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The impact of midwife/nurse-led psychosocial interventions on parents experiencing perinatal bereavement: An integrative review

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ABSTRACT

Background: Perinatal loss is a traumatic event associated with a high risk of parents experiencing negative psychological outcomes. Despite most parents being in regular contact with midwives and nurses during the perinatal period, there is a lack of evidence which hampers these professionals from using effective psychosocial interventions with parents.
Aim: This study aims to synthesise the existing evidence on the types of psychosocial interventions delivered by midwives/nurses for parents with perinatal bereavement, their impacts on bereaved parents' mental health and the experiences of midwives and nurses in delivering psychosocial interventions for parents experiencing perinatal loss.
Design: An integrative review of the literature.
Methods: Whittemore and Knafl's five-stage integrative review framework guided this review. A systematic literature search of the Medline, PsycINFO, Embase, CINAHL and ASSIA, Cochrane Library and ProQuest databases was conducted from inception to January 2023, with no language or geographical limiters set due to the paucity of research published in this subject area. Two researchers independently screened and reviewed each study's data extraction and methodological quality using the Joanna Briggs Institute and Mixed Method Appraisal Tool. Results were analysed and synthesised using narrative synthesis.
Results: A total of 21 studies met the inclusion criteria. From these, we identified nine types of psychosocial interventions for perinatal bereavement that can be delivered by midwives and nurses. The positive impacts of midwife/nurse-led psychosocial interventions on grief, anxiety, depression posttraumatic stress disorder and other psychosocial outcomes amongst parents experiencing perinatal loss have been demonstrated. In addition, we identified the useful components of these interventions and the experiences of midwives and nurses in delivering psychosocial interventions, thereby highlighting barriers such as lack of knowledge and skills, stressful working environments and inadequate emotional support.
Conclusion: Our findings demonstrate that midwife/nurse-led psychosocial interventions have the potential to improve grief, anxiety, depression, posttraumatic stress disorder symptoms and other psychosocial outcomes for parents experiencing perinatal loss. Thus, future research should consider training, workload, time cost and emotional support for midwives/nurses when developing midwife/nurse-led psychosocial interventions for parents with perinatal loss.
Registration number: CRD42022369032.
Tweetable abstract: Midwife/nurse-led psychosocial interventions have the potential to improve mental health amongst parents experiencing perinatal loss.

What is already known

- Psychosocial interventions can promote positive psychological outcomes for parents experiencing perinatal loss.
- Midwives and nurses in maternity services are well placed to provide psychosocial interventions for parents with perinatal loss in the perinatal period.

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- Little is known about the impact of midwife/nurse-led psychosocial interventions on parents with perinatal loss.

What this paper adds

- This review identified nine types of psychosocial interventions that can be used by midwives and nurses, along with the useful components in supporting parents experiencing perinatal loss.
- This review provides evidence that supports the positive impacts of midwife/nurse-led psychosocial interventions on alleviating symptoms of grief, anxiety, depression posttraumatic stress disorder and other psychosocial outcomes amongst parents experiencing perinatal loss.
- This work underscores an emerging understanding of the challenges experienced by midwives and nurses when delivering psychosocial interventions, including the lack of training, inadequate emotional support and a stressful working environment.

1. Introduction

Perinatal loss, which is defined as the loss of an infant due to miscarriage, stillbirth, neonatal death, ectopic pregnancies, or elective termination for foetal anomalies (HSE, 2022; Shaohua and Shorey, 2021), occurs in 25 % of pregnancies (Herbert et al., 2022). Every year, there are nearly 23 million miscarriages, 2.6 million stillbirths and 2.4 million newborn deaths globally (Lawn et al., 2016; Quenby et al., 2021; WHO, 2022). Parents who lose desired pregnancies are at a high risk of suffering from adverse psychological outcomes (Robinson, 2011). In fact, up to 60 % of bereaved parents experience symptoms of grief, anxiety, depression and posttraumatic stress symptoms (Chung and Reed, 2017; Herbert et al., 2022; Kersting and Wagner, 2022; Westby et al., 2021) with a long-lasting impact that may continue after the birth of a subsequent healthy child (Blackmore et al., 2011; Christiansen et al., 2013). Studies in Europe, Australia and the United States have reported that perinatal loss is associated with higher costs to healthcare and society due to parents' negative psychological outcomes (Gandino et al., 2019; Heazell et al., 2016; Quenby et al., 2021). In turn, poor psychological status can result in negative physical well-being, which is disruptive to daily life, often debilitating and linked to multiple chronic physical, social and psychological conditions, such as cardiovascular disease, diabetes, interpersonal relationships, family finances, eating disorders, substance misuse and suicidal ideation (Aarons et al., 2008; Burden et al., 2016). Due to the serious and profound impacts of perinatal loss, healthcare professionals must provide adequate support and communication to parents experiencing perinatal loss to mitigate the negative psychological outcomes and associated costs to healthcare and society (Hendson and Davies, 2018).

Psychosocial interventions have been described as a group of nonpharmacological therapeutic interventions grounded in psychological theory, which aim to address the psychological, social, personal and relational problems of people with mental health conditions (Barbui et al., 2020; Dua et al., 2011). In recent reviews, psychosocial interventions, including psychoeducation, psychotherapy, bereavement care and social support, have been found to be effective in reducing depression, anxiety and grief amongst parents experiencing perinatal loss (Shaohua and Shorey, 2021; Xie et al., 2022). However, psychosocial interventions delivered by mental health specialists come with financial and accessibility challenges, particularly in low- and middle-income countries (Barbui et al., 2020; McNab et al., 2022; Prom et al., 2022). In contrast, interventions facilitated by midwives and nurses are considered more affordable and accessible options, though they might not offer the same depth of specialised interventions (Barbui et al., 2020; Homer et al., 2016).

Midwives and nurses in maternity services can play crucial roles in delivering sensitive and supportive bereavement care for parents experiencing perinatal bereavement (Homer et al., 2016), not only because they are typically the first healthcare staff that parents engage with, but also because they can provide continued support throughout the postnatal period and into subsequent pregnancies (Nash et al., 2018; Qian et al., 2022). This multifaceted engagement underscores the critical importance of their contribution to perinatal bereavement care. Therefore, understanding the provision and potential effects of psychosocial interventions delivered by midwives/nurses may improve their ability to employ effective strategies during perinatal bereavement, consequently impacting parental mental health recovery (Qian et al., 2024).

To date, although an increasing number of interventions targeting bereaved parents have been developed, the perspectives of the midwives and nurses who can deliver timely interventions have been overlooked. This may lead to such interventions being possibly underutilised in clinical settings. Furthermore, understanding the experiences of midwives and nurses in implementing psychosocial interventions can inform future research to better tailor interventions effectively and prepare midwives and nurses for implementing interventions in clinical environments (Garcia-Catena et al., 2023).

We acknowledge that each type of perinatal loss is worthy of individual attention; however, we include all types of perinatal loss in this review, which intends to provide a more holistic understanding and identify similar components of the intervention for perinatal bereavement that can fit different types of perinatal loss (Herbert et al., 2022; Kuforiji et al., 2023). Therefore, this review aims to explore the types of midwife/nurse-led psychosocial interventions for parents experiencing perinatal bereavement, their impact on bereaved parents' mental health and the experiences of midwives and nurses in delivering such psychosocial interventions for parents experiencing perinatal loss.

2. Methods

An integrative review approach was applied as this enabled us to combine diverse methodologies, including experimental and non-experimental research (Whittemore and Knafl, 2005). This method has been widely used in nursing and midwifery research to identify knowledge gaps, generate research questions, integrate research from various research designs, promote a holistic understanding of the research topic and facilitate the development of evidence-informed practices (Cronin and George, 2020; Dhollande et al., 2021; Russell, 2005). This multifaceted approach was chosen to synthesise findings from diverse research methodologies and provide a comprehensive overview of the evidence regarding the midwife/nurse-led psychosocial interventions for parents experiencing perinatal loss. To guide the review process and increase the methodological rigour, the following five-stage integrative review framework (Whittemore and Knafl, 2005) was employed: (1) identifying the problem, (2) searching for literature, (3) evaluating data, (4) analysing data and (5) presenting the findings. The review was reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Page et al., 2021), reflecting the same level of rigour as a systematic review using Cochrane guidance (Higgins et al., 2023). This review protocol was registered on PROSPERO (CRD42022369032).

2.1. Search strategy

A preliminary search was conducted to ensure that there were no other similar reviews within Cochrane Library, Open Grey database and PROSPERO. This search found a dearth of literature related to psychosocial interventions delivered by midwives for parents with perinatal bereavement. A population, intervention and context (PIC) framework analysis was undertaken to guide the keywords in the search strategy (Supplementary material file 1) and formulate the following

review question: '*What psychosocial interventions are being delivered by midwives/nurses for parents experiencing perinatal loss, how well do they work and what are the experiences of midwives/nurses in delivering psychosocial interventions for bereaved parents?*'

Seven electronic databases, namely, Medline, PsycINFO, Embase, CINAHL, Applied Social Sciences Index and Abstracts (ASSIA), Cochrane Library and ProQuest, were searched from inception to January 2023. The search was not limited by date, language, or type of study due to the dearth of literature in this area. Terms and keywords derived from Medical Subject Headings (MeSH) were selected and combined for each concept in the title and abstract, and these were searched identically in all databases. The Boolean operator 'OR'/'AND' was utilised to refine, expand and combine the search terms (Supplementary material file 2). The search strategies were adjusted by a research librarian. Backward and forward citation tracking of included articles was conducted by a manual search of the reference list and tracking citation index of included articles to identify additional studies.

2.2. Eligibility criteria

Studies were included if they met the following criteria: (1) focused on the parents (fathers, mothers or both) with perinatal bereavement resulting from miscarriage, stillbirth, neonatal loss, or elective termination for foetal anomalies; (2) focused on psychosocial interventions, including all nonpharmacological interventions based on enhancing social interaction support (e.g. relationship-focused) or theoretically based psychological interventions (e.g. cognitive behavioural therapy); (3) interventions were provided by midwives or nurses working in maternity services (especially for those countries that do not have registered midwives); and (4) were quantitative, qualitative, mixed-methods, case studies or systematic reviews. Protocols, conference abstracts and non-peer-reviewed theses were excluded to ensure the rigour of synthesis.

2.3. Study selection

All records retrieved from the database were imported into Covidence (https://www.covidence.org) for title/abstract screening and full-text review, which also removed duplicates across the electronic databases. All titles/abstracts and full-text screenings underwent independent screening twice, involving all four reviewers (JX, AH, LB, and AMG). The eligibility criteria were rigorously applied, and discrepancies were resolved collaboratively following title/abstract and full-text screening.

2.4. Quality assessment

The methodological quality of each of the included studies was independently appraised for quality, rigour, credibility, relevance and outcomes by two reviewers using the Joanna Briggs Institute (2020) Critical Appraisal tools in accordance with their research methodologies. The Mixed Method Appraisal tool (Hong et al., 2018) was used to assess the methodological quality of the mixed-methods studies. Version 2 of the Cochrane tool for assessing the risk of bias (ROB2) in randomised trials (Higgins et al., 2023) was independently appraised by two reviewers (JX and AMG). The consensus on the risk of bias assessments of the five domains was scored using low, high or unclear risk of bias.

2.5. Data extraction

Data extraction was managed using a Microsoft Excel form, which was developed and piloted by the three reviewers (JX, AH, and AMG) to extract data from eligible studies. This form was used to identify sections relevant to the research questions and to the analysed data, including the following: author(s), year, title, country, ethics, aim/objectives, sample size, participants' characteristics, study design, setting, data collection/analysis and variables of interest, that is, the types of psychosocial interventions using items adapted from the Template for Intervention Description and Replication (TIDieR) checklist (Hoffmann et al., 2014). This step was performed to better report interventions, outcomes and results. The data from the included studies were extracted by JX and AMG, and any questions were resolved through discussion with the other authors to ensure the accuracy of extractions.

2.6. Data analysis

A narrative synthesis was used in the current study due to the methodological heterogeneity and the nature of the research question. Narrative synthesis is an approach used for describing, comparing and combining heterogeneous qualitative, quantitative and mixed-methods results using text and illustrations (Evans, 2002). To increase the transparency and trustworthiness of the narrative synthesis, the following three elements of the narrative synthesis process (Popay et al., 2006) were used to summarise and explain the findings of the synthesis: (1) developing a preliminary synthesis, (2) exploring relationships within and between studies, and (3) assessing the robustness of the synthesis. The included studies were grouped according to their type of interventions, after which tabulation and textual description were used to organise the findings and describe patterns across the studies.

3. Results

3.1. Search results

Database searches yielded 3445 studies from five databases, from which 924 duplicates were removed and 2494 were retained for title/abstract screening. A total of 50 full-text papers were screened and 10 articles remained for inclusion. The manual search through the backward and forward citation tracking of the included articles yielded 86 studies. Following a more detailed examination of the full text, 11 more studies were deemed eligible. This resulted in a total of 21 studies being identified for the review. The screening process of the eligibility criteria using the PRISMA 2020 flowchart (Page et al., 2021) is shown in Fig. 1.

3.2. Study characteristics

A summary of the study characteristics is presented in Table 1. All studies were published between 1999 and 2022 and were conducted across nine countries: eight in Iran, four in America, three in China and one each respectively in Scotland (Martin et al., 2021), Sweden (Adolfsson et al., 2006), Turkey (Karaca and Oskay, 2020), Japan (Horiuchi et al., 2011), Thailand (Sriarporn et al., 2017) and South Africa (Modiba, 2008). A total of 17 studies used quantitative designs, including 11 randomised controlled trials, five quasi-experimental studies and one cross-sectional, retrospective, two-group design. Two studies used qualitative methods and two were mixed-methods studies (Table 1).

The included studies reported a combination of 2379 participants in total, consisting of only women who experienced perinatal loss as participants (n = 2005), women and their partners (n = 341) and fathers/partners (n = 33). The sample size in the included studies ranged from 14 to 682 participants, and the ages ranged between 18 and 47 years old. Ethnicity was reported in five studies (DiMarco et al., 2001; Johnson and Langford, 2015; Martin et al., 2021; Swanson, 1999; Swanson et al., 2009), and the majority of the sample identified as White Caucasian (n = 870, 78 %), White British (n = 65, 6 %), African American (n = 55, 5 %), Hispanic/Latino (n = 52, 5 %), Asian/Pacific Island (n = 46, 4 %) and others (n = 24, 2 %). Studies consisted of participants who had histories of miscarriage (n = 1426), stillbirth (n = 100), ectopic pregnancy (n = 68), termination of pregnancy (n = 508) and mixed perinatal loss (n = 277). The mean gestational age at loss ranged from 5.2 to 26.4

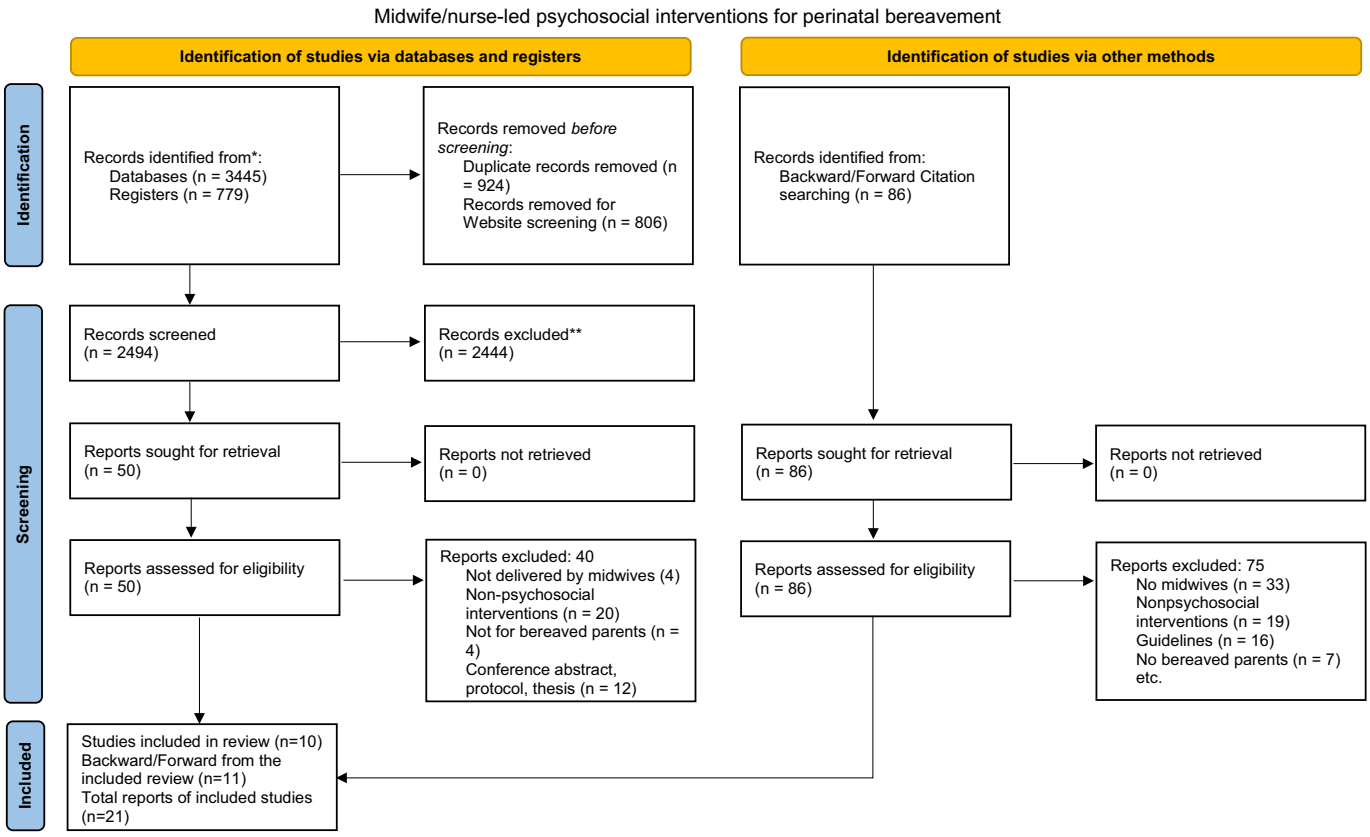

Fig. 1. PRISMA 2020 flowchart of the study selection process.

weeks. The study settings included maternity or gynaecological clinics, obstetric emergency centres, obstetric wards in hospitals and local health or counselling centres.

It was found that various outcomes were examined in the included studies, including depression in eight studies, anxiety in eight studies, grief in seven studies, posttraumatic stress disorder in four studies, social support in two studies, self-esteem in two studies and hopelessness, posttraumatic growth and resilience each in one study (Supplementary material file 3). The same dataset was used in two studies, Navidian et al. (2017) focused on reporting posttraumatic stress, whereas Navidian and Saravani (2018) reported outcomes related to grief. A summary of outcomes and the instruments used in the original studies is presented in Supplementary material file 3, which shows the diversity of outcomes and measurement tools used in the included studies.

3.3. Methodological quality

The quality appraisal of the included studies was assessed using the corresponding checklists of the JBI Critical Appraisal Tools (Aromataris and Munn, 2020) and the Mixed Methods Appraisal Tool (Hong et al., 2018). Version 2 of the Cochrane Risk of Bias (ROB2) tool for randomised trials (Sterne et al., 2019) was also used to provide a detailed assessment of different bias domains for the randomised controlled trials. The results of the quality appraisal are detailed in Supplementary material file 4. Nineteen (90 %) studies were of good quality, achieving over 70 % of the quality appraisal checklist, with two (DiMarco et al., 2001; Karaca and Oskay, 2020) rated as moderate quality. The Risk of Bias (ROB2) tool identified that, of the 12 randomised controlled trials, five studies were assessed to have a high risk of bias, and the seven other studies had some concerns. Almost half of the studies were evaluated as 'high risk' in terms of the measurement of outcomes. Most randomised controlled trials were categorised as having a low risk of bias regarding the randomisation process, missing outcome data, selection of the reported results and raising some concerns related to deviations from the intended intervention.

3.4. Characteristics of midwife/nurse-led psychosocial interventions

The characteristics of the included psychosocial interventions using items adapted from the Template for Intervention Description and Replication (TIDieR) checklist are presented in Supplementary material file 5. Nine types of midwife/nurse-led psychosocial interventions were identified in our review (Table 2), of which six studies used counselling, five studies used cognitive behavioural therapy and one study (Hasani et al., 2021) used health promotion awareness. Four studies used Swanson's care based on Swanson's Care Theory and Meaning of Miscarriage Model, two studies (Sriarporn et al., 2017; Sun et al., 2017) used informational and emotional support based on Social Support Theory, three studies used memory making, two studies (Qian et al., 2021, 2019) used expressive writing and the remaining studies focused on mindfulness-based stress reduction (Nasrollahi et al., 2022) and support group (DiMarco et al., 2001). One study (Martin et al., 2021) explored the acceptability of compassion-focused therapy amongst women experiencing perinatal loss.

3.5. Components of midwife/nurse-led psychosocial interventions

The findings from 12 studies revealed the useful components of psychosocial interventions (Table 3). In addition, results from six studies (Adolfsson et al., 2006; Horiuchi et al., 2011; Karaca and Oskay, 2020; Modiba, 2008; Sriarporn et al., 2017; Sun et al., 2017) indicated that information support on perinatal loss, decision-making, grief process and coping strategies was beneficial for bereaved parents. Furthermore, several studies highlighted emotional support, characterised by active listening, empathetic caring, emotional catharsis and effective communication, as a useful component in the process. The benefits of memory

Table 1
Characteristics of the included studies in the review.

Author(s), year	Location	Study design	Sample size	Participants' characteristics	Obstetrical characteristics	Setting	Intervention	Outcomes	Key findings
Swanson, 1999	US	A Solomon four-group randomised experimental design with delayed measurement	Total n = 252 I (early measures): n = 56 I (delayed measures): n = 60 C (early measures): n = 64 C (delayed measures): n = 62	Women miscarried at 20 weeks or less, within 5 weeks of loss. Ethnicity: 93.8 % (198) were Caucasian, others were Asian/Pacific Islander (5), Hispanic (4), African American (3), Native American (1), or undisclosed (13).	Mean gestational age at loss was 10.41 weeks (SD = 3.3). Participants had miscarried from one to six times (M = 1.44; SD = 0.79). 71 % said their pregnancies were planned, and 2.4 % said pregnancies were not wanted. About 72 % had prior pregnancies and 54.2 % currently had children. Previous losses included infertility (22.5 %), elective abortions (30.6 %), late gestation losses (4.5 %) and previous miscarriages (30.3 %).	N/A. Care providers throughout the area shared recruitment pamphlets at the time of loss or during follow-up appointments.	Three hour-long counselling sessions based on Swanson Care Theory and the Meaning of Miscarriage Model	Self-esteem Emotional disturbance, including anxiety, depression, anger and confusion Earlier measured group: T1: immediately T2: 6 weeks T3: 4 months T4: 1 year after enrolling. Delayed measured group: Measurements were delayed until T3 and T4.	There were significant effects for treatment on overall emotional disturbance ($F = 4.94$; $p = 0.029$), anger ($F = 4.57$; $p = 0.035$) and depression ($F = 6.14$; $p = 0.015$). No significant effects on anxiety ($F = 1.43$; $p = 0.236$), confusion ($F = 0.85$, $p = 0.359$) and self-esteem ($F = 1022$, $p = 0.272$). Compared with those measured earlier, delayed measure women (both treated and control) had higher anger scores ($F = 3.86$; $p = 0.051$) and lower lost-baby scores ($F = 5.84$; $p = 0.017$).
Adolfsson et al., 2006	Sweden	RCT	Total n = 116 I: n = 56 C: n = 60	Women miscarried before 13 weeks of gestation. Mean age 31.3 years. Four women were living as single individuals.	The number of gestations, 2.9; mean gestation length at the time of the miscarriage, 9.7 weeks; and being primiparous, 36 %. The pregnancy was planned for 75 % of the women; previous miscarriages were 25 %.	At the gynaecology clinic in a medium-sized town in the southwest of Sweden. Letters of invitation giving details about the study were sent to 146 women.	Structured follow-up visit by a midwife based on Swanson Care Theory and on the Meaning of Miscarriage Model.	Grief T1: at the first follow-up visit to the midwife. T2: 4 months after the miscarriage	There was a 30 % greater reduction in grief in structured follow-up visits (23.5 points) than in regular visits (17.5 points), but no statistically significant difference was observed in the two groups. Grief (I/C): T1: 97.0 (80.7–113.3)/93.7 (75.7–111.6) T2: 73.4 (60.0–86.8)/76.2 (60.2–90.1) Difference (I/C) = 23.5 (11.6–35.5)/17.5 (7.7–27.3) The women's own estimations of the importance of the structured follow-up visit were measured using a visual analogue scale from 1 to 10 was (n = 43) 8.6 in the intervention group and in the regular visit group (n = 45) 7.0 ($p < 0.05$).
Swanson et al., 2009	US	RCT	Total n = 341 couples. Nurse caring: n = 84 Self-caring: n = 86 Combined caring: n = 85	Volunteer couples reported an unplanned, unexpected loss of pregnancy prior to 20 weeks gestation.	Gestational age at loss ranged from 2.7 to 21 weeks (mean = 9.8, SD = 3.1). Women had from 1 to 6 miscarriages, with the current loss being the first for 232 (68 %) women. Couples had up to 6 children, with 181 couples (53.1 %) having none and 107	Throughout the Puget Sound (Washington) area, recruitment posters, print and media ads, or pamphlets were posted in healthcare facilities.	Nurse caring; self-caring; combined caring	Depression Grief: including pure grief and grief-related emotions. Measured at baseline, 3 months, 5	Bayesian odds (BO) ranging from 3.0 to 7.9 favoured nurse caring over all other conditions for accelerating women's resolution of depression. BO of 3.2–6.6 favoured nurse caring and no treatment over self-caring and combined caring

(continued on next page)

Table 1 (*continued*)

Author(s), year	Location	Study design	Sample size	Participants' characteristics	Obstetrical characteristics	Setting	Intervention	Outcomes	Key findings
			No treatment: n = 86		(31.4 %) having one. Pregnancies were planned by 246 couples (72.1 %) and wanted by 333 (97.7 %).			months, 13 months after enrolling.	for resolving men's depression. BO of 3.1–7.0 favoured all three interventions over no treatment for accelerating women's pure grief resolution, and BO of 18.7–22.6 favoured nurse caring and combined caring over self-caring or no treatment for resolving men's pure grief. BO ranging from 2.4 to 6.1 favoured nurse caring and self-caring over combined caring or no treatment for hastening women's resolution of grief-related emotions. BO from 3.5 to 17.9 favoured nurse caring, combined caring and no treatment over self-caring for resolving men's grief-related emotions.
Karaca and Oskay, 2020	Turkey	RCT	Total n = 104 I: n = 52 C: n = 62 Completed: Total n = 91 I: n = 45 C: n = 46	Women who had experienced a miscarriage within 22 weeks.	Week of miscarriage, I: 8.68 ± 2.56, C: 9.43 ± 2.69 Number of children, I: 1.02 ± 0.91, C: 1.39 ± 1.29 63.7 % wanted to become pregnant again. Numbers of pregnancies, I: 2.51 ± 1.34, C: 3.15 ± 1.7 Number of live births, I: 1.02 ± 09.1, C: 1.43 ± 1.36 Number of viable births, I: 0, C: 0.02 ± 0.14 Number of miscarriages, I: 1.48 ± 0.84, C: 1.71 ± 1.16	A maternity clinic of a state hospital. In this clinic, the women who have had a miscarriage are typically discharged after 2 or 3 h if their general condition is well and they have no other problems or complications.	Swanson's care	Symptoms of grief, including physical, cognitive, emotional and behavioural symptoms. Hopelessness Depression Anxiety Stress T1: 1st day T2: 6th weeks	The women's physical, emotional, behavioural and cognitive grief symptoms decreased after receiving Swanson's care ($p < 0.001$). Negative feelings about the future, level of depression, and anxiety levels diminished after receiving Swanson's care ($p < 0.001$). Grief (I/C): T1: 111.0 ± 18.38/110.0 ± 17.18 T2: 49.9 ± 8.83/67.9 ± 13.71 Hopelessness T1: 12.1 ± 4.11/11.5 ± 3.49 T2: 5.37 ± 2.69/7.06 ± 2.79 Anxiety T1: 15.7 ± 7.88/17.4 ± 5.58 T2: 4.6 ± 3.21/9.76 ± 5.19 Depression T1: 24.6 ± 7.12/22 ± 6.42 T2: 7.71 ± 3.95/12 ± 6.12 Stress T1: 18.2 ± 10/21.3 ± 10.16 T2: 7.02 ± 4.75/29.1 ± 12.69
Khodakarami et al., 2017	Iran	Quasi-experimental study (two groups with pre- and posttest)	Total n = 72 I: n = 36 C: n = 36	Women suffering from spontaneous abortion who wanted pregnancy, being the first pregnancy, having mild to higher levels of anxiety and depression (a score of 8 and higher)	Gestational age (weeks), I: 11.21 ± 3.18, C: 12.40 ± 3.48 Duration of marriage (months), I: 28.58 ± 10.94, C: 31.42 ± 15.45	At Fatemiyeh Hospital in Hamadan	Fordyce happiness counselling programme	Anxiety and depression T1: before the intervention T2: immediately after the intervention	The mean anxiety ($p < 0.001$) and depression ($p < 0.001$) scores in the intervention group were significantly lower than in the control groups. Anxiety (I/C) T1: 10.88 ± 2.94/11.48 ± 2.94

				Mean age: N/A					T3: one month after the intervention.	T2: 5.58 ± 2.52/9.25 ± 3.60 T3: 5.00 ± 2.27/8.31 ± 2.56 Depression (I/C)
Nazaralivand et al., 2021	Iran	RCT	Total n = 46 I: n = 23 C: n = 23	Women who had a spontaneous abortion in their first pregnancy, and obtained a score above 23 on the Goldberg Mental Health Questionnaire (GHQ-28) Mean age, I: 27.95 ± 3.92, C: 28.04 ± 3.78.	Duration after abortion (weeks), I: 11.40 ± 5.13, C: 8.85 ± 3.92	At the Razi and Imam Khomeini Hospitals	Counselling based on problem-solving therapy	Mental health, including physical symptoms, anxiety, social dysfunction and depression. T1: before the intervention T2: immediately after the intervention T3: one month after the intervention.	T1: 10.55 ± 2.57/10.97 ± 2.56 T2: 5.73 ± 2.78/9.05 ± 3.47 T3: 4.82 ± 2.24/7.94 ± 3.52 There was a significant difference in mental health and its subscales between the intervention and control groups after the intervention ($p < 0.001$). Total score of GHQ-28 (I/C): T1: 59.25 ± 3.56/58.14 ± 4.16 T2: 41.30 ± 2.55/58 ± 4.43 T3: 38.45 ± 3.03/58.95 ± 4.87 Physical symptoms (I/C): T1: 16.35 ± 1.13/15.28 ± 1.76 T2: 11.50 ± 1.14/15.38 ± 1.80 T3: 10.30 ± 0.80/15.19 ± 1.96 Anxiety (I/C): T1: 16.05 ± 1.66/15.52 ± 1.72 T2: 11.50 ± 1.13/15.85 ± 1.38 T3: 10.15 ± 1.42/16.14 ± 1.19 Social dysfunction (I/C): T1: 15.35 ± 1.42/14.95 ± 1.46 T2: 10.30 ± 1.08/15.00 ± 1.84 T3: 9.75 ± 1.06/15.00 ± 1.84 Depression (I/C): T1: 12.75 ± 1.51/12.00 ± 1.70 T2: 7.95 ± 1.60/11.57 ± 1.63 T3: 7.70 ± 1.41/12.09 ± 1.60
Navidian et al., 2017	Iran	RCT	Total n = 100 I: n = 50 C: n = 50	Women who had recently experienced stillbirth (maximum four weeks and perinatal loss occurred at more than 22 weeks gestational age) Mean ages, I: 29.16 ± 6.88, C: 29.90 ± 6.82	Pregnancy duration (months), I: 6.46 ± 1.50, C: 6.45 ± 1.41; foetal abnormalities: I: 16 %; C: 12 %; no obvious reason for death was reported: I: 46 %; C: 36 %; the stillborn babies were not seen by the mothers: I: 48 %; C: 62 %.	At their local health centre, the posttest questionnaire was given to all participants in their homes.	Psychological counselling based on psychoeducation and cognitive-behavioural therapy	Posttraumatic stress symptoms T1: before intervention, T2: four weeks after intervention.	There is a significant improvement in the severity of posttraumatic stress symptoms after psychological grief counselling ($p = 0.001$). The severity of posttraumatic stress symptoms (I/C): T1: 7.22 ± 4.19/7.64 ± 5.20 T2: 4.52 ± 2.14/6.50 ± 3.28
Navidian and Saravani, 2018	Iran	RCT	Total n = 100 I: n = 50 C: n = 50	Women who had recently experienced stillbirth Mean ages, I: 29.16 ± 6.88, C: 29.90 ± 6.82	Pregnancy duration (months), I: 6.46 ± 1.50, C: 6.45 ± 1.41; foetal abnormalities: I: 16 %; C: 12 %; no obvious reason for death was reported: I: 46 %; C: 36 %; the stillborn babies were not seen by the mothers: I: 48 %; C: 62 %.	At their local health centre, the posttest questionnaire was provided to all the participants at their homes.	Psychological counselling based on psychoeducation and cognitive-behavioural therapy.	Grief T1: before intervention, T2: four weeks after intervention.	The mean total grief symptom score and three subscale scores (active grief, difficulty coping, and despair) were significantly lower in the participants who received psychological counselling than in those who received routine care ($p < 0.001$). Grief (I/C): T1: 104.06 ± 24.00/107.78 ± 19.60 T2: 86.14 ± 15.00/98.50 ± 16.01 The mean decrease in grief:

(continued on next page)

Table 1 (*continued*)

Author(s), year	Location	Study design	Sample size	Participants' characteristics	Obstetrical characteristics	Setting	Intervention	Outcomes	Key findings
									I/C = −17.92 ± 17.11/−9.28 ± 11.48 ($p < 0.001$).
Hajnasiri et al., 2015	Iran	A quasi-experimental study with a pretest–posttest design and a control group.	Total n = 120 I: n = 60 C: n = 60 Remained: Total n = 100 I: n = 50 C: n = 50	Women who had licenced legal abortion at 1st or 2nd trimester. Mean age: N/A	Wanted pregnancy: 69 %	At the Kosar Hospital of Qazvin	Counselling based on the type of cognitive and emotional directed	Anxiety T1: before intervention T2: 8 weeks after intervention	After intervention, the anxiety level in the intervention group was significantly less than that in the control group ($p = 0.0001$). Anxiety (I/C): T1: 22.76 ± 12.67/24.74 ± 11.05 T2: 1.10 ± 1.70/11.66 ± 7.76
Ilbeygi et al., 2019	Iran	Quasi-experimental interventional study with pretest–posttest design and a control group	Total n = 120 I: n = 60 C: n = 60 Remained Total n = 100 I: n = 50 C: n = 50	Women with legal abortion at the 1st or 2nd trimester Mean age: N/A	Wanted pregnancy: 69 %	Counselling centres in Tehran	Rogersian and cognitive behavioural counselling	Anxiety Depression T1: before intervention T2: 8 weeks after intervention.	After intervention, the depression ($p = 0.0001$) and anxiety ($p = 0.0001$) scores in the intervention group were significantly lower than those in the control group. Depression (I/C): T1: 18.88 ± 9.99/20.66 ± 11.67 T2: 3.24 ± 5.58/16.24 ± 10.5 Anxiety (I/C): T1: 24.72 ± 11.05/22.76 ± 12.67 T2: 1.10 ± 1.70/11.66 ± 7.76
Hasani et al., 2021	Iran	RCT	Total n = 68 I: n = 34 C: n = 34	Women with ectopic pregnancies Mean age, I: 29.2 (6.1), C: 30.1 (6.1)	Gestational age (weeks), I: 5.4 (1.2), C: 5.2 (1.4); first pregnancy, 22.06 %; number of deliveries: 0, I: 12 (35.3), C: 7 (20.6), 1, I: 14 (41.2), C: 22 (64.7); abortion history, 13.24 %; ectopic pregnancy history, 11.76 %.	Hospitalised at Al-Zahra Hospital of Tabriz in East Azerbaijan.	Group counselling based on health promotion awareness	Self-esteem Mental health including physical symptoms, anxiety/insomnia symptoms, social dysfunction and symptoms of depression T1: before intervention T2: 2 weeks after intervention.	A significant reduction in the total score of mental health and its three subscales and a significant increase in the total score of self-esteem were observed in the intervention group compared with the control group, but no significant decrease in the score of social function symptoms was recorded. Mental health: adjusted difference = 11.27; 95 % CI: 15.19 to 7.34; $p < 0.001$ Physical symptoms: adjusted difference = 3.79; 95 % CI: 5.52 to 2.04; $p < 0.001$ Anxiety and sleep disorder: adjusted difference = 4.51; 95 % CI: 6.17 to 2.85; $p < 0.001$ Depression symptom: adjusted difference = 3.27; 95 % CI: 5.13 to 1.42; $p = 0.001$ Social function symptoms: adjusted difference = 0.54; 95 % CI: −0.39–1.47; $p = 0.247$ Self-esteem: adjusted difference = 4.79; 95 % CI: 3.07–6.51; $p < 0.001$
Sriarporn et al., 2017	Thailand	A pilot, one-group, pretest/posttest design	Total n = 30 I: n = 30 C: n = 0	Women who had undergone therapeutic termination of pregnancy	The conceptual ages of the terminated foetuses were between 10 and 22 weeks. 16 first pregnancies (53.33 %) and 14	At a university hospital in Chiang Mai, Thailand	Support programme based on Social Support Theory	Grief T1: 8–12 h after the termination of pregnancy.	A comparison of the numbers of participants at the grief score level before and after the support programme revealed a significant

				All participants were Buddhist	second pregnancies. A total of 23 participants had therapeutic abortions, and 7 participants had spontaneous abortions.			T2: two weeks after the termination of pregnancy.	difference ($\chi 2 = 0.394$; $p < 0.02$)
Sun et al., 2017	China	RCT	Total n = 124 I: n = 62 C: n = 62	Women diagnosed as having foetal abnormalities requiring pregnancy termination, or who had experienced stillbirth Mean age: I (39)/C (41) = 30.15 (4.49)/31.24 (5.02) Had religious beliefs: I/C = 6 (15.4 %)/6 (14.6 %)	Gestational weeks; I/C = 24.56 (5.88)/26.41 (6.28); primiparous, I/C = 17 (43.6 %)/9 (22.0 %), 32.5 %; multiparous, I/C = 22 (56.4 %)/32 (78.0 %); planned pregnancy, I/C = 28 (71.8 %)/29 (70.7 %), 71.25 %; abnormal pregnancy history: I/C = 5 (12.8 %)/10 (24.4 %), 18.75 %; complication of pregnancy: I/C = 5 (12.8 %)/6 (14.6 %).	At the ward of the Women's Hospital School of Medicine, Zhejiang University	Family-support programme	Family support Depression Posttraumatic stress symptoms T1: before intervention T2: after intervention (6 weeks after delivery)	After intervention, the family support ($p = 0.042$), depression ($p = 0.020$) and posttraumatic stress symptoms ($p = 0.025$) were significantly improved in the intervention group than in the control group. Family support (I/C): T1: 7.72 ± 2.58/7.05 ± 2.83 T2: 8.41 ± 1.93/6.90 ± 3.41 Depression (I/C): T1: 12.64 ± 4.96/11.98 ± 5.47 T2: 6.64 ± 4.45/9.12 ± 4.84 Posttraumatic stress symptoms (I/C): T1: 24.46 ± 13.69/23.85 ± 12.51 T2: 13.03 ± 7.71/18.98 ± 14.62
Qian et al., 2021	China	RCT	Total n = 100 I: n = 50 C: n = 50	Women were pregnant for more than 14 weeks and decided to terminate pregnancies due to foetal abnormalities. Mean age: 30.06 ± 4.03 Had religious beliefs: 5 (5.0 %)	Gestational weeks: 24.97 ± 3.08; gravidity: 1, 37 (37.0); ≥2, 63 (63.0); primiparous, 54 (54.0); planned pregnancy: 65 (65.0 %)	Hospitalised in 6 obstetric wards of a tertiary public hospital	Expressive writing	Posttraumatic stress symptoms Posttraumatic growth Resilience T1: before the intervention T2: immediately after the intervention T3: 1-month after the intervention	The mean score of the posttraumatic stress disorder symptoms for the intervention group was 4.12 points (95 % CI: 0.56 to 7.69, $p = 0.023$) lower than the control group at T2, and the two scores were significantly equivalent (95 % CI: −0.29–8.34, $p = 0.067$) at T3. The mean score of posttraumatic growth for the intervention group was 8.68 points (95 % CI: 3.00 to 14.37, $p = 0.003$) higher than that for the control group at T2 and 6.78 points (95 % CI: 1.35 to 12.21, $p = 0.014$) higher at T3. No significant effects were observed in both groups in terms of changes over time in resilience.
Qian et al., 2019	China	A descriptive qualitative study using a phenomenological approach	Total n = 14 (7 women had higher scores and 7 women had lower scores than the mean IES-R score)	Women's gestational age is more than 14 weeks and accepted induced labour for foetal abnormality. Participants have attended the expressive writing intervention.	N/A	By telephone one month after the completion of the intervention	Expressive writing	N/A	Benefits of expressive writing include rational and systems thinking, shifting perspectives, emotional catharsis, adjusting coping strategies, and improving emotional health.
Nasrollahi et al., 2022	Iran	RCT	Total n = 114 I: n = 57 C: n = 57	Women with bleeding leading to the termination of pregnancy in the first trimester of their planned pregnancy. Mean age: I/C = (28.93 ±	Primiparous, 19.81 %; no previous live birth, 26.42 %; abortion history: 68.87 %; gestational age (weeks): ≤6, I/C = 13 (24.5 %)/9 (17 %), 07–10, I/C = 20 (37.7 %)/23 (43.4 %), 11–14, I/C = 20 (37.7 %)/21 (39.6 %); desire to get pregnant again, 53.77	Zeinabieh Hospital in Shiraz	Mindfulness-Based Stress Reduction (MBSR)	Depression, anxiety and stress T1: before the intervention T2: two weeks after the intervention	A significant difference between the two groups after intervention was observed in the total scores of the Depression, Anxiety and Stress Scales (DASS) and its three subscales ($p < 0.0001$). Total score of the DASS (I/C):

(continued on next page)

Table 1 (*continued*)

Author(s), year	Location	Study design	Sample size	Participants' characteristics	Obstetrical characteristics	Setting	Intervention	Outcomes	Key findings
				5.62)/(29.30 ± 6.32)	%; history of bleeding in previous pregnancies, 14 (26.4 %)/11 (20.8 %); reason of loss of pregnancy: EP, I/C = 13 (24.5 %)/12 (22.6 %), mole, I/C = 8 (15.1 %)/9 (17 %), abortion, I/C = 32 (60.4 %)/32 (60.4 %)				T1: 47.86 ± 15.61/46.26 ± 15.19 T2: 25 ± 2.75/48.18 ± 19 Anxiety (I/C): T1: 14.34 ± 5.35/13.58 ± 4.47 T2: 9.70 ± 1.07/13.79 ± 5.36 Depression (I/C): T1: 15.11 ± 6.34/14.47 ± 5.96 T2: 7.83 ± 1.05/16.26 ± 11.06 Stress (I/C):
Horiuchi et al., 2011	Japan	A descriptive exploratory study	Total n = 84 I: n = 84 C: n = 0	Women who experienced perinatal loss (more than 12 weeks of pregnancy, such as abortion, intra-uterus foetal death, stillbirth or death of a newborn) The ages ranged from 20 to 47 years, with 38 (45.2 %) aged 35 years or older.	Twenty-one (25 %) were first pregnancies and 31 (36.9 %) were first-time deliveries. The aetiological causes were intrauterine foetal death (IUFD) in 33 (39.3 %), premature birth due to water breaking, etc. in 16 (19 %), foetal diseases (oesophageal atresia, anencephaly, heart malformation, etc.) in 20 (23.8 %), chromosomal abnormalities such as 21 and 18 trisomy in 11 (13 %) and cancer and mental illness in 4 (4.8 %) of the mothers; the most common number of weeks of pregnancy lost was up to 21 weeks (57.1 %), from 22 to 36 weeks (32.1 %) and from 37 to 42 weeks (7.1 %)	In the obstetric wards of five hospitals in the Kanto region in Tokyo	Bereavement booklet '*Living with Grief*' and Angel Memory Box for perinatal loss (memory making)	N/A	T1: 18.39 ± 5.47/18.2 ± 7.07 T2: 9.26 ± 1.25/18.13 ± 7.66 Forty-two mothers (97.6 %) thought the booklet was helpful and very helpful. All mothers expressed appreciation and favourable comments about the Angel Memory Box. Five themes emerged from the booklet: 1. To help relief and acceptance, 2. understanding the experience of loss, 3. no feeling of loneliness and sense of linkage to somebody, 4. assurance of one's grieving pace, and that the process takes a long time, 5. knowing about personal differences in the expression of grief. Five themes emerged for the Angel Memory Box: 1. The Kit was one of the few keepsakes, 2. timely assistance and help in case of need, 3. appropriate guide for memory-keeping and support to make decisions, 4. treated the dead baby carefully like a valuable human being, 5. made it easier to communicate with nursing/midwifery staff.
Johnson and Langford, 2015	US	RCT with posttest only	Total n = 40 I: n = 20 C: n = 20	Women who experienced complete spontaneous miscarriages in the first or second trimester (12–20 weeks gestation) Age range: 18–42, mean age = 27. The majority were Hispanic.	The majority (62.5 %) suffered a miscarriage between 14 and 19 weeks gestation. Most had one to three living children. The number of pregnancies ranged from one to eight, with the majority of the participants reporting from one to three pregnancies.	The Obstetric Emergency Centre (OBEC) and obstetrics-gynaecology clinic of a 350-bed, county-funded facility in a large city in the south-central United States	Structured bereavement intervention based on Guidelines (2002)	Grief Posttest only: 2 weeks post-loss.	A significant difference in the total score of grief ($F = 22.43$, $p < 0.000$), and the treatment group displayed significantly lower levels of despair ($F = 42.27$, $p < 0.001$). No significant difference was observed in active grieving ($p = 0.067$) and coping difficulty ($p = 0.830$) between the two groups. Grief (I/C):
DiMarco et al., 2001	US	A cross-sectional, retrospective,	Total n = 121, support group	Parents who had experienced a perinatal	The length of time since perinatal loss ranged from 1 month to 13	At a large hospital in a metropolitan area in the	Support group meeting	Grief	Posttest: 105.55/117.90 There were no statistically significant differences in grief

		two-group research design	(F/M) = 67 (49/18); no support group = 54 (39/15)	loss The mean age for the support group was 31.8 years, and 32.5 years for the non-support group. Ethnicity: Caucasian	years (m = 2.76 years). No living child: 26.45 %; types of perinatal loss including miscarriage (30.58 %), EP (6.61 %), stillbirth (42.15 %), early infant loss (49.59 %); the length of time since perinatal loss for the entire sample ranged from 1 month to 13 years (mean = 2.76 years)	midwestern United States			between the two groups ($p > 0.05$). Overall, for both groups, the mean scores were low for all six sub-scores.
Modiba, 2008	South Africa	A qualitative research method that was analytical, descriptive and contextual	N/A	All doctors and midwives who were interviewed described their experiences when caring for mothers experiencing perinatal loss. (Phase II)	N/A	The research was conducted in a single institution in Gauteng Province.	Support programme for perinatal loss in the in-patient system and out-patient systems	N/A	The programme was well accepted, and the recommendations are listed below: – It should be implemented in the clinics. – The researcher should have invited the policymakers of the hospital so that they could see the need for the implementation of the support programme, and the final say would lie with them. – This should be included in the curriculum of both midwives and doctors in training to bridge a gap.
Martin et al., 2021	Scotland	A mixed methods approach: a quantitative survey, semi-structured interviews and a focus group.	Sample of the questionnaire, n = 72. Sample of the interview, n = 12. Focus group comprised of maternity staff, n = 5.	Phase I: Women who had experienced perinatal bereavement. Phase II: Participants who met the criteria for posttraumatic stress disorders or complex post-traumatic stress disorders. Staff who worked with women experiencing perinatal bereavement.	Timing of loss: <24 weeks gestation: 47 (50.0 %), ≥24 weeks gestation: 26 (27.7 %), during labour and birth: 5 (5.3 %); ≤1 month of age 14 (14.9 %), >1 month of age 2 (2.1 %); Time since loss occurred from less than 1 month to 18 years.	Women who registered with a perinatal bereavement charity were sent the survey. The interview occurred at a venue of their choice.	Compassion-focused therapy	N/A	Quantitative data suggest that complex posttraumatic stress disorder (CPTSD) is a more common condition than posttraumatic stress disorder in people with perinatal bereavement. Qualitative data suggest that compassion-focused therapy and eye movement desensitisation and reprocessing can be useful and acceptable interventions for this population group.

Note: US = United States; I = intervention group; C = control group; SD = standard deviation; N/A = not available; RCT = randomised controlled trial; DASS = Depression, Anxiety and Stress Scales.

Table 2
Effects of midwife/nurse-led psychosocial interventions.

Types of interventions	Studies	Outcomes	Effects
Swanson's care for miscarriage	Swanson (1999) Adolfsson et al. (2006) Swanson et al. (2009) Karaca and Oskay (2020)	Anxiety, depression and grief	For women who have miscarried within the first 20 weeks, Swanson's care significantly alleviated symptoms of grief and depression (Swanson, 1999; Swanson et al., 2009; Karaca and Oskay, 2020). However, its impact on anxiety remains controversial (Swanson, 1999; Karaca and Oskay, 2020). For women who miscarried before 13 weeks, no significant differences in grief were noted between structured follow-up based on Swanson's care and the regular visits provided by midwives, but 30 % greater reduction in grief in Swanson's care visits than regular visits (Adolfsson et al., 2006).
Cognitive behavioural counselling	Khodakarami et al. (2017) Nazaralivand et al. (2021) Navidian et al. (2017) Navidian and Saravani (2018) Hajnasiri et al. (2015) Ilbeygi et al. (2019)	Anxiety, depression, grief and posttraumatic stress symptoms	The improvement in anxiety and depression was observed after intervention amongst women who had miscarried (Khodakarami et al., 2017; Nazaralivand et al., 2021). Grief and posttraumatic stress symptoms were significantly improved after intervention amongst women experiencing stillbirth (Navidian et al., 2017; Navidian and Saravani, 2018). Anxiety and depression were significantly improved after intervention amongst women who had experienced abortion at the 1st or 2nd trimester (Hajnasiri et al., 2015; Ilbeygi et al., 2019).
Group counselling based on health promotion awareness	Hasani et al. (2021)	Anxiety and depression.	A significant improvement in anxiety and depression was observed after intervention amongst women who had ectopic pregnancies (Hasani et al., 2021).
Support programmes based on Social Support Theory	Sriarporn et al. (2017) Sun et al. (2017)	Grief, depression and posttraumatic stress symptoms	Support programmes based on Social Support Theory can effectively reduce grief, depression and posttraumatic stress symptoms amongst women who experienced termination of pregnancy for medical reasons and stillbirth (Sriarporn et al., 2017; Sun et al., 2017).
Expressive writing	Qian et al. (2021) Qian et al. (2019)	Posttraumatic stress symptoms Experience in receiving expressive writing	Significant improvements were observed in posttraumatic stress symptoms amongst women undergoing termination of pregnancy for foetal abnormalities after expressive writing (Qian et al., 2021). Qualitative data showed that expressive writing can increase rational and systems thinking, shift perspectives, and emotional catharsis, adjust coping strategies and improve emotional health (Qian et al., 2019).
Mindfulness-based stress reduction	Nasrollahi et al. (2022)	Anxiety and depression	A significant difference between the two groups after intervention was observed in the anxiety and depression amongst women who miscarried within 12 weeks (Nasrollahi et al., 2022).
Memory making	Johnson and Langford (2015) Horiuchi et al. (2011) Modiba (2008)	Grief and experience in receiving memory making support	A significant difference in grief between the two groups after intervention amongst women who miscarried in 20 weeks (Johnson and Langford, 2015). Nearly all mothers (97.6 %) found the booklet helpful, and all of them appreciated the Angel Memory Box, offering positive feedback. Qualitative data suggest that memory making skills can assist women who have experienced perinatal loss in finding relief and acceptance. These skills aid in understanding the loss, combatting loneliness, ensuring that grieving occurs at an individual's own pace and recognising personal expressions of grief. In addition, they help facilitate communication with healthcare staff. Midwives and doctors recommend the implementation of these skills in clinical settings (Horiuchi et al., 2011; Modiba, 2008).
Support group	DiMarco et al. (2001)	Grief	There were no statistically significant differences in grief amongst bereaved parents who attended the support group before compared to those who did not (DiMarco et al., 2001).
Compassion-focused therapy	Martin et al. (2021)	Experience of support/care from local other voluntary and statutory services	Qualitative data suggest that compassion-focused therapy and eye movement desensitisation and reprocessing can be useful and acceptable interventions for women who have experienced perinatal loss (Martin et al., 2021).

making, including the collection or creation of mementoes, bereavement photography and opportunities to see and hold the deceased infant, were documented in four studies (Table 3). Furthermore, the value of proactive follow-up was highlighted in four studies, whereas cognitive behavioural therapy techniques, including social sharing, cognitive restructuring and self-confrontation, were understood as particularly advantageous in two studies (Navidian et al., 2017; Qian et al., 2019). Other useful components identified encompassed early engagement in survey completion (Swanson, 1999), mindfulness/meditation practices (Nasrollahi et al., 2022) and guidance for family members (Sun et al., 2017). Furthermore, DiMarco et al. (2001) provided distinctive insights by documenting interventions perceived as counterproductive, such as '*being told not to cry, not acknowledging the experience, making light of the experience and being told the loss was for the best*'.

3.6. The impacts of midwife/nurse-led psychosocial interventions

The impacts of midwife/nurse-led psychosocial interventions on grief, anxiety, depression and posttraumatic stress symptoms are presented in Table 4. We also summarised the effects of midwife/nurse-led psychosocial interventions on other psychosocial outcomes (self-esteem, anger, hopelessness, physical symptoms, posttraumatic growth, resilience, family support and social dysfunction) in Supplementary material file 6.

3.6.1. Grief

The impact of midwife/nurse-led psychosocial interventions on grief was examined in seven studies, encompassing 1165 parents experiencing perinatal loss. These studies focused on five types of interventions: Swanson's care, cognitive behavioural counselling, social support, memory making and support groups.

Notably, Swanson's care was particularly effective amongst parents who experienced a miscarriage before 22 weeks of pregnancy, as evidenced in randomised controlled trials by Swanson et al. (2009) and Karaca and Oskay (2020), which demonstrated substantial improvements in grief symptoms after intervention as measured by the Miscarriage Grief Inventory and the Mourning Scale. For women who miscarried before 13 weeks, Adolfsson et al. (2006) reported that midwife-led follow-ups based on Swanson's care theory led to a 30 % greater reduction in grief (the Perinatal Grief Scale) compared to midwife-led regular follow-ups, although there was no statistically

Table 3
Components of midwife/nurse-led psychosocial interventions.

Useful components	Details	Reported studies
Information support	• Information regarding early miscarriage, in particular, missed abortion, should be the same in the whole chain of health care. The objectivity of the midwife, as well as her giving clear information, will aid the women in understanding, which will, in turn, facilitate the grieving process (Adolfsson et al., 2006). • Providing information on the process of miscarriage, giving guidebooks to help women cope with miscarriage (Karaca and Oskay, 2020) • In this study, the participants indicated that the informational support, advice, and guidance they received from nurses helped them confront and manage their grief and take care of their health (Sriarporn et al., 2017). • This may be explained by the targeting of information on the causes of foetal abnormalities and related information on induced labour and postpartum recovery, which helps to reduce the fear and concerns of pregnant women (Sun et al., 2017). • Booklet '*Live with Grief*': The booklet is based on a translation of the booklet '*Stillbirth And Neonatal Death Society; Saying Goodbye To Your Baby—A Guide For Parents Whose Baby Dies Around The Time Of Birth*' 'I feel accepted and at ease': For a mother who was confused by unexpected events, the words in the booklet provided affirmation and approval that the confusion and feelings were natural (Horiuchi et al., 2011). • The woman is given a decision-plan form, which explains the decisions that must be made during the first few days after delivery regarding events that will occur. Sometime during the first hour of delivery the issue of performing an autopsy is carefully and compassionately introduced (Modiba, 2008).	Adolfsson et al. (2006); Karaca and Oskay (2020); Sriarporn et al. (2017); Sun et al. (2017); Horiuchi et al. (2011); Modiba (2008)
Emotional support	• The midwife's attitude is knowledgeable, being with the women, doing for the women, enabling and maintaining belief (Adolfsson et al., 2006). • Providing counselling on grief, speaking about feelings related to miscarriage, asking the women about how they are emotionally feeling and giving the women time to mourn (Karaca and Oskay, 2020). • The participants in this study expressed their need to talk about their experience and to have someone listen. They found it most helpful to talk with health professionals who truly understood their feelings and problems (Sriarporn et al., 2017). • It is worth noting that eight women felt that EW provided an outlet for their emotional catharsis (Qian et al., 2019). • Emotional support from medical staff: '*During my hospitalisation, I was very afraid of being alone. Every time you accompanied me to write, it gave me a deep sense of security. What impressed me most was the second time writing because I wanted to look for someone who experienced the same situation as me, and this topic made me feel less lonely.*' (P7) (Qian et al., 2019) • Crying with them, being there, listening, assigning meaning to the experience and having pictures of the baby. Whilst there were reports of kindness from nurses ('*the nurse gave me a warm blanket, comforted me, and said she was sorry*,' '*a nurse read a poem and hugged me*,' '*a nurse seemed to share our loss*,' '*a nurse talked to me and helped a lot*,' '*a nurse cried with me and told me my daughter was beautiful*,' '*a nurse told us it wasn't our fault*,' and '*a nurse let us spend time with our baby and took pictures*'), nurses in these situations still have much to learn about how to have the most positive impact during such a stressful time. Our best teachers about this are the parents who have experienced loss (DiMarco et al., 2001).	Adolfsson et al. (2006); Karaca and Oskay (2020); Sriarporn et al. (2017); Qian et al. (2019); DiMarco et al. (2001)
Survey completion	• The effects (both main and interactive) due to measurement offer insight into the mechanisms through which survey completion may, in itself, be a 'self-caring' therapeutic. It is possible that the IMS is useful in both prompting meaning--making and detecting made-meaning (Swanson, 1999).	Swanson (1999)
Proactive follow-up	• Follow up, including home visits or phone calls made after the women were discharged, with the aim of helping the women to overcome this process in a healthier manner (Karaca and Oskay, 2020). • Remembering the deceased child will be meaningful to the family; provide follow-up calls at key points in the grieving process (e.g. anniversaries and holidays) (DiMarco et al., 2001) • Follow-up meetings function as a catharsis for parents, as well as an opportunity for assessment, counselling and possibly referral. For the family, relating to care providers with whom a relationship has already been established may be easier than establishing a new relationship with a stranger. Midwives related that bereaved parents talk more freely and express their feelings more openly in their own environment. Parents may contact midwives by telephone, not only at the hospital but also at home. One midwife said: '*We routinely call the parents a few weeks after their home visits to let them know we are still thinking of them and offer continuing care if they wish.*' (Modiba, 2008) • Currently, there is no proactive follow-up provided by the NHS, with women expected to seek out help for themselves (Martin et al., 2021).	Karaca and Oskay (2020); DiMarco et al. (2001); Modiba (2008); Martin et al. (2021)
Principles of cognitive and behavioural therapy such as social sharing, cognitive restructuring and self-confrontation	• Principles of cognitive and behavioural therapy, such as social sharing, cognitive restructuring and self-confrontation were used, which can increase the effectiveness of the intervention (Navidian et al., 2017). • A total of three women described the first EW session as being the most beneficial to them, whilst two suggested that the second session was the most helpful. Of the 14 women, five indicated the last session of EW was most useful (Qian et al., 2019).	Navidian et al. (2017); Qian et al. (2019)
Mindfulness/meditation	• By using mindfulness-based stress reduction, people know themselves better by recognising their strengths and weaknesses. They learn coping strategies, commitment and acceptance, helping them move towards their desired goals, accept their mistakes and decisions without judgement and deal with them promptly by identifying stressful stages and events, ultimately reducing stress and anxiety before they become depressive (Nasrollahi et al., 2022).	Nasrollahi et al. (2022)
Guide for family members	• The programme emphasises the fact that nurses provide formal support for pregnant women and guide their families to provide informal support so that pregnant women can obtain more comprehensive and systematic support and care (Sun et al., 2017).	Sun et al., 2017
Collection or creation of mementos	• Angel Memory Box: Memorial box (with a case to put photos in), Angel's clothes, stationery that can take hand and footprints, special cardboard (titled 'Our Baby'), ceremony card (condolence messages from friends and other concerned people), bag for baby's nails and hair, two hearts or teddy bears (handmade by participants), name card, postcards from the staff, etc. '*It became one of the few mementoes that I have.*': Many of the participants expressed their gratitude for the memories they were able to create using the hand and footprints in the kits as a starting point (Horiuchi et al., 2011). • A packet of flower seeds of remembrance to be planted at home; a soft plush care bear; other physical mementoes, if applicable; participation in a naming ceremony; and completion of a self-addressed sympathy card (Johnson and Langford, 2015). • Assign meaning to the experience, giving pictures and footprints of the baby to the family (DiMarco et al., 2001). • The in-patient support will help bereaved parents to validate a healthy grieving process, allowing families the opportunity to view the dead infant and hold the infant if desired contributing to the validation of the loss. Pictures or mementoes, including footprints, handprints, locks of hair, and receiving blankets, confirm that the pregnancy did exist. Additionally, the importance of taking photographs cannot be stressed enough. Although families initially may state that they do not wish photographs, they may find great relief in the fact that photos were held in the file and could be received at a later date (Modiba, 2008).	Horiuchi et al. (2011); Johnson and Langford (2015); DiMarco et al. (2001); Modiba (2008)

Table 4
Effects of interventions on outcomes.

Outcomes	Positive-effect interventions	Uncertain-effect interventions
Grief (n = 1165 parents)	• Swanson's care (Adolfsson et al., 2006; Swanson et al., 2009; Karaca and Oskay, 2020) • Cognitive behavioural counselling (Navidian and Saravani, 2018) • Memory making (Johnson and Langford, 2015)	• Support group (DiMarco et al., 2001: retrospective, cross-sectional study) • Social support (Sriarporn et al., 2017: pilot study, one group n = 30)
Anxiety (n = 896 parents)	• Cognitive behavioural counselling (Khodakarami et al., 2017; Nazaralivand et al., 2021; Hajnasiri et al., 2015; Ilbeygi et al., 2019) • Group counselling based on health promotion awareness (Hasani et al., 2021) • Mindfulness-based stress reduction (Nasrollahi et al., 2022)	• Swanson's care (Swanson, 1999; Karaca and Oskay, 2020: controversial results)
Depression (n = 1582 parents)	• Swanson's care (Swanson, 1999; Swanson et al., 2009; Karaca and Oskay, 2020) • Cognitive behavioural counselling (Khodakarami et al., 2017; Nazaralivand et al., 2021; Ilbeygi et al., 2019) • Group counselling based on health promotion awareness (Hasani et al., 2021) • Mindfulness-based stress reduction (Nasrollahi et al., 2022) • Social support (Sun et al., 2017)	
Posttraumatic stress symptoms (n = 324 parents)	• Cognitive behavioural counselling (Navidian et al., 2017) • Social support (Sun et al., 2017) • Expressive writing (Qian et al., 2021)	• Compassion-focused therapy (Martin et al., 2021: nonexperimental study)

significant difference between the groups. Similarly, cognitive behavioural counselling amongst women experiencing stillbirth (Navidian and Saravani, 2018) and memory making for women who miscarried within 12 weeks (Johnson and Langford, 2015) have shown promising results in decreasing grief scores using the Perinatal Grief Scale, notably both evidenced by randomised controlled trials.

Social support was piloted in a one-group study and showed a significant reduction in moderate and higher levels of grief using the Grief Questionnaire for Women after Pregnancy Termination after social support amongst 30 women undergoing termination of pregnancy (Sriarporn et al., 2017). Conversely, support groups did not consistently affect grief symptoms amongst parents experiencing perinatal loss in a cross-sectional, retrospective, two-group study (DiMarco et al., 2001), indicating varied effectiveness of different intervention types.

Overall, these studies indicate that specific midwife/nurse-led psychosocial interventions can effectively mitigate symptoms of grief, especially Swanson's care, cognitive behavioural counselling and memory making, which have shown positive outcomes, whilst the effectiveness of social support and support groups on grief still needs to be examined owing to the study design.

3.6.2. Anxiety

The impacts of midwife/nurse-led psychosocial interventions on anxiety were examined in eight studies amongst 896 women experiencing perinatal loss. These studies centred on four types of interventions: Swanson's care, cognitive behavioural counselling, group counselling based on health promotion awareness and mindfulness-based stress reduction.

Mixed results were observed for Swanson's care, where one study showed no significant effect on anxiety, whilst another highlighted a notable reduction in symptoms. Swanson (1999) conducted a Solomon four-group randomised trial with 252 women who miscarried within 20 weeks, revealing that Swanson's care did not significantly affect anxiety, as measured by the Profile of Mood States within the first year post-miscarriage. Karaca and Oskay (2020) reported notable reductions in anxiety scores after Swanson's care from 15.7 to 4.6 in the intervention group and from 17.4 to 9.8 in the control, as measured by the Depression, Anxiety and Stress Scale.

Cognitive behavioural counselling consistently demonstrated reductions in anxiety across multiple studies, including a randomised controlled trial (Nazaralivand et al., 2021) and three quasi-experimental studies (Hajnasiri et al., 2015; Ilbeygi et al., 2019; Khodakarami et al., 2017) and involving 358 participants who experienced miscarriage or abortion, proving to be an effective intervention. Significant decreases in anxiety were measured by several measurements, including the Hospital Anxiety and Depression Scale (Khodakarami et al., 2017), the Beck Anxiety Inventory (Hajnasiri et al., 2015; Ilbeygi et al., 2019), and the General Health Questionnaire-28 (Nazaralivand et al., 2021), with improvements maintained one-month post-intervention.

Group counselling based on health promotion awareness and mindfulness-based stress reduction also showed positive outcomes, with the former achieving a significant reduction in anxiety measured by the General Health Questionnaire-28 in a randomised controlled trial involving women with ectopic pregnancies (Hasani et al., 2021) and the latter showing decreased anxiety levels evidenced by the Depression, Anxiety, and Stress Scale in women who had miscarriages (Nasrollahi et al., 2022).

Overall, the synthesis indicates that certain midwife/nurse-led psychosocial interventions, especially cognitive behavioural counselling, group counselling based on health promotion awareness and mindfulness-based stress reduction, are effective in reducing anxiety amongst women experiencing perinatal loss.

3.6.3. Depression

Midwife/nurse-led psychosocial interventions have shown significant effects in reducing symptoms of depression amongst women experiencing perinatal loss, evaluated across nine studies involving 1582 participants. Key interventions include Swanson's care, cognitive behavioural counselling, group counselling based on health promotion awareness, mindfulness-based stress reduction and social support programmes.

Swanson's care was particularly effective in reducing depression, as demonstrated in three randomised control trials involving 1038 parents following miscarriage (Karaca and Oskay, 2020; Swanson, 1999; Swanson et al., 2009), using the Centre for Epidemiological Studies—Depression scale, the Profile of Mood States Scale and the Depression, Anxiety, and Stress Scales.

Similarly, cognitive behavioural counselling showed positive impacts in one randomised controlled trial (Nazaralivand et al., 2021) and two quasi-experimental studies (Ilbeygi et al., 2019, Khodakarami et al., 2017) amongst 238 women who experienced miscarriage or abortion, improving anxiety scores significantly compared to controls as measured by the Hospital Anxiety and Depression Scale (Khodakarami et al., 2017), the Beck Depression Inventory (Ilbeygi et al., 2019), and the General Health Questionnaire-28 (Nazaralivand et al., 2021).

Group counselling based on health promotion awareness for women who experienced ectopic pregnancy (Hasani et al., 2021) and mindfulness-based stress reduction for women who miscarried within 12 weeks (Nasrollahi et al., 2022) also effectively decreased depression levels both using the General Health Questionnaire-28. Furthermore, the social support programme was validated for its efficacy in a randomised controlled trial by Sun et al. (2017), where women

undergoing termination of pregnancy for foetal abnormalities showed marked improvement in depression symptoms post-intervention using the Edinburgh Postnatal Depression Scale.

In summary, these studies collectively highlight that midwife/nurse-led psychosocial interventions can effectively mitigate depression in parents who experienced miscarriage, abortion, ectopic pregnancy or termination of pregnancy for foetal abnormalities.

3.6.4. Posttraumatic stress disorder symptoms

The positive impacts of midwife/nurse-led psychosocial interventions on posttraumatic stress symptoms were highlighted in three studies amongst 324 women with perinatal loss. These studies specifically focused on three types of interventions, namely, cognitive behavioural counselling, social support programmes and expressive writing.

Cognitive behavioural counselling significantly reduced posttraumatic stress disorder symptoms, with notable improvements observed one month post-intervention using the Perinatal Posttraumatic Stress Disorder Questionnaire (Navidian et al., 2017). Similarly, social support programmes (Sun et al., 2017) and expressive writing (Qian et al., 2021) were effective in mitigating posttraumatic stress disorder symptoms substantially amongst women experiencing termination of pregnancy for foetal abnormalities using the Impact of Event Scale—Revised.

These findings collectively suggest that midwife/nurse-led psychosocial interventions can significantly reduce posttraumatic stress disorder symptoms amongst women who experienced stillbirth or termination of pregnancy for foetal abnormalities.

3.6.5. The impacts of the interventions on women experiencing perinatal bereavement

Expressive writing, memory making, and compassion-focused therapy have been explored for their impacts in supporting women experiencing perinatal bereavement. Expressive writing has been shown to facilitate emotional catharsis and improve emotional health by engaging rational thinking and adjusting coping strategies for women undergoing termination of pregnancy for foetal abnormalities (Qian et al., 2019). Similarly, memory making interventions like the bereavement booklet and the memory box have proven beneficial. These interventions have aided women experiencing perinatal loss in dealing with grief by being aware of emotional support, facilitating understanding of their loss, and reducing feelings of isolation (Horiuchi et al., 2011). Meanwhile, participants thought that the memory box made it easier to communicate with midwives. Additionally, the potential benefits of compassion-focused therapy have been recognised, although its effectiveness is yet to be quantitatively assessed. Participants have expressed a willingness to try this therapy, highlighting its perceived acceptability (Martin et al., 2021).

In summary, midwife/nurse-led interventions such as expressive writing and memory making offer valuable support to women experiencing perinatal bereavement.

3.7. Midwives/nurses' experiences of delivering psychosocial interventions amidst perinatal bereavement

Midwives/nurses' experiences of delivering psychosocial interventions were reported in eleven studies (Adolfsson et al., 2006; Hajnasiri et al., 2015; Hasani et al., 2021; Horiuchi et al., 2011; Ilbeygi et al., 2019; Johnson and Langford, 2015; Modiba, 2008; Navidian and Saravani, 2018; Navidian et al., 2017; Qian et al., 2019; Sriarporn et al., 2017). The overall need to increase midwives/nurses' knowledge and skills in psychosocial intervention was identified in these studies. In particular, Modiba (2008) reported that midwives and nurses did not know how to respond to parents and how they lacked the skills and knowledge to care for and support parents with perinatal loss: '*I deliver a mother and I don't really know where to start or what to say. Because of fear that I may say wrong things, I just avoid the mother as much as I can*' (Modiba, 2008).

Adolfsson et al. (2006) found the lack of knowledge and understanding by midwives on how to support parents with perinatal loss and concluded that midwives lacked the confidence and ability to give information and answers to women's questions. Two studies (Navidian and Saravani, 2018; Navidian et al., 2017) highlighted that the use of midwife/nurse-led psychosocial intervention continued to be a difficult concept given the lack of training in this area. Horiuchi et al. (2011) suggested that midwives should understand the intention behind the development of interventions and communicate with the affected women in a thoughtful manner in order to avoid its misuse. The training of midwives and nurses to implement interventions is recommended not only to enhance the capabilities of midwives but also to improve the quality of care. This, in turn, is expected to facilitate the psychological rehabilitation of women (Johnson and Langford, 2015; Qian et al., 2019; Sriarporn et al., 2017).

Other studies (Hajnasiri et al., 2015; Hasani et al., 2021; Ilbeygi et al., 2019) highlighted the lack of skills and the inability of the midwives/nurses to identify women with perinatal loss who may be at risk of mental health and psychosocial difficulties and refer them to specialist counselling centres. Two studies (Hajnasiri et al., 2015; Modiba, 2008) highlighted the need to train all midwifery students, including the provision of basic knowledge on the grieving process, their ability to reflect on their feelings about death, rehearsing supportive communication techniques, counselling skills and practising culturally sensitive care for bereaved families. Modiba (2008) interviewed midwives caring for mothers with pregnancy loss and highlighted the importance of in-service training on the skills of support, counselling and stress management for midwives. Meanwhile, the support groups for midwives and mentorship from experienced professionals may enhance their confidence and capability in supporting bereaved parents.

Furthermore, inadequate emotional support and stressful working environments for midwives/nurses were identified as important factors to consider (Modiba, 2008). In particular, increased workload and staff shortages led to midwives and nurses feeling overwhelmed and stressed, preventing them from giving adequate attention and support to each mother with perinatal loss: '*I get tired, I get very emotional, I start crying. Then how can I comfort another person?*' (Modiba, 2008).

Therefore, the need to create a suitably supportive environment for midwives and nurses who are working in stressful situations must be highlighted. Modiba (2008) also emphasised the critical role of keeping a reflective journal and forming support groups for midwives. These strategies are crucial not only for enhancing their coping abilities with environmental stresses but also for ensuring the successful provision of care for mothers experiencing pregnancy loss.

4. Discussion

This review highlights the positive impacts of midwife/nurse-led psychosocial interventions on a broad spectrum of psychosocial outcomes for parents experiencing perinatal loss, including grief, anxiety, depression, posttraumatic stress symptoms and other psychosocial outcomes (self-esteem, emotional disturbance, hopelessness, physical symptoms, posttraumatic growth, resilience, family support and social dysfunction). This is consistent with the meta-analysis conducted by Shaohua and Shorey (2021), who found that the psychosocial interventions provided by medical healthcare professionals were effective in reducing grief, anxiety and depression amongst parents experiencing perinatal loss. Our review further substantiates the argument that psychosocial interventions facilitated by midwives or nurses can not only alleviate symptoms of grief, anxiety, depression, posttraumatic stress disorder but also enhance various psychosocial outcomes amongst affected parents.

However, challenges experienced by midwives and nurses such as increased workload, staff shortage and inadequate support hinder them in delivering effective psychosocial interventions for parents experiencing perinatal loss. Thus, a supportive environment should be

created for midwives and nurses in maternity services to improve their capacity and confidence in providing perinatal bereavement support (Kalu et al., 2018). Yet, despite the acknowledgement that midwives and nurses are well placed to provide psychosocial interventions for parents with perinatal loss (Homer et al., 2016; Modiba, 2008), there is a paucity of studies reporting on their experiences of delivering psychosocial interventions. Specifically, our findings highlighted the lack of training in the basic knowledge of perinatal bereavement, knowledge and skills in psychosocial interventions and stress management skills. Furthermore, this review finds that keeping a reflective journey, forming support groups and receiving support from senior midwives/nurses who can deliver and supervise psychosocial interventions are vital to improving their abilities to provide effective psychosocial interventions. In addition, interventions considering the challenges they face remain limited, which may lead to these interventions being underutilised in clinical settings. Thus, it is important for further research to consider the perspectives of both bereaved parents and healthcare providers to ensure the successful implementation and utilisation of psychosocial interventions in clinical settings.

The components of memory making, including creating mementoes, taking photographs and seeing and holding the dead infant, were recommended by some clinical practice guidelines for the perinatal loss after the second trimester (Flenady et al., 2020; HSE, 2022). Memory making, in particular, was suggested in four studies (DiMarco et al., 2001; Horiuchi et al., 2011; Johnson and Langford, 2015; Modiba, 2008), which noted that the photographs or mementoes, including footprints, handprints, locks of hair and receiving blankets, have the possibility of providing comfort to parents who lost their babies. This echoed the positive impact of memory making in a scoping review (Thornton et al., 2019), which found that memory making emerged as significant elements of the experiences of bereaved parents.

Whilst Kingdon et al. (2015) also found positive outcomes for parents who saw or held their babies, this was contradicted in other studies (Hughes et al., 2002) which reported that seeing and holding the dead infant after stillbirth were likely to increase symptoms of depression and anxiety symptoms for some parents. However, these findings may be limited by the observational nature of the study, survey response rate and inability to adjust for women's baseline anxiety levels. Therefore, memory making, if it has positive effects, might be a cost-effective intervention, especially for minimising the workload of midwives/nurses in terms of providing bereavement care for parents experiencing perinatal loss. However, to date, evidence related to the effectiveness of memory making is limited by the study design and the sample size. Our review suggests that further research into the effectiveness of memory making and its components using high-quality experimental studies is required to provide more robust evidence to guide actual practice.

This review also demonstrated that midwife/nurse-led psychosocial interventions for fathers who experienced perinatal loss are limited. This finding is similar to a descriptive literature review conducted by Karali et al. (2021), which analysed 12 international guidelines on early pregnancy loss management and found a lack of clear guidelines for the involvement, care, counselling and support of male partners. Although mothers generally report more severe and enduring grief than fathers when a baby dies (Murray et al., 2000), Obst and Due (2019, 2021) demonstrated that fathers also require emotional support following a loss. Therefore, further attention to the effects of midwife/nurse-led psychosocial interventions for fathers is also needed.

Our findings also suggest the importance of screening for grief and mood, including anxiety, depression and post-traumatic stress disorder symptoms as close to the time of bereavement as possible (Sriarporn et al., 2017; Swanson, 1999). Swanson (1999), in particular, emphasised that the earlier application of the Profile of Mood States and the Impact of Miscarriage Scale could in itself be a 'self-caring' intervention that assists women who experienced miscarriage to identify what they had lost and to let go of their feelings of anger. Sriarporn et al. (2017) also suggested that all women should assess grief symptoms within 8–12 h after a termination of pregnancy, as most of the participants felt depressed, disappointed, discouraged, angry, guilt and shame during this period. These findings suggest that earlier interventions for women closer to the loss, as opposed to delayed interventions, might be better to help them overcome the grieving process. However, the commencement of intervention can be impacted by the severity of physical discomfort caused by perinatal loss, resulting in delays and the consequent diminishing of the effectiveness of the intervention. Therefore, future research should explore the suitable time for midwives/nurses to deliver interventions to achieve better effects, mindful of the affected women's physical needs and interventions.

4.1. Implications for research and practice

Whilst this review highlights the positive effects of midwife/nurse-led psychosocial interventions, there is a call for further high-quality experimental studies. In this regard, further research focused on evaluating the effectiveness of peer support and memory making components in perinatal bereavement is crucial to inform evidence-based practices, particularly given their potential to alleviate the workloads of midwives/nurses involved in perinatal bereavement care. In light of the findings from this integrative review, addressing the training and support needs of midwives and nurses is critical to enhancing clinical practice. Specifically, training programmes should cover the basic knowledge of perinatal bereavement, specialised training in psychosocial intervention and stress management skills. Creating supportive environments for midwives and nurses in maternity services can also help address the challenges they experience whilst providing such services. Certain initiatives, such as advocating for adequate staffing, improving working conditions and establishing support systems for midwives and nurses (including peer support groups and mentorship from experienced professionals) can be helpful in significant ways. Professional organisations can collaborate with healthcare institutions and policymakers to implement measures that mitigate workload pressures, reduce staff shortages and enhance the overall working environments. In addition, providing platforms for peer support and mentorship within midwifery communities can further contribute to a supportive and resilient workforce. Furthermore, considering the emotional challenges encountered by midwives and nurses who deliver interventions to bereaved parents, the significance of having clinical psychologists within maternity services should not be underestimated. We suggest that future research should explore the role of clinical psychologists within maternity services, focusing on providing support for midwives, nurses and other members of multidisciplinary teams. By addressing these key areas, the midwifery profession can advance its capacity to deliver compassionate and effective care to parents experiencing perinatal loss.

4.2. Strengths and limitations

The eligibility criteria used in our review were designed to identify the psychosocial interventions delivered by midwives or nurses; thus, we added the terms related to midwifery into our search terms. However, many studies did not state the profession or intervention settings in their titles or abstracts. Therefore, we conducted a detailed manual search for the backward and forward citations of the included articles, which well-compensated for the shortcomings of the database search.

In addition, a range of diverse intervention types and populations were included in the identified studies. However, our review's broad scope, whilst beneficial for a general understanding of midwife/nurse-led psychosocial interventions, may not fully capture the nuances and specific details associated with each type of perinatal loss. In recognition of this fact, we suggest that future research could benefit from more targeted reviews focusing on interventions for specific types of perinatal loss. Finally, the rigorous application of these quality appraisal tools underlines the strength and credibility of our findings to a certain extent.

Nevertheless, due to the high methodological heterogeneity, the mixed quality of the methodologies and small sample sizes, the findings of our review should be interpreted with caution.

5. Conclusion

This integrative review has synthesised the results of studies evaluating the impacts of midwife/nurse-led psychosocial interventions and their experiences in delivering psychosocial interventions. There is compelling evidence suggesting that such interventions have the potential to improve grief, anxiety, depression, post-traumatic stress disorder and other psychosocial outcomes for parents experiencing perinatal loss. The useful components include information support, emotional support, memory making, meditation and cognitive behaviour therapy techniques. Given the challenges of implementing psychosocial interventions experienced by midwives/nurses in clinical settings, we suggest that relevant maternity services should provide training and support for midwives and nurses who work with parents experiencing perinatal loss.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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