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Review article

Interventions to address the needs and requirements of families after intrauterine or perinatal child loss – a scoping review

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Abstract
Aim: To provide an overview of existing research on interventions addressing the needs and requirements of families after intrauterine or perinatal loss of a child.
Design: A scoping review
Methods: We conducted a systematic literature search in Medline, Cochrane, and CINAHL without restrictions on the publication period. We only included original empirical studies that investigated interventions for families following intrauterine or perinatal child loss. After the title, abstract, and full-text screening, data was extracted and synthesized using an inductive approach.
Results: Of the 3,502 studies obtained, a total of 25 were included in the scoping review. The selected studies were divided into six clusters: "interaction with the baby" (n = 6), "comprehensive care" (n = 3), "psycho-social support services" (n = 11), "digital support services" (n = 7), "psycho-social support services for siblings" (n = 2), and "supportive interventions in subsequent pregnancies" (n = 1).
Conclusion: This scoping review identified key components of needs-based interventions when experiencing intrauterine or perinatal loss. The identified studies cover a wide range, from the period after birth to two years after the loss, and are primarily designed for parents. To enable needs-based care for parents and siblings, implementing care pathways to standardize continuous, safe care is recommended. Further interventions (e.g., lactation management) need to be developed, implemented, and evaluated in further research.

Keywords: Fetal death; Interventions; Miscarriage; Needs and requirements; Parents and siblings; Stillbirth

Introduction

Worldwide, the rate of intrauterine or perinatal child loss is estimated at around three million per year (Lawn et al., 2016). Many risk factors that contribute to a pathological pregnancy have already been identified. These include maternal high blood pressure or malnutrition, mental illness, infections, cervical diseases, or substance abuse (Gold et al., 2007; Osborne et al., 2023). Nevertheless, in over 60% of cases, the cause of the child's death remains unknown (Man et al., 2016).

A miscarriage is defined as a pregnancy that ends before the end of the 22nd week of pregnancy. Medically, a distinction is made between early miscarriage (within the first trimester) and late miscarriage (up to the 22nd week of pregnancy) (Alves et al., 2025). Fetal death refers to the loss of a fetus before birth. The diagnosis is made when no fetal heartbeat can be detected via ultrasound or when the newborn shows no signs of life after delivery. A distinction is drawn between early fetal death (from 22^{+0} weeks to 27^{+6} weeks, or ≥ 500 g birth weight, when no gestational age information is available) and late fetal death (≥ 28^{+0} weeks, or ≥ 1000 g birth weight, when no gestational age information is available) (Blencowe et al., 2025; Farquharson et al., 2005; Lawn et al., 2016). The definition of perinatal child loss refers to a combination of fetal death and live births with only a short survival time. However, the survival time varies in the existing definitions (usually between 7 and 28 days after birth) (Barfield, 2016).

These intrauterine or perinatal loss experiences not only have a medical impact on the mother, but also a significant impact on the affected families. They represent an extraordinary challenge that can be considered an emotional event for the entire family system (Cacciatore, 2013; Cena et al., 2021). Women in particular often report intense feelings such as emptiness, fear, guilt, and grief after child loss (Westby et al., 2021).

The experiences also affect interpersonal relationships. Partnerships face particular challenges, as mothers and fa-

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thers grieve differently, and these different reactions can lead to tension and strain in the relationship (Avelin et al., 2011; Martínez-Serrano et al., 2019). Siblings are also affected by the loss experience, although their grief reactions vary depending on their age and stage of development (Capitulo, 2005; Persson et al., 2023). In addition to the emotional strain, many families experience social stigmatization, as intrauterine and perinatal loss experiences are often not recognized to the same extent as other losses. This lack of social recognition reinforces feelings of loneliness, isolation, and misunderstanding within the family. In addition, the ambivalence between hope and resignation complicates the coping process (Freda et al., 2003; Hawkes et al., 2023).

Families who experience intrauterine or perinatal child loss are therefore confronted with complex psychological, social, and physical challenges. Despite existing support services such as memorial rituals, peer groups, midwifery care, and professional grief counseling, research shows a lack of support. These inadequate efforts to process this traumatic event can have serious psychological and physical consequences for families (Berry et al., 2021; Zhao et al., 2020). To avoid these consequences, it is recommended that interventions after intrauterine or perinatal loss of a child be provided in line with the needs and requirements of the families (Huberty et al., 2017).

Aim

This study aims to provide an overview of empirically investigated interventions for families following intrauterine or perinatal child loss. The findings are intended to offer a basis for the development of an intervention bundle comprising evidence-based measures. In addition, research gaps should be identified. To this end, the study pursued the following research question: "Which interventions to address the needs and requirements of families after intrauterine or perinatal loss of a child have already been empirically investigated?"

Materials and methods

To achieve the aim of the study, a scoping review (ScR), based on the current methodological recommendations of Peters et al. (2020) was conducted. The structure of this study follows the "Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR)" reporting guideline (Tricco et al., 2018). In this study we didn´t distinguish between different types of loss when searching for interventions, so we will refer to them collectively as intrauterine or perinatal child loss throughout this text.

Registration

We registered our review in the Open Science Framework in May 2024 (https://doi.org/10.17605/OSF.IO/W9AU5).

Eligibility criteria

The PICo (Population, Phenomenon of interest, Context) scheme was chosen to define the inclusion criteria (Stern et al., 2014). The *"population"* contained families (including mother, father, and siblings) who experienced a miscarriage, an intrauterine death of an embryo or fetus (fetal death), or the physiological birth with perinatal death of the newborn child. Other family members or relatives (e.g., grandparents) were excluded. We defined the *"phenomenon of interest"* as the needs-based interventions following the loss of a child. Studies that dealt solely with experiences or desirable approaches were excluded. The *"context"* included the intrauterine or perinatal child loss in every stage of pregnancy, regardless of the setting in which the loss occurred (e.g., hospital, at home). The inclusion criterion was defined as an "immediate postnatal loss experience". To this end, the definition "death of the child during pregnancy or birth" had to have been used in the studies. Studies focusing on neonatal loss experiences (after the self-defined birth period) were excluded. In addition, the studies had to be conducted with parents or siblings. We only included original empirical and peer-reviewed studies that were published in German or English. Grey literature and non-scientific articles, as well as studies that did not adequately report their methodological approach, were excluded.

Search strategy

To identify relevant studies, we searched the databases Cumulative Index to Nursing and Allied Health Literature (CINAHL via EBSCOhost), Medline (via PubMed), and the Cochrane Library without restriction on the period of publication. Based on the research question, search terms and their synonyms were derived and then optimized using hits from the initial search. Using the defined search components, search terms, synonyms, and Boolean operators, a final search string was developed for each database. These strings and the results can be found in Suppl. Table 1.

Study selection

The systematic search yielded a total of 3,502 results in the databases CINAHL (via EBSCOhost), Medline (via PubMed), and Cochrane Library. After excluding 1,051 duplicates, two reviewers (YS, LB) conducted a blinded title, abstract screening. Thereby a further 2,355 studies were excluded. A total of 96 full-texts were reviewed. Of these, six studies were not available in full-text, and a further 66 studies were excluded based on various criteria (see Suppl. Table 2). Meanwhile, a backward search was performed, which identified one additional relevant study. Conflicts during the screening process were discussed and resolved with two other reviewers (FS, JS). Thus, a total of 25 studies were included in the scoping review. The entire search and screening process is shown in Diagram 1.

Evaluation of quality of articles

In line with methodological recommendations for scoping reviews (Peters et al., 2020), no quality appraisal was conducted.

Data extraction

We created a table in Microsoft Excel for data extraction. The relevant information included the authors, year, and country of publication, study design, aim, population, and the intervention studied. Two authors (YS, LB) independently extracted the data from the included studies, verified the consistency of the analyses, and merged the two tables into a single table. In case of conflicts, two additional reviewers (FS, JS) were consulted.

Synthesis of results

To analyze and synthesize the extracted data, we followed an inductive approach. We openly coded the results, developed a framework, organized it, and finally categorized it into clusters (Pollock et al., 2023).

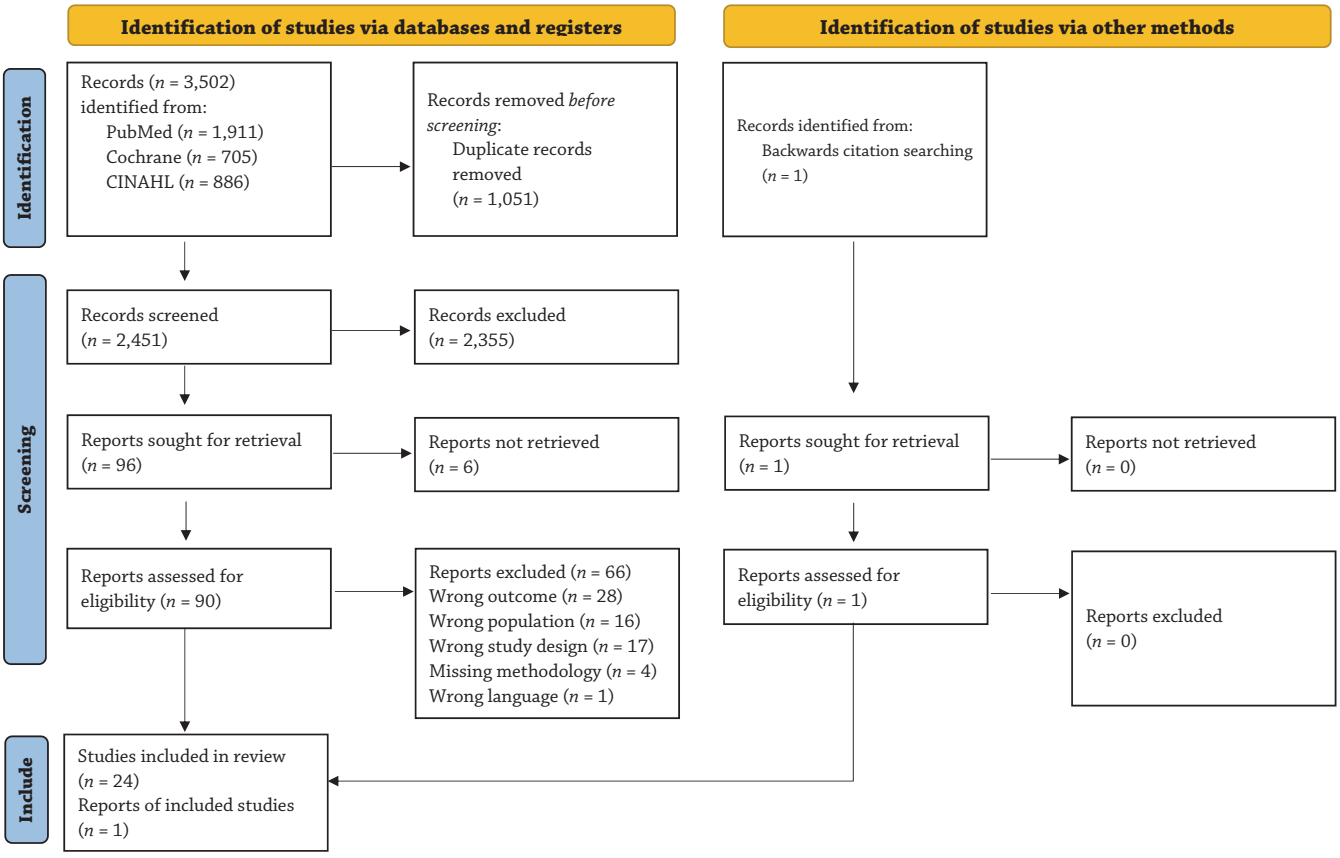

Diagram 1. PRISMA flow diagram of the search and screening process (Page et al., 2021)

Results

Characteristics of sources of evidence

The included studies comprise five quantitative, fourteen qualitative, and six mixed-methods studies and were published between 1989 and 2024. In total, the 25 sources included 4,023 study participants. Of these, 1,286 are mothers, 31 are fathers, 58 are siblings, and 1,006 are participants in an online survey who are not further differentiated. In all other cases, the population was not specified and simply summarized as parents.

Most of the studies were conducted in Australia (n = 6), Sweden (n = 5), the United States (n = 4), and the United Kingdom (n = 4). One study was conducted in each of the following countries: Iran, the Netherlands, Scotland, India, Denmark, and Ireland. The main inclusion criteria were interventions to address the needs and requirements of parents and siblings after intrauterine or perinatal child loss. Detailed study characteristics, objectives, interventions, and results can be found in Table 1.

Synthesis of interventions

The selected studies were divided into six clusters. These are entitled "interaction with the baby" (n = 6), "comprehensive care" (n = 3), "psycho-social support services" (n = 11), "digital support services" (n = 7), "psycho-social support services for siblings" (n = 2), and "supportive interventions in subsequent pregnancies" (n = 1). Some studies could be assigned to two or more clusters. The synthesized clusters are to be described in the following text.

Cluster 1 – Interaction with the baby

This cluster includes six studies focusing on establishing contact, creating memories, and spending time together with the deceased child.

Two of these studies focus on mothers' experiences interacting with their stillborn baby and the impact on their emotional reactions (Erlandsson et al., 2013; Ryninks et al., 2014). One article examines the duration and nature of interaction between parents and their child (Jørgensen et al., 2022). Another analyzes the relationship between creating and sharing memories and the psychological effects on mothers (Crawley et al., 2013). Two studies (Listermar et al., 2020; Smith et al., 2020) focus on the experiences with the use of special beds with integrated cooling cots (*"cubitus baby"*) or mobile cooling elements (*"cold cots"*), and the time this provides for parents of a stillborn child to collect memories.

Cluster 2 – Comprehensive care

A total of three studies focus on needs-based care for bereaved parents after an intrauterine or perinatal loss experience in a clinical setting. Two of these (O'Connell et al., 2016; Tomlinson et al., 2018) examine the implementation of an integrated care pathway to ensure continuous and targeted support. Furthermore, the use of comprehensive, interdisciplinary bereavement care protocols (including long-term follow-up care) is described by Howard and Nyari (1989).

Table 1. Characteristics of the included studies

Author, year, country	Aim	Study design	Population	Intervention
Allahdadian et al. (2015) Iran	To explore social support to aid mothers in adaptation after the experience of stillbirth	Qualitative content analysis	15 women who experienced stillbirth	Support for mothers from relatives (husband, family & friends) & the social support system (Support from healthcare centers & peer support
Avelin et al. (2011) Sweden	To describe parenthood and the needs of siblings after stillbirth from the parents' perspective	Qualitative content analysis	Six focus groups with 27 parents	Support in an acute situation Sharing the experience within the family Adjusting to the situation
Bennett et al. (2012) USA	To evaluate the efficacy of the proposed intervention	Single-case, multiple-baseline across-subjects design	5 women	Cognitive behavioral intervention targeting the psychological and behavioral sequelae of perinatal bereavement
Boyle et al. (2015) Australia	To examine the perceptions and experiences of parent support group volunteers who deliver a 24h telephone support service	Online survey	24 parent supporters	24 h telephone support service
Caelli et al. (2002) Australia	To explore the impact of a special delivery service	Phenomenological study	13 participants (8 women/5 men)	Midwife-managed care intervention
Crawley et al. (2013) UK	To examine whether the experience of creating and sharing memories of their babies is associated with mothers' mental health after stillbirth	Cross-sectional questionnaire study	162 mothers of stillborn babies	Interventions to make and share memories
Diamond and Roose (2016) USA	To understand the perspectives of peer parents and parents receiving support within a peer support program for perinatal bereavement	Evaluation study	13 peer parents 11 parents receiving support	Peer support program for parents
Du Fossé et al. (2021) Netherlands	To quantify preferences for supportive care of both men and women affected by recurrent pregnancy loss	Cross-sectional study	92 participants (46 couples)	Supportive care for the following pregnancy
Erlandsson et al. (2010) Sweden	To capture parental descriptions of how siblings take leave of and mourn a stillborn brother or sister, and how their parents support them	Qualitative questionnaire study	16 parents of siblings to a stillborn child	Special interventions for siblings (being present at the funeral; physical closeness; time to talk; reading about death and hope; showing feelings; family drawings and play situations)
Erlandsson et al. (2011) Sweden	To describe parents' experiences of support over a 2-year period after a stillbirth and its effect on parental grief	Quantitative questionnaire study	55 parents (33 mothers, 22 fathers)	Support during birth assessed 3 months after loss (talk to someone; psychological support from professionals) Support after stillbirth was assessed at 1 and 2 years after the loss (hospital support, support from priests and counselors; support from close friends)
Erlandsson et al. (2013) Sweden	To determine if the way caregivers offer opportunities to see and hold a stillborn baby impacts a mother's feelings about the experience of seeing and holding her newborn	Quantitative questionnaire study	840 participants who had experienced a stillbirth after the 22nd gestation week	See and hold a stillborn baby
Fletcher et al. (2024) Australia	To describe a multi-stage co-design process for developing text messaging support for fathers experiencing perinatal loss	Qualitative descriptive study	959 parents	Text-messaging support for fathers
Gold et al. (2012) USA	To describe demographics, usage patterns, and perceived benefits for women participating in internet pregnancy loss support groups	Online survey	1,006 participants	Internet pregnancy loss support groups
Herkes (2002) Scotland	To evaluate the efficacy of a bereavement counseling service	Quantitative questionnaire study	n.n.	Bereavement counselling service
Howard and Nyari (1989) USA	To develop a bereavement protocol and outline the intradisciplinary responsibilities during the first year following the fetal death	Case study	One case of a seventh-month pregnant woman, who had an accident and lost her child	Bereavement protocol with special interventions (including follow-up phone calls, emotional and spiritual support, information about death…)

Table 1. ***(continued)***

Author, year, country	Aim	Study design	Population	Intervention
Huberty et al. (2020) USA	To determine the effectiveness of home-based online-streamed yoga to improve PTSD	A qualitative study with an iterative design	10 mothers	Online yoga intervention
Inati et al. (2018) Australia	To describe the types of bereavement services utilized by families who have experienced a perinatal loss	Quantitative survey	47 women	Different bereavement support services
Jacobs and Harvey (2000) Australia	To evaluate a telephone follow-up service provided as part of the Miscarriage Support Program of Care in a public hospital	Telephone survey	24 women	Telephone follow-up service
Jørgensen et al. (2022) Denmark	To enlighten the amount of time Danish parents spend with their stillborn in hospital settings that encourage this practice	Web-based questionnaires	173 parents who experienced a stillbirth	Spending time with the stillborn babies
Listermar et al. (2020) Sweden	To investigate the midwife's experiences of using the device (cubitus baby) when supporting parents after the stillbirth	Quantitative survey	154 midwives	Cubitus baby cot (make it possible to have the dead baby in the same room with the parents)
O'Connell et al. (2016) Ireland	To establish the view of parents – which aspects of care are valued, which could be improved, and which cause distress	Evaluation study	36 participants (21 mothers & 15 fathers)	Special approach in a hospital to bereavement care with a bereavement team, including representatives from obstetrics, midwifery, medical social work, chaplaincy, sonography, management, and perinatal pathology
Pang et al. (2018) Australia	To investigate how and what online information mothers searched for at the time of miscarriage	Qualitative study	12 women	Online health seeking
Ryninks et al. (2014) Switzerland	To investigate how mothers describe their own experience of spending time with their stillborn baby and how they felt retrospectively about the decision they made to see and hold their baby or not	Phenomenological study	21 mothers	Contact with stillborn babies
Smith et al. (2020) UK	To examine healthcare professionals' perceptions and experiences of using a cold cot following the loss of a baby	Qualitative, cross-sectional study	33 HCP's	Using cooling facilities (cold cots) to facilitate parents spending time with their dead baby
Tomlinson et al. (2018) UK	To develop, implement, and evaluate a care pathway	Evaluation study	Baseline: audits of 12 maternity units inputting a total of 29 cases Follow-up: 11 units participated, inputting a total of 40 cases	Care pathway for the management of stillbirth

Cluster 3 – Psycho-social support services

The cluster of psycho-social support services includes eleven studies analyzing various forms of support for bereaved parents. These are different interventions, but they are considered together because they pursue the same goals or follow similar approaches. It is not just about the intervention itself, but also about the connection with the outcomes.

The interventions examined include peer groups for exchange between bereaved parents (Allahdadian et al., 2015; Boyle et al., 2015; Diamond and Roose, 2016), as well as support from related persons (Allahdadian et al., 2015), close friends (Allahdadian et al., 2015; Erlandsson et al., 2011), and family members (Allahdadian et al., 2015; Avelin et al., 2011).

Social infrastructures, such as local networks and public support services, are explored in some studies (Allahdadian et al., 2015; Bennett et al., 2012; Erlandsson et al., 2011; Inati et al., 2018; O'Connell et al., 2016; Tomlinson et al., 2018). Professional support from specialists or bereavement services (Caelli et al., 2002; Herkes, 2002; O'Connell et al., 2016), and support from pastoral care or grief counselors (Erlandsson et al., 2011) are also empirically investigated interventions.

Cluster 4 – Digital support services

The cluster of digital support services comprises a total of seven studies and is divided into internet-based and mobile-based interventions. These show how modern technologies can be

used to support parents after the intrauterine or perinatal loss of a child.

The subcluster of internet-based interventions includes three studies that deal with the positive and negative aspects of digital platforms. The focus is on grief and support forums (Gold et al., 2012), internet-based information-seeking behavior of those affected (Pang et al., 2018) and web-based yoga interventions (Huberty et al., 2020). The subcluster of mobile-based interventions comprises four studies that examine different approaches to supporting parents after the experience of loss. These include follow-up phone calls (Howard and Nyari, 1989; Jacobs and Harvey, 2000), support text-messages for grieving fathers (Fletcher et al., 2024), and 24-hour telephone support as part of a peer support model (Boyle et al., 2015).

Cluster 5 – Psycho-social support services for siblings
Two studies examine psycho-social support services for siblings after the experience of loss. Various measures are being researched, such as age-appropriate explanations, seeing, holding, and touching the stillborn baby to promote understanding of the loss, and enabling a conscious farewell (Avelin et al., 2011; Erlandsson et al., 2010).

Cluster 6 – Supportive interventions in subsequent pregnancies
The identified study in this cluster describes the need for support interventions in a subsequent pregnancy after the experience of child loss. The focus is on interventions such as continuous medical care, frequent ultrasound examinations, and emotional support when feeling anxiety and stress (Du Fossé et al., 2021).

Discussion

This study aimed to provide an overview of empirically investigated interventions to address the needs and requirements of families experiencing intrauterine or perinatal child loss. Therefore, we conducted a scoping review and included a total of 25 studies reporting on such interventions. These were grouped into six clusters entitled "interaction with the baby", "comprehensive care", "psycho-social support services", "digital support services", "psycho-social support services for siblings", and "supportive interventions in subsequent pregnancies".

The publication years of the included studies demonstrate a growing interest in this topic in science and research. Between 1989 and 2002, only three studies were identified that addressed interventions after intrauterine or perinatal child loss. The remaining 22 included studies were published since 2010, demonstrating a significant increase in the number of studies over the past 15 years.

In terms of timing, the interventions range from the moment immediately after birth (Erlandsson et al., 2013; Ryninks et al., 2014) to support during subsequent pregnancies (Du Fossé et al., 2021). In addition, the measures include both professional, interdisciplinary care by healthcare professionals (Caelli et al., 2002; Herkes, 2002) and non-professional support, such as peer groups (Allahdadian et al., 2015) or reinforcement from the social environment (Erlandsson et al., 2011). However, even with non-professional support services, professional guidance for families is essential, as although a strengthening of social networks and a reduction in emotional stress were observed, parents often reported feeling overwhelmed when interacting with other affected families (Allahdadian et al., 2015; Boyle et al., 2015; Diamond and Roose, 2016).

In current studies, differentiating between the various types of loss (intrauterine/perinatal; miscarriage/stillbirth/neonatal death) is challenging and heterogeneous. There is existing literature on the various definitions (e.g., Blencowe et al., 2025; Lawn et al., 2016), which should be considered when conducting future studies. In the event of deviations from the existing definitions, the timing and type of the loss must also be reported adequately. This will enable us to (maybe) identify important differences in further studies. For example, the study results of Fletcher et al. (2024) demonstrate that while grief and emotional distress can be comparable, specific differences exist depending on the circumstances of the loss experience. Therefore, selective interventions are recommended that acknowledge the individual needs of grieving parents or siblings.

In the future, the use of modern technologies such as cooling beds or mobile cooling elements can make a significant contribution to promoting and extending the time spent with the dead baby. This can reduce structural and physiological barriers in the grieving process. However, according to Listermar et al. (2020) and Smith et al. (2020), comprehensive training of the staff is essential to implement these technologies effectively. In addition to technical handling, this training should also cover individual adaptation to the needs of families and consideration of emotional reactions.

The main focus in the literature is on providing informational materials for parents after experiencing intrauterine or perinatal loss. Parents must be given the opportunity to make informed decisions about how to cope with the situation. However, this requires comprehensive information about all options. The information is conveyed through conversations, flyers, or online resources, with parents' preference for written content in layman's language (Inati et al., 2018; Pang et al., 2018). Furthermore, there is a difference in the timing of various information. Immediately after the child loss, information is needed on how to create memories (e.g., photos, physical contact) (Jørgensen et al., 2022), or about the possibility of using special beds to extend the time spent with the baby (Listermar et al., 2020; Smith et al., 2020). Information about online resources (e.g., yoga for postnatal recovery) (Huberty et al., 2020) is described as essential much later, as this would simply overwhelm the parents after birth. Parents in a clinical setting can be informed about which organizations they can contact for further support. In addition to personal grief counseling, it is recommended that flexible, low-threshold, and location-independent services be created for long-term support (e.g., internet-based support; online programs; telephone/text message programs) to enable families to choose the service that suits them best (Gold et al., 2012; Huberty et al., 2020; Pang et al., 2018). A comprehensive selection of information and the joint consensus building between those affected and the professionals, therefore, enables well-founded decision-making considering the individual needs of the parents and siblings (Erlandsson et al., 2010; O'Connell et al., 2016).

Finally, gender differences in the grieving process are an important aspect to be considered. While mothers require more emotional and psychoeducational support, fathers prefer practical assistance and clear communication (Diamond and Roose, 2016; Du Fossé et al., 2021). Furthermore, the homogeneous distribution of the sample in the included studies (1,286 mothers/31 fathers/58 siblings) suggests that the specific needs of fathers and siblings are underrepresented in current research.

Limitations

This scoping review has several limitations that need to be considered when interpreting the results. First, the sample composition showed that men and siblings were significantly underrepresented in the included studies. In addition, cultural, infrastructural, and health system differences within the included populations may lead to different needs and requirements regarding the interventions studied. This variability makes it difficult to generalize the results to other contexts or populations with similar loss situations. Second, the methodological approach did not include a critical appraisal, as this is outside the methodological framework of a scoping review. Therefore, no definitive statements can be made about the effectiveness, prevalence, or usefulness of the interventions examined. Third, the focus of this review was deliberately placed on interventions for intrapartum or prenatal deaths. Studies examining interventions for the treatment of neonatal deaths were excluded. This may result in potentially relevant findings from other loss contexts being ignored, thereby limiting the generalizability of the results to broader types of perinatal loss.

Recommendations for further research

This article highlights significant research gaps, particularly regarding gender-specific, population-specific, and sibling-specific interventions. These findings underscore the urgent need for further studies to more comprehensively address the specific needs of parents and siblings following the experience of child loss. As observed during the search process and also reported by Kennedy et al. (2017), lactation management is an underrepresented topic in current research. In addition, a lack of research on the establishment of follow-up protocols and recommendations in numerous countries, as well as the limited development of standardized guidelines, was identified in our review and has also been reported in previous studies (e.g., Avelin et al., 2011; Diamond and Rose, 2016). This gap should be addressed in future research.

Conclusion

This study identified key components of needs-based interventions for parents and siblings experiencing intrauterine or perinatal loss. Essential elements include psychoeducational support, ritual and memory-building activities, compassion, understanding, specific care and aftercare services. Training specialist staff in options such as seeing, holding, or photographing the baby is crucial. Such actions should be communicated sensitively and encouragingly without creating a sense of obligation. The integration of modern technologies in this area also enables innovative approaches to support the grieving and farewell process of this vulnerable target group.

To enable a needs-based care for parents and siblings, the implementation of care pathways to standardize continuous and safe care is recommended. The findings of this study form the basis for the design of an evidence-based and practice-oriented intervention bundle specifically tailored to the needs of families after the experience of child loss. However, this requires organizational and structural adjustments within the various healthcare institutions, as well as an interdisciplinary approach that integrates medical, psychological, and social aspects.

Author contributions

All authors made substantial contributions to the manuscript. Conception and design: *YS, FS, JS, KG, CR, LB*. Data analysis and interpretation: *YS, LB*. Manuscript draft: *YS, LB*. Critical revision of the manuscript: *FS, JS, KG, CR, LB*. Final approval of the manuscript: *YS, FS, JS, KG, CR, LB*.

Ethical aspects and conflict of interest

The authors have no conflict of interest to declare.

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