. Methods and Materials

2.1. Search Strategy

A systematic and exhaustive search was meticulously executed across three prominent electronic scientific databases: PubMed, Scopus, and Web of Science (Core Collection). The search encompassed all available records from each database's inception date up to June 1, 2025.

Table 1

Search strategies across databases

Results (n)	Search strategy	Data Base
44	("psychological intervention"[Title/Abstract] OR "psychotherapy"[Title/Abstract] OR "cognitive behavioral therapy"[Title/Abstract] OR "CBT"[Title/Abstract] OR "mindfulness"[Title/Abstract] OR "counseling"[Title/Abstract] OR "emotional support"[Title/Abstract] OR "grief therapy"[Title/Abstract] OR "bereavement support"[Title/Abstract]) AND ("miscarriage"[Title/Abstract] OR "spontaneous abortion"[Title/Abstract] OR "recurrent miscarriage"[Title/Abstract] OR "recurrent pregnancy loss"[Title/Abstract] OR "RPL"[Title/Abstract]) AND ("grief"[Title/Abstract] OR "mourning"[Title/Abstract] OR "bereavement"[Title/Abstract] OR "emotional distress"[Title/Abstract] OR "psychological distress"[Title/Abstract])	PubMed

510	(TITLE-ABS-KEY (psychological AND intervention) OR TITLE-ABS-KEY (psychotherapy) OR TITLE-ABS-KEY (cognitive AND behavioral AND therapy) OR TITLE-ABS-KEY (cbt) OR TITLE-ABS-KEY (mindfulness) OR TITLE-ABS-KEY (counseling) OR TITLE-ABS-KEY (emotional AND support) OR TITLE-ABS-KEY (grief AND therapy) OR TITLE-ABS-KEY (bereavement AND support)) AND (TITLE-ABS-KEY (miscarriage) OR TITLE-ABS-KEY (spontaneous AND abortion) OR TITLE-ABS-KEY (recurrent AND miscarriage) OR TITLE-ABS-KEY (recurrent AND pregnancy) OR TITLE-ABS-KEY (rpl)) AND (TITLE-ABS-KEY (grief) OR TITLE-ABS-KEY (mourning) OR TITLE-ABS-KEY (bereavement) OR TITLE-ABS-KEY (emotional AND distress) OR TITLE-ABS-KEY (psychological AND distress))	Scopus
232	1: ((((((TS=(psychological intervention)) OR TS=(psychotherapy)) OR TS=(cognitive behavioral therapy)) OR TS=(CBT)) OR TS=(mindfulness)) OR TS=(counseling)) OR TS=(grief therapy)) OR TS=(bereavement support) 2:((((TS=(miscarriage)) OR TS=(spontaneous abortion)) OR TS=(recurrent miscarriage)) OR TS=(recurrent pregnancy loss)) OR TS=(RPL) 3:((((TS=(grief)) OR TS=(mourning)) OR TS=(bereavement)) OR TS=(emotional distress)) OR TS=(psychological distress) 4: #1 AND #2 AND #3	Web of Science

The search strategy was meticulously crafted to ensure maximum comprehensiveness, employing an intelligent combination of precise keywords, specific phrases, and Boolean operators (AND, OR). Key terms central to this search included: "infertile couples" (e.g., "Infertile Couples", "Infertility", "Subfertility"), "spontaneous miscarriage" (e.g., "Spontaneous Miscarriage", "Early Pregnancy Loss", "Pregnancy Loss", "Abortion"), "recurrent miscarriage" (e.g., "Recurrent Miscarriage", "Recurrent Pregnancy Loss", "Habitual Abortion"), "psychological interventions" (e.g., "Psychological Interventions", "Counseling", "Psychotherapy", "Support", "Mental Health Support", "Emotional Support", "CBT", "Cognitive Behavioral Therapy", "Mindfulness", "Self-compassion", "Art Therapy", "Self-talk"), and "grief protocols or grief management" (e.g., "Grief Protocols", "Bereavement Care", "Grief Management", "Mourning", "Grief Therapy", "Support Protocols", "Care Pathway"). To enhance search precision within PubMed, relevant MeSH (Medical Subject Headings) terms were extensively utilized. The application of truncation operators (e.g., * at the end of a word) was also systematically employed to capture all morphological variations and related forms of the keywords.

2.2. Inclusion and Exclusion Criteria

Inclusion criteria for study selection were rigorously defined to identify articles directly relevant to the review's objectives. Included studies comprised randomized controlled trials (RCTs), cohort studies, cross-sectional studies, qualitative studies, and service evaluations that explicitly investigated psychological interventions and grief protocols.

The target population was defined as infertile couples or women with a history of spontaneous or recurrent miscarriage, encompassing studies focusing on either gender or both. Articles published in English or Persian that reported quantitative or qualitative outcomes related to

reductions in anxiety, depression, grief, PTSD, or improvements in quality of life and psychological well-being were deemed eligible.

Conversely, exclusion criteria were applied to filter out irrelevant or unsuitable publications. These included review articles, case reports, letters to the editor, and conference abstracts. Studies that exclusively focused on induced abortion or late-term abortion were excluded unless their results pertaining to general grief after pregnancy loss were clearly separable and relevant to the review's scope. Furthermore, studies that addressed infertility or miscarriage but did not evaluate any specific psychological intervention or grief protocol were also excluded from the final analysis.

2.3. Article Selection Process and Data Extraction

The initial results generated from the database searches were meticulously imported into a reference management software to facilitate the automatic identification and removal of duplicate entries. In the subsequent phase, two independent reviewers rigorously screened the titles and abstracts of all remaining articles. Articles deemed relevant based on their title and abstract, or those with unclear relevance, advanced to the full-text review stage. During the full-text evaluation, each article was thoroughly examined to confirm its complete alignment with the predefined inclusion criteria and the absence of any exclusion criteria. Any disagreements between the two reviewers regarding article eligibility were resolved through open discussion and consensus; if consensus could not be reached, a third reviewer served as the final arbiter.

Data pertinent to the selected studies were systematically extracted using a standardized data collection form specifically designed for this systematic review. The extracted information was comprehensive, covering various facets of each study: general study characteristics (e.g., primary author's name, publication year, country where the study was conducted), study design details (e.g., type of

study, methodological approach), participant demographic information (e.g., mean age and range, marital status, number of previous miscarriages, infertility characteristics), intervention specifics (e.g., type of psychological intervention, duration, number of sessions, underlying theoretical framework), comparators (e.g., descriptions of control groups or usual care), outcome measurement tools (e.g., scales used to assess anxiety, depression, grief, PTSD, and quality of life), and key findings directly related to the intervention's effectiveness.

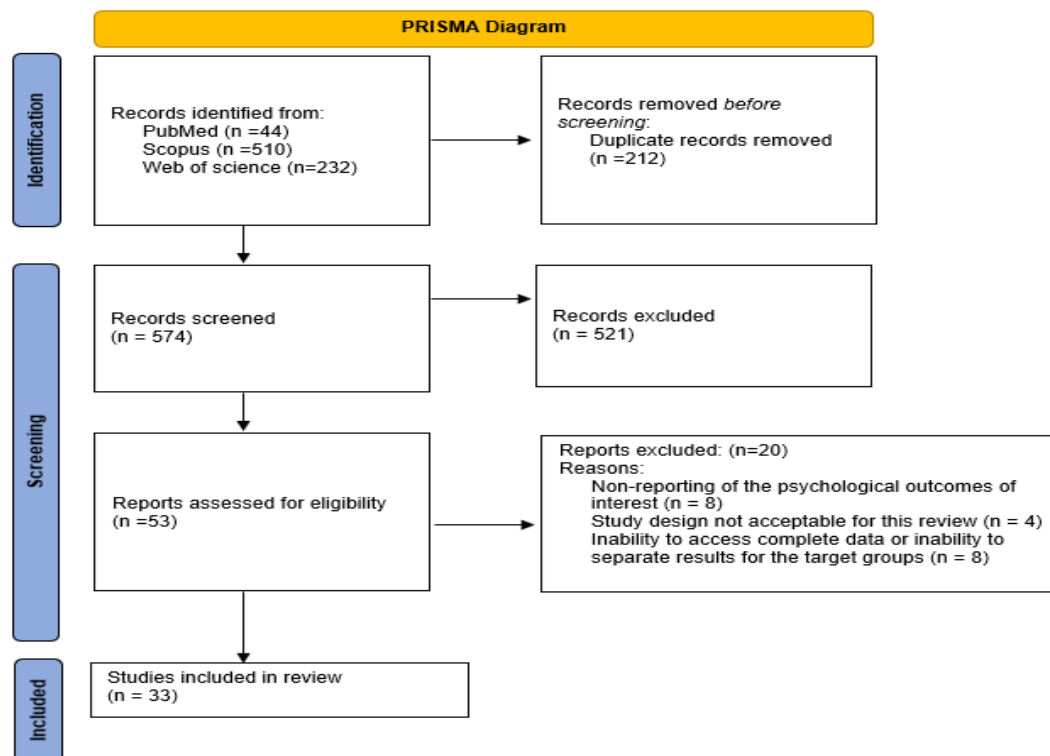### 2.4. Quality Assessment of Studies and Data Synthesis

The methodological quality of included randomized controlled trials was rigorously assessed using the Cochrane Collaboration's Risk of Bias 2.0 (RoB 2) tool. This tool evaluates potential biases across several domains, including randomization process, deviations from intended interventions, missing outcome data, measurement of the outcome, and selection of the reported result. For qualitative studies, the Critical Appraisal Skills Programme (CASP)

tool was employed to assess the credibility, transferability, dependability, and confirmability of qualitative findings. Service evaluations and other non-experimental designs were assessed using relevant checklists to evaluate clarity of objectives, appropriateness of methods, data collection, analysis, and relevance of findings.

Due to the substantial heterogeneity observed across the included studies concerning study designs, target populations, intervention types, and outcome measurement tools, conducting a quantitative meta-analysis was not deemed appropriate or feasible. Consequently, the findings were synthesized using a narrative synthesis approach. This methodology allowed for a comprehensive and integrated description of the results, focusing on identifying common patterns in intervention effectiveness, persistent methodological challenges, and notable strengths within the evaluated protocols. The primary goal of this synthesis was to provide a macro-level overview and practical insights to inform and improve psychological care within this critical research domain.

Figure 1

PRISMA flow diagram illustrating the study selection process for the systematic review. The diagram outlines the number of records identified through database searches (PubMed, Scopus, and Web of Science)

3.   Findings and Results

A meticulous screening process and the systematic removal of duplicates, 33 articles were ultimately selected for inclusion in the final analysis. These studies collectively represented a diverse array of research designs, encompassing randomized controlled trials (RCTs), study protocols, cohort studies, cross-sectional studies, and comprehensive service evaluations. The geographical distribution of these investigations was broad, with contributions from various countries including Iran (7 studies), United States of America (4 studies), United Kingdom (5 studies), France (2 studies), Japan (2 studies), Netherlands (1 study), Australia (1 study), Germany (4 studies), Taiwan (1 study), Turkey (2studies), China (1 study) and Sweden (3 studies).

The sample sizes across these included studies exhibited a wide range of variability, from the smallest at merely 14 participants in a preliminary pilot study (Nakano et al., 2013) to the largest encompassing a robust 932 participants in a prospective protocol for a large-scale trial (Barbe et al., 2023). The mean age of participants in the majority of studies consistently fell within the range of 24 to 36 years, indicating a predominant focus on women within their reproductive age. The duration of intervention follow-up also varied considerably; some studies emphasized immediate interventions within the first 24 hours of hospitalization (Barat et al., 2020), while others reported follow-up periods extending to three months (Bagheri et al., 2023; Séjourné et al., 2010), six months (Johnson et al., 2016; Kong et al., 2014), and even as long as 14 months post-intervention (Fernlund et al., 2021) (Figure 1).

The types of psychological interventions examined within these studies were highly diverse, encompassing a wide array of therapeutic approaches. Interpersonal Psychotherapy (IPT), delivered in a group format, was evaluated as a targeted intervention for major depressive disorder following perinatal loss in studies by Johnson et al., demonstrating improvements in depressive symptoms, PTSD, and social support (Johnson et al., 2016). The protocol by Johnson et al. further delineates a fully powered randomized controlled trial aimed at extensively evaluating IPT within this specific population (Johnson et al., 2022). Cognitive Behavioral Therapy (CBT) and related counseling approaches emerged as widely utilized modalities; work in Japan showed that individual CBT could significantly reduce anxiety and depression symptoms in women with recurrent miscarriage (Nakano et al., 2013). Evidence from

Iran further corroborated the effectiveness of cognitive behavioral counseling in mitigating the intensity of post-abortion grief (Bagheri et al., 2023). An internet-based CBT intervention from Germany effectively reduced post-traumatic stress and prolonged grief in parents (Kersting et al., 2013). Similarly, other studies highlighted the efficacy of internet-based approaches in reducing grief and PTSD symptoms (Kersting et al., 2017; Kersting et al., 2011). In Taiwan, empathic caring-based nursing counseling reduced stress and depression among women with recurrent miscarriage (Chang et al., 2021). French investigations of brief supportive interventions (integrating support, psychoeducation, and cognitive components) proved effective in reducing anxiety and event-related stress in the short term, although long-term differences were less pronounced (Séjourné et al., 2010, 2011).

Brief Supportive Psychotherapy (BSP), as investigated in Iran, demonstrated highly promising results as an immediate intervention within the first 24 hours of hospitalization, effectively preventing psychiatric morbidity (anxiety, depression, and grief) in women following miscarriage (Barat et al., 2020). General supportive counseling was also evaluated across several studies. In Hong Kong, while routine counseling for all women did not show a statistically significant overall effect, it led to considerable psychological improvement for a subgroup of women experiencing high baseline distress, underscoring the importance of targeted intervention (Kong et al., 2014). In the UK, combined medical and psychological interventions revealed that psychological counseling—particularly when integrated with medical information regarding the cause of miscarriage—could alleviate grief, self-blame, and worry (Nikčević et al., 2007). In Iran, supportive care programs based on Swanson's Caring Theory reduced grief and enhanced the quality of life for women after miscarriage (Golmakani et al., 2017; Kheirkhah et al., 2024). In Turkey, individualized supportive care based on Swanson's theory reduced grief, depression, anxiety, and stress levels in women after miscarriage (Palas Karaca & Oskay, 2020). In the United States, an evidence-based intervention protocol designed to provide emotional support to women experiencing perinatal loss before 20 weeks' gestation ameliorated despair levels in the intervention group (Johnson & Langford, 2010). In Turkey, a randomized controlled study showed that a nursing care program based on Swanson's Caring Theory, delivered via a mobile application and telephone follow-ups, significantly reduced grief, depression, anxiety, and stress in women after

pregnancy termination, while enhancing their coping and adaptation abilities (Yeşildere Sağlam et al., 2025).

Furthermore, studies explored novel approaches and moderating factors. Peer support programs in the United States demonstrated that providing one-on-one support from parents with similar experiences could assist bereaved parents, highlighting the crucial role of face-to-face contact and flexible communication options for program success (Diamond & Roose, 2016). The Positive Reappraisal Coping Intervention (PRCI), introduced in a UK feasibility study, is a self-administered technique designed to reduce distress during the waiting period of a subsequent pregnancy following recurrent miscarriage (Bailey et al., 2015). In France, a protocol outlined the validation of early, brief psychological care via teleconsultation for women experiencing early miscarriage (Barbe et al., 2023). In Australia, self-compassion was linked to reduced psychological distress, particularly in women who had experienced pregnancy loss (Maagh et al., 2023). In the Netherlands, a comprehensive survey identified women's preferences for supportive care—including a consistent, empathetic doctor, frequent ultrasounds, and the option to discuss with medical or psychological professionals after a loss—with greater need for supportive options among ethnic minorities and women not currently pregnant (Musters et al., 2013).

The results also indicated that art therapy can be effective in improving quality of life and reducing distress after pregnancy loss; in Iran, a randomized clinical trial demonstrated that art therapy significantly enhanced women's quality of life following pregnancy loss, particularly across physical, psychological, social, and environmental domains (Zahmatkesh et al., 2024). These findings advocate for art therapy as a complementary method. Similarly, Positive Self-Talk was investigated as a non-pharmacological intervention; in Iran, positive self-talk significantly reduced anxiety and grief in women with spontaneous abortion (Rezaee et al., 2024). In Sweden, a comparison of the psychological impact of early miscarriage and satisfaction with treatment between expectant management and misoprostol treatment found that psychological response (grief, anxiety, depression) and recovery between the two treatment methods did not differ, and anxiety and depression levels decreased and remained low for up to 14 months—emphasizing the role of patient

choice in EPL management (Fernlund et al., 2021). In China, a cross-sectional study explored a moderated mediation model of perceived stress, negative emotions, and mindfulness on fertility-related quality of life in women with recurrent pregnancy loss, discovering that mindfulness could moderate the impact of stress on quality of life via negative emotions (Li et al., 2020). A systematic review examined the effectiveness of follow-up care in improving psychological well-being for women after miscarriage, concluding that due to heterogeneity in studies and measurement tools, insufficient evidence existed to definitively prove this effectiveness (Murphy et al., 2012). In Sweden, the effect of a structured follow-up visit by a midwife on grief in women with early miscarriage indicated reductions in active grief and coping difficulties (Adolfsson et al., 2006). A subsequent study further explored the applicability of general grief theory to Swedish women's experiences after early miscarriage, supporting the effectiveness of active support and care in reducing grief levels (Adolfsson & Larsson, 2010). In Iran, a comparative study highlighted that women with recurrent miscarriage experienced extensive functional disability and lower quality of life, emphasizing the need for psychosocial support (Tavoli et al., 2018).

Finally, some studies delved into the psychosocial factors influencing distress. In Japan, a prospective study revealed that high neuroticism, poor marital quality (characterized by partner control), and perceived lack of social support were strong predictors of greater emotional distress following recurrent miscarriage, whereas perceived social support diminished distress (Hori et al., 2002). In the UK, a service evaluation of an early pregnancy loss support clinic highlighted the critical importance of emotional support, reassurance regarding future fertility, and the role of the bereavement midwife, demonstrating that such services effectively reduced anxiety (Anderson et al., 2024). In Germany, a retrospective study on women who experienced stillbirth found that psychological support—particularly contact with the deceased infant and receiving precise information about its fate—could aid the grief process and reduce depression (Kuse-Isingschulte et al., 1996). These studies collectively suggest that psychological interventions can play a pivotal role in supporting women and couples after pregnancy loss, with a strong emphasis on comprehensive and personalized approaches (Table 2).

Table 2

Summary of included studies

Mean Age (Years) / Other Information	Population (Number and Characteristics)	Psychological Intervention	Country	Year	First Author
Unspecified - RCT. Reduced active grief and coping difficulties.	Women with early miscarriage (unspecified)	Structured follow-up visit by midwife	Sweden	2006	Adolfsson, A.
Unspecified - Applied study. Active support and care effective in reducing grief.	Swedish women with early miscarriage (unspecified)	General grief theory (active support and care)	Sweden	2010	Adolfsson, A.
Unspecified - Service evaluation. EPLSC showed high satisfaction and reduced anxiety.	110 women with EPL (65% miscarriage, 35% ectopic, 56% >35 years)	Early Pregnancy Loss Support Clinic (EPLSC)	UK	2024	Anderson, M.
28.6 - RCT. Counseling significantly reduced grief intensity.	168 women post-miscarriage (2-12 months after loss)	Group cognitive behavioral counseling	Iran	2023	Bagheri, L.
Unspecified - Feasibility RCT. Self-administered technique to reduce distress.	50 women with recurrent miscarriage (feasibility study)	Positive Reappraisal Coping Intervention (PRCI)	UK	2015	Bailey, S.
Unspecified - BSP significantly reduced anxiety, depression, and grief.	79 women with miscarriage (within first 24h of hospitalization)	Brief supportive psychotherapy (BSP)	Iran	2020	Barat, S.
Unspecified - RCT protocol. Assessment of anxiety, depression, and PTSD.	932 women with early miscarriage (study protocol)	Short-term remote psychological care (MisTher)	France	2023	Barbe, C.
34.8 - RCT. Reduced stress and depression.	62 women with recurrent miscarriage	Empathic caring-based nursing counseling	Taiwan	2021	Chang, S.C.
Unspecified - Program evaluation. Reduced isolation and normalized emotions.	13 peer parents, 11 recipient parents	Peer Support Program (PSP)	USA	2016	Diamond, R.M.
32 - RCT. No difference in psychological response between groups.	184 women with early miscarriage	Expectant management vs misoprostol treatment	Sweden	2021	Fernlund, A.
28.9 - RCT. Significant grief reduction.	60 women with early miscarriage	Supportive care program based on Swanson's theory	Iran	2017	Golmakani, N.
30 - Prospective study. Neuroticism and low social support linked to higher distress.	49 women with recurrent miscarriage in past 12 months	Psychosocial factors assessment	Japan	2002	Hori, S.
30.3 - Pilot RCT. Effective in reducing depression and PTSD.	50 women with MDD after perinatal loss	Group interpersonal psychotherapy (IPT)	USA	2016	Johnson, J.E.
Unspecified - RCT protocol. Assessment of IPT on MDD, PTSD, grief.	274 women with MDD after perinatal loss	HeAL protocol (IPT)	USA	2022	Johnson, J.E.
Unspecified - Quasi-experimental. Reduced hopelessness and increased support.	40 women with perinatal loss	Evidence-based grief intervention protocol	USA	2010	Johnson, O.P.
34.18 - RCT. Reduced PTSD, grief, depression, anxiety.	228 parents (92% female)	Internet-based CBT	Germany	2013	Kersting, A.
34.3 - Pilot RCT. Improved PTSD and depression.	83 mothers with pregnancy loss	Internet-based CBT (pilot)	Germany	2011	Kersting, A.
Unspecified - Discussion paper on effectiveness of internet interventions.	Unspecified	Treatment of grief symptoms	Germany	2017	Kersting, A.
Unspecified - RCT. Improved quality of life.	72 pregnant women with history of miscarriage	Supportive counseling (Swanson's theory)	Iran	2024	Kheirkhah, M.
Unspecified - Low overall effect, but effective in distressed subgroup.	280 women with miscarriage	Supportive counseling	UK	2014	Kong, G.W.S.
33 - Retrospective study. Psychological support aided grief process.	51 women with loss after 20th week	Psychological assessment post-stillbirth	Germany	1996	Kuse-Isingschulte, M.W.
32.32 - Cross-sectional study. Mindfulness moderated stress effects.	262 women with recurrent miscarriage	Mindfulness mediation model	China	2020	Li, G.
33.09 - Self-compassion predicted reduced distress.	168 perinatal women (45 with EPL history)	Self-compassion	Australia	2023	Maagh, L.C.S.

Unspecified - Insufficient evidence for definitive effectiveness.	Unspecified	Systematic review of psychological interventions	UK	2012	Murphy, F.A.
34.8 - Preference for empathetic doctor, frequent ultrasounds.	171 women with recurrent miscarriage	Survey of supportive care preferences	Netherlands	2013	Musters, A.M.
34 - Pilot study. Reduced anxiety and depression.	14 women with recurrent miscarriage and depression/anxiety	Individual CBT	Japan	2013	Nakano, Y.
Unspecified - Psychological counseling reduced grief and worry.	66 women with missed miscarriage	Medical and psychological interventions	UK	2007	Nikčević, A.V.
Unspecified - Quasi-experimental. Reduced grief, depression, anxiety.	91 women with miscarriage	Supportive care (Swanson's theory)	Turkey	2020	Palas Karaca, P.
25.4 - Quasi-experimental. Reduced anxiety and grief.	80 women with spontaneous abortion	Positive self-talk	Iran	2024	Rezaee, N.
31.82 - Reduced anxiety and PTSD short-term.	134 women post-miscarriage	Brief supportive psychological intervention	France	2010	Séjourné, N.
Unspecified - Women with recurrent miscarriage had lower QoL.	Unspecified (women with recurrent miscarriage)	Quality of life and psychological distress	Iran	2018	Tavoli, Z.
29.4 - RCT. Improved coping, reduced grief, depression, stress.	50 women with 2nd trimester termination	Swanson nursing care (mobile program)	Turkey	2025	Yeşildere Sağlam, H.
26.5 - RCT. Improved QoL in multiple domains.	60 women with recent pregnancy loss	Art therapy	Iran	2024	Zahmatkesh, M.

4. Discussion and Conclusion

The findings of the present systematic review provide a comprehensive synthesis of psychological interventions and grief-related protocols applied to women and couples experiencing spontaneous and recurrent miscarriage. The integration of 33 empirical and clinical studies across multiple continents underscores both the diversity of intervention strategies and the growing recognition of miscarriage as a significant public mental health concern (Anderson et al., 2024; Bagheri et al., 2023; Barbe et al., 2023). Across the reviewed literature, a consistent pattern emerged: well-structured psychological interventions significantly alleviate grief, anxiety, depression, and stress while promoting better emotional adjustment and quality of life outcomes (Rezaee et al., 2024; Yeşildere Sağlam et al., 2025; Zahmatkesh et al., 2024).

The analysis revealed that Cognitive Behavioral Therapy (CBT) and Interpersonal Psychotherapy (IPT) stand out as the most empirically validated modalities for women with a history of miscarriage. In the studies by Nakano et al. (Nakano et al., 2013) and Bagheri et al. (Bagheri et al., 2023), CBT effectively reduced depressive and anxiety symptoms while helping participants reframe negative cognitions surrounding self-blame and failure. Similarly, internet-based CBT interventions demonstrated by Kersting and colleagues (Kersting et al., 2013; Kersting et al., 2017; Kersting et al., 2011) reduced prolonged grief and post-traumatic stress with high acceptability, validating the growing role of telepsychological care in reproductive health contexts. IPT, on the other hand, as implemented by Johnson et al. (Johnson et al., 2016; Johnson et al., 2022), specifically targeted depressive reactions to perinatal loss by focusing on relational dynamics and emotional expression. These findings reinforce that psychotherapeutic approaches emphasizing cognitive restructuring and interpersonal connectedness yield clinically meaningful improvements in grief resolution and emotional functioning (Bramble, 2024; Markin, 2024).

Moreover, the review highlights the robust impact of supportive counseling approaches, particularly those grounded in Swanson's Caring Theory. The consistent evidence across Iranian and Turkish studies demonstrates that structured supportive interventions—encompassing empathy, active listening, and informational reassurance—facilitate emotional recovery and enhance quality of life (Golmakani et al., 2017; Kheirkhah et al., 2024; Palas Karaca & Oskay, 2020; Yeşildere Sağlam et al., 2025). Yeşildere Sağlam and colleagues (Yeşildere Sağlam et al., 2025) notably demonstrated that nursing care rooted in Swanson's model, supplemented by telephone and mobile follow-ups, reduced depression, anxiety, and stress in women following pregnancy termination. These outcomes resonate with earlier findings by Golmakani et al. (Golmakani et al., 2017), which indicated that such interventions reduce grief intensity through relational

continuity and compassion. Similarly, the quasi-experimental study by Palas Karaca and Oskay (Palas Karaca & Oskay, 2020) confirmed reductions in emotional distress, corroborating the role of relational support as a central determinant in post-loss adjustment.

Immediate psychosocial interventions also demonstrated substantial therapeutic benefit. Barat et al. (Barat et al., 2020) showed that Brief Supportive Psychotherapy (BSP) administered within 24 hours of miscarriage prevented psychiatric morbidity, highlighting the value of timely intervention. These findings correspond with the evidence from Séjourné and colleagues (Séjourné et al., 2010, 2011), who reported that even short-term supportive sessions combining psychoeducation and empathy can significantly decrease short-term anxiety and event-related stress. Though long-term differences diminished over time, early psychological engagement proved critical in preventing acute emotional crises. These results collectively emphasize that early, compassionate responses within healthcare settings may serve as protective mechanisms against chronic grief and post-traumatic stress.

Another prominent theme arising from this synthesis is the importance of personalized and context-sensitive care. The work of Kong et al. (Kong et al., 2014) revealed that counseling interventions are most effective among women exhibiting high baseline distress, underscoring the necessity of systematic screening procedures to identify vulnerable subgroups. Nikčević et al. (Nikčević et al., 2007) further demonstrated that interventions integrating psychological counseling with transparent medical explanations of miscarriage etiology effectively alleviate self-blame and anxiety, especially when biomedical causes remain ambiguous. This interplay between emotional understanding and medical information supports the concept of integrated biopsychosocial care, where psychological recovery is inseparable from medical management and patient education (Anderson et al., 2024; Barbe et al., 2023).

Emerging intervention modalities, including art therapy, mindfulness, and positive self-talk, provide complementary frameworks that align with contemporary understandings of grief and resilience. Zahmatkesh et al. (Zahmatkesh et al., 2024) demonstrated that art therapy enhances multiple dimensions of quality of life—physical, psychological, and social—by allowing women to symbolically externalize and reprocess loss-related emotions. Similarly, the quasi-experimental study by Rezaee et al. (Rezaee et al., 2024) confirmed that positive self-talk fosters emotional regulation and diminishes anxiety, thereby promoting adaptive coping.

Li et al. (Li et al., 2020) offered a theoretical complement to these findings by illustrating how mindfulness moderates the relationship between perceived stress and negative emotions in women with recurrent miscarriage, enhancing fertility-related quality of life. The converging evidence from these studies supports the incorporation of mindfulness-based and self-compassion interventions as adjunctive therapeutic elements within miscarriage care (Maagh et al., 2023; Markin, 2024).

Additionally, community and peer-based interventions have emerged as critical mechanisms for social validation and shared empathy. The peer support program developed by Diamond and Roose (Diamond & Roose, 2016) effectively reduced isolation and normalized grief, reaffirming that peer-based empathy complements professional therapy. Similarly, Musters et al. (Musters et al., 2013) revealed that women preferred empathetic healthcare providers, consistent care continuity, and opportunities for dialogue following recurrent miscarriage. These insights are consistent with the model proposed by Anderson et al. (Anderson et al., 2024), whose service evaluation in an early pregnancy loss clinic showed that supportive environments integrating medical reassurance with psychological care markedly improved satisfaction and reduced anxiety. Collectively, these results underscore that relational continuity, informational transparency, and empathetic communication form the foundation of effective miscarriage support systems.

In terms of theoretical perspectives, the applicability of general grief theory and related frameworks to miscarriage has been empirically confirmed. Adolfsson and Larsson (Adolfsson & Larsson, 2010) validated Bonanno's taxonomy within the Swedish context, establishing that miscarriage grief parallels conventional bereavement yet involves distinctive societal invisibility. Their earlier work (Adolfsson et al., 2006) demonstrated that structured midwife follow-up reduced active grief, affirming the therapeutic significance of professional acknowledgment of loss. Similarly, Hori et al. (Hori et al., 2002) emphasized personality traits and perceived social support as determinants of emotional resilience, while Kuse-Isingschulte et al. (Kuse-Isingschulte et al., 1996) found that compassionate post-loss care, including contact with the deceased infant, eased grief and depression. These findings collectively validate the psychodynamic and attachment-informed underpinnings of miscarriage grief, suggesting that recognition, empathy, and social integration are central to recovery (Markin, 2024).

Despite these positive outcomes, methodological challenges persist. Studies vary widely in design, population, duration, and measurement instruments, creating difficulties in generalizing findings. Murphy et al. (Murphy et al., 2012) identified this heterogeneity as a critical limitation in prior systematic reviews, a conclusion echoed in the present analysis. While some interventions, such as internet-based CBT, demonstrate high efficacy and accessibility, most trials feature small sample sizes and limited follow-up durations, restricting the robustness of conclusions (Bailey et al., 2015; Nakano et al., 2013). Further, cultural and socioeconomic variables influence treatment outcomes, as illustrated by regional differences in counseling preferences and psychological symptom profiles (Golmakani et al., 2017; Kheirkhah et al., 2024; Tavoli et al., 2018). This diversity underscores the necessity of cross-cultural adaptation and culturally sensitive program design.

Another salient observation concerns the integration of technology in intervention delivery. The studies by Kersting et al. (Kersting et al., 2013; Kersting et al., 2017) and Altaf Dar et al. (Altaf Dar et al., 2023) illustrate that online modalities expand access to care and overcome logistical barriers, especially for women in remote or conservative regions where mental health stigma persists. Digital platforms enable confidentiality and flexibility, making them promising tools for future reproductive mental health strategies (Areas, 2024). However, further research is needed to determine long-term adherence, cross-cultural efficacy, and therapist-patient relationship dynamics in digital contexts.

Finally, the findings reiterate that miscarriage is not solely a medical event but an existential and relational disruption. Markin (Markin, 2024) and Bramble (Bramble, 2024) conceptualize psychotherapy for pregnancy loss as a meaning-making process that reconstructs disrupted identities and reestablishes emotional bonds. This aligns with relational and attachment perspectives, viewing recovery not as detachment but as integration of the loss experience into one's life narrative. From this standpoint, effective interventions are those that bridge emotional, cognitive, relational, and spiritual dimensions of healing, fostering empowerment and restoring agency among affected women and couples.

Overall, the cumulative evidence converges on several critical conclusions. First, early, structured, and empathetic psychological care is essential for mitigating grief-related pathology following miscarriage. Second, interventions tailored to individual distress levels and contextual factors yield better outcomes than generalized approaches. Third, integrating psychological care into obstetric services and expanding digital accessibility can ensure timely and equitable support. Lastly, multidisciplinary collaboration among psychologists, midwives, and physicians remains vital for addressing the complex biopsychosocial dimensions of miscarriage and infertility-related grief.

5. Suggestions and Limitations

Although the present review synthesizes a wide range of studies, several limitations must be acknowledged. The most significant limitation pertains to the methodological heterogeneity among included studies. Differences in study design, intervention duration, sample size, and outcome measurement tools hindered direct comparison and precluded meta-analytic integration. The inclusion of both quantitative and qualitative studies enriched conceptual understanding but introduced variability in rigor and reporting standards. Additionally, the majority of studies focused exclusively on women, with limited exploration of male partners' psychological experiences, which may provide an incomplete picture of the relational impact of miscarriage. Publication bias may also exist, as studies reporting non-significant findings are less likely to appear in indexed databases. Finally, language restrictions and reliance on published data may have resulted in the omission of relevant gray literature or unpublished interventions.

Future investigations should prioritize large-scale randomized controlled trials employing standardized outcome measures to establish the comparative efficacy of diverse intervention modalities. Longitudinal designs are essential to evaluate sustained effects over time and the prevention of chronic grief and depressive relapse. Furthermore, studies should aim to include dyadic and family-centered approaches to account for the shared and interactive nature of bereavement within couples. Cross-cultural validation of psychological models and the adaptation of interventions to specific sociocultural and religious contexts will also be critical for global applicability. Finally, emerging technologies such as digital health platforms, mobile apps, and virtual counseling environments warrant rigorous evaluation for usability, safety, and long-term engagement outcomes.

From a clinical standpoint, healthcare systems must adopt integrated care pathways that combine medical treatment with structured psychological follow-up after miscarriage. Hospitals and maternity units should implement early

screening protocols to identify women and couples at high risk for psychological distress. The inclusion of trained mental health professionals within obstetric and gynecological teams can enhance emotional support and continuity of care. Additionally, expanding psychoeducational programs for healthcare providers can foster empathy, reduce stigma, and promote compassionate communication. Finally, policymakers should ensure equitable access to evidence-based psychological interventions, with special attention to rural populations and low-resource settings, to ensure comprehensive care for all individuals affected by pregnancy loss.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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