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Abstract: Background. In the aftermath of perinatal loss, the physiological onset of lactation presents a complex array of emotional responses for women, including grief and despair. Effective lactation management is essential for maternal health, yet it is often inadequately addressed by healthcare professionals, potentially compromising the physical and psychological recovery of the bereaved mother. Aim. The aim of this study is to investigate how Italian HCPs support mothers in managing lactation after a perinatal loss. Methods. This study is web-based and cross sectional. HCPs involved in perinatal bereavement care were asked to answer a survey consisting of three areas: sociodemographic information, knowledge and experience about perinatal loss and about lactation after perinatal loss. Findings. In this study, 1,227 healthcare professionals participated. A significant majority, 60.2%, had received formal training on perinatal loss care, expressing high satisfaction with an average score of 4.7 out of 5. However, less than half, at 42.5%, reported having a protocol for bereavement care in their workplace. A notable 25% of the respondents did not provide lactation information when possible. Discussions predominantly centred on pharmacological suppression of lactation in cases of stillbirth (89.5%) and neonatal death (83.8%), as well as complications associated with these events. Post-discharge follow-up was reported as lacking by 78.2% of the sample. Conclusion. The discrepancy between HCPs' training and their practice reveals a critical need for enhancing the implementation of bereavement care protocols and follow-up support, reflecting the importance of integrating lactation management into the perinatal loss care continuum.

Keywords: lactation; midwives; bereavement; management

1. Introduction

Perinatal death is an acknowledged global burden that affects millions of families every year [1,2]. In Italy, around 4 babies every 1000 are stillborn or die within a week from childbirth, with a great rate of variability between northern and southern regions [3]. This event has a huge impact on parents' psychological wellbeing with several long-term consequences, such as post-traumatic stress symptoms, anxiety and depression [4]. In such a situation, mothers have to manage the initial onset of their lactation which could be very demanding and challenging to deal with [5].

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In this setting, healthcare professionals (HCPs) play a pivotal role in helping mothers to manage lactation after a perinatal loss. Respectful care could actually improve the possibility that lactation itself will have a positive impact on the grieving process. Unfortunately, literature underlines how lactation care, received by mothers, is often insufficient and not tailored to their needs [5]. This aspect is usually neglected by HCPs and it often receives poor attention within guidelines for perinatal bereavement care [6]. Concerning Italy, recommendations about care around stillbirth have only recently been published [7]. However, no formal guidelines are actually available to support HCPs during clinical practice. In particular, few indications are given about lactation: prompt milk suppression or milk donation is advised, without other recommendations for HCPs.

Lactogenesis is a physiological process of pregnancy and the post-partum period which starts at 16 weeks of pregnancy. International guidelines stipulate that all bereaved mothers should be offered lactation support and written information about the available options [6,8]. Beyond its biological role, breastfeeding carries more than a nutritional significance within the dyad of mother and child. It can assume several meanings, like the expression of maternal love and of the emotional bonding with the baby; it may also represent self-empowerment and agency for women, and an invaluable essential life support for premature babies. Breastfeeding is actually linked to the new identity as a mother and, for some bereaved mothers, it may represent an emotional connection with the deceased baby [9,10]. Considering such psychological and relational implications, it shouldn't be given for granted that mothers' best option after perinatal loss is immediate milk suppression. Other options, such as milk donation [10] or non-pharmacological suppression, could fit more with mothers' needs than other paths [11]. Furthermore, literature underlines several health benefits given by an extended breastfeeding, including its influence on perinatal depression [12] which has a high incidence on mothers with previous losses [13], also influencing subsequent pregnancies [14].

As previously mentioned, HCPs involved in bereavement care often overlook the topic of lactation after perinatal loss [5,10]. This may be due to a lack of knowledge about this specific issue and the commonly held belief among HCPs that pharmacological suppression of lactation is the best course of action for the well-being of all mothers [10,15]. Many HCPs are not adequately trained to provide support to parents experiencing perinatal loss [16]: the lack of formal training is more likely to increase the risk of burnout syndrome [17] and post-traumatic stress disorder (PTSD) symptoms [18]. HCPs with burnout symptoms may exhibit less empathy towards patients and provide impaired emotional support and care [19]. Specifically, the burnout dimension of emotional exhaustion can lead to an emotional disinvestment that may hamper the proper shared decision making process in bereavement care .

The LISTEN (Lactation Support afTer pEriNatal loss) study aims to investigate the knowledge, thoughts, feelings, and experiences of Italian HCPs who are specifically involved in lactation care after perinatal loss. The objective of this research is to enhance our knowledge and understanding of this topic, in order to help HCPs in assisting mothers in the difficult issue of managing lactation after a perinatal loss.

2. Materials and Methods

The LISTEN study was an anonymous web-based, mixed methods and cross sectional study hosted on the Qualtrics platform (www.qualtrics.com) provided by Florence University PeaRL laboratory and was distributed through the online channels of CiaoLapo Foundation, an Italian charity for perinatal loss support, from January to December 2023, in collaboration with several Italian hospitals. All data were collected and analysed anonymously.

Participants were considered eligible to complete the survey if they were healthcare professionals involved in bereavement care after a perinatal loss. The survey was voluntary and anonymous, no personal data were recorded, in no way it was possible to identify the single respondents. Informed consent was provided at the start of the survey once participants had read the participant information and met the eligibility criteria.

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The survey consisted of questions across several key areas including: (1) Sociodemographic information; (2) knowledge and experience about perinatal loss; (3) knowledge and experience about lactation after perinatal loss.

2.1. Statistical Analysis and Data Presentation

Survey responses were downloaded and extracted from the online survey tool Qualtrics, and imported into Stata BE 18 (StataCorp) for statistical analysis. Incomplete records were excluded, and descriptive statistics were used to analyse quantitative data. Categorical data were reported as frequencies and percentages and compared using the chi-squared test, whereas continuous data were reported as mean values with standard deviations (SD) or as median [quartiles] and compared using t-test or Kruskall Wallis and Mann Witney test. All results were considered to be statistically significant at $p<0.05$. A mixed-method analysis was conducted on open-end questions with the help of Artificial Intelligence as described by Ravaldi et al. (2023) [20], then themes and categories were classified using MAXQDA 2018 to identify negative aspects of clinical and care management. Graphs were plotted using Tableau Desktop 2023.3 (Tableau Software, LLC) or Stata BE 18 (StataCorp).

3. Results

3.1. Sample Characteristics

A total of 1227 HCPs participated in this study, with the majority being women (97.5%). The largest group consisted of midwives (76.8%). More than half of the participants had less than 10 years of work experience (51.4%). The majority of HCPs worked in public hospitals (80.2%), particularly in birth rooms (56.9%) and maternity wards (43.1%). **Table 1** provides a detailed overview of the participants' demographic and professional characteristics.

Table 1. Main characteristics of the sample. Other jobs: healthcare assistants, lactation consultants. Other settings: outpatient clinic, emergency room, paediatrics, screening services, psychiatric and psychological services.

Variable	N (%)
Sex	
Female	1196 (97.5%)
Age	
<35	602 (49.1%)
35-50	476 (38.8%)
>50	149 (12.1%)
Job	
Midwife	942 (76.8%)
Nurse	157 (12.8%)
Psychologist	20 (1.6%)
Medical Doctor	81 (6.6%)
Other	27 (2.2%)
Years of work	
<10	631 (51.4%)

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10-20	386 (31.5%)
>20	210 (17.1%)
Main type of practice	
Public hospital	984 (80.2%)
Accredited private hospital	88 (7.2%)
Community	73 (5.9%)
Private hospital	8 (0.7%)
Private practice	74 (6.0%)
Main setting	
Birth room	698 (56.9%)
Maternity ward	529 (43.1%)
Nursery	127 (10.4%)
Neonatal intensive care	103 (8.4%)
Other	141 (11.5%)
Total	**1227 (100%)**

3.2. Perinatal Loss Management

More than half of the participants reported having assisted in cases of stillbirths (69.7%) and neonatal deaths (53.1%). Additionally, 60.2% of the respondents had attended specialised formal training on perinatal loss. Based on our findings, such training was highly valued; it received an average usefulness rating of 4.7 on a Likert-type scale ranging from 1 (not useful at all) to 5 (extremely useful), as detailed in **Table 2**.

Table 2. Professional experience on perinatal loss.

Variable	N (%) / Mean (SD)
Assisted Stillbirths	855 (69.7%)
Clinically hard – SB (0-10)	4.8 (2.3)
Emotionally hard – SB (0-10)	7.7 (2.1)
Assisted neonatal deaths	651 (53.1%)
Clinically hard – NND (0-10)	5.3 (2.4)
Emotionally hard – NND (0-10)	7.8 (2.2)
Courses perinatal loss	
Attended courses	739 (60.2%)
Courses are useful (1-5)	4.7 (0.6)
Protocols for perinatal loss	
Presence of protocols for perinatal loss	522 (42.5%)

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Specific protocols for psychological support	386 (31.5%)
Protocols are useful (1-5)	4.8 (0.6)
Protocols since how many years	
<5 years	120 (23.2%)
>5 years	225 (43.5%)
Don't know	172 (33.3%)
Community resources	
Available	345 (28.1%)
Not Available	605 (49.3%)
Don't know	277 (22.6%)
Total	**1227 (100%)**

In our study, only 42.5% of HCPs reported the presence of a perinatal loss care protocol in their workplace and 31.5% indicated the existence of a formalised support pathway for parents' psychological care. Regarding the implementation period of these protocols, 23.2% of the respondents reported their implementation within the last five years, 43.5% reported their establishment over five years ago, and the remaining 33.3% were unaware of the timeframe. The HCPs in our study emphasised the usefulness of having a protocol on bereavement care after a perinatal loss, assigning a high score of 4.8 on a Likert-type scale ranging from 1 (not useful at all) to 5 (extremely useful) (**Table 2**).

HCPs were asked to rate their difficulties in the emotional and clinical management of perinatal loss on a Likert-type scale, ranging from 0 ("not difficult at all") to 10 ("extremely difficult"). While emotional involvement in the two cases was comparable and higher than clinical one, clinical management of neonatal death was considered more challenging than stillbirth (5.3±0.1 vs 4.9±0.1, $p<0.01$) (**Figure 1, panel A**).

We also investigated whether attending specific courses or working in settings with specific protocols had any impact on the difficulty ratings. However, our findings did not reveal a significant difference in difficulty ratings between HCPs who had received specific training or worked in settings with protocols. It is important to note that there was a slight decrease in emotional difficulty reported by HCPs with specific training in stillbirth management, although the statistical significance was only borderline (4.7±0.1 vs 5.1±0.1, $p=0.05$).

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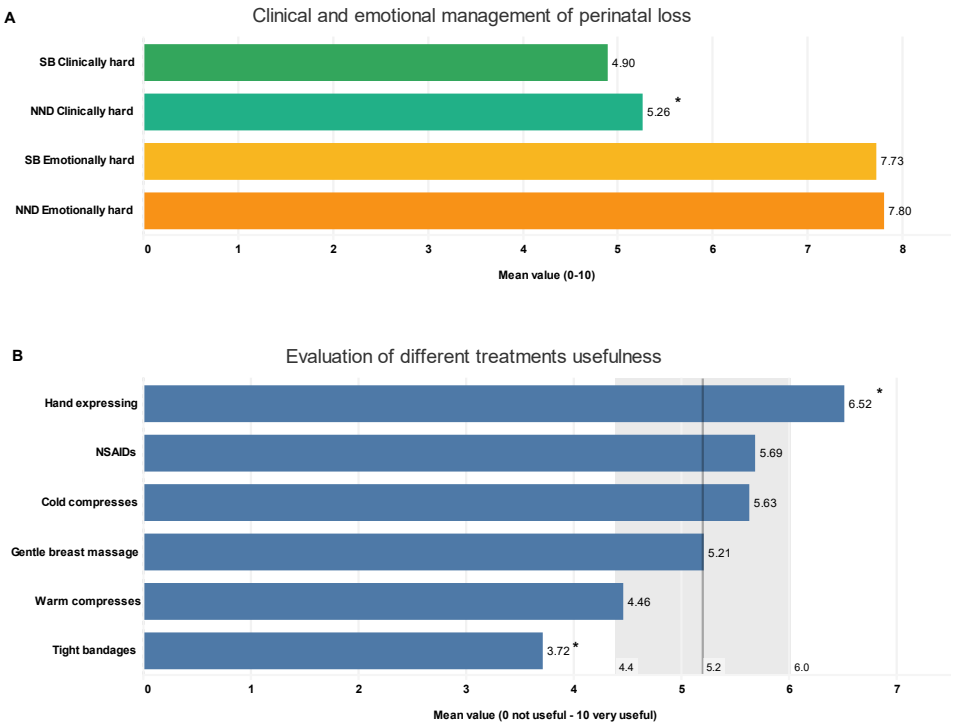

Figure 1. Clinical and emotional management of perinatal loss (panel A) and evaluation of the usefulness of different treatments (panel B). * p<0.05.

3.3. Information on Lactation After Perinatal Loss

We also examined HCPs training in lactation suppression techniques. Participants were asked to self-report their training on a Likert-type scale ranging from 1 ("not trained at all") to 5 ("very trained"), with a mean score of 2.7 (SD 1.0). Additionally, they were asked to rank the degree of usefulness for various interventions in lactation management on a scale from 0 ("not useful at all") to 10 ("very useful"). All treatments were considered moderately effective (mean 5.2 SD 3.2), with hand expressing considered slightly more effective than the others (mean 6.5 SD 2.9, p<0.01) and tight bandages considered less effective (mean 3.7 SD 3.1, p<0.01) (**Figure 1, panel B**).

In our research on lactation information provided to mothers, all professionals agreed on the importance of educating women about managing lactation following a perinatal loss. This was reflected in a high average rating (mean 4.7, SD 0.6, range 1-5). However, we founded that approximately 25% of professionals, despite having the opportunity, did not provide this information to parents (**Table 3**). Additionally, around 10% were unsure of what information to convey, and a similar proportion (9.6% following stillbirth and 8.4% after neonatal death, totaling 78 healthcare professionals) did not consider providing lactation guidance as part of their professional responsibilities. When considering their roles, we observed that those who viewed lactation counselling as outside their professional domain were more likely to be medical doctors (13.6% of them considered it not their duty to provide information on lactation) or psychologists (10.0%), and less likely to be nurses (7.6%) or midwives (5.6%; p<0.05).

We also examined the significance of clear communication and the appropriate timing for discussing lactation with healthcare professionals dealing with stillbirth. Our respondents were asked to specify the most suitable time and the majority of them (64.7%) believed that the optimal approach was to share this information within 24 hours of childbirth. Additionally, 10.4% of HCPs chose to provide these details immediately after birth, while 7.8% offered lactation management information only upon the mother's explicit request (**Table 3**).

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Table 3. Personal experience on lactation information on perinatal loss (analysis restricted to those HCPs who had the actual opportunity of giving such information).

Gave information on lactation	After Stillbirth n (%)	After Neonatal Death n (%)
Yes	542 (75.70%)	401 (75.23%)
No		
I did not know what to say	70 (9.78%)	59 (11.07%)
I never thought about it	35 (4.89%)	28 (5.25%)
It is not my professional duty	69 (9.64%)	45 (8.44%)
Total	716 (100%)	533 (100%)
Timing of communication		
Within 24h	349 (64.75%)	
Before birth	66 (12.24%)	
Immediately after birth	56 (10.39%)	
Only when asked	43 (7.98%)	
Other	25 (4.64%)	
Total	539 (100%)	

Regarding the nature of information typically provided by respondents, pharmacological suppression of lactation was a common topic, mentioned by 89.5% of participants in the context of stillbirth and 83.8% in cases of neonatal death. Additionally, complications like mastitis or leaking milk were frequently addressed, with 62.9% of respondents discussing these after stillbirth and 62.1% following neonatal death. General information about lactation was also commonly shared (as illustrated in **Figure 2, panel A and B**). However, the topic of milk donation was less frequently discussed, with only 21.8% of respondents providing information on this subject after stillbirth and 25.4% after neonatal death.

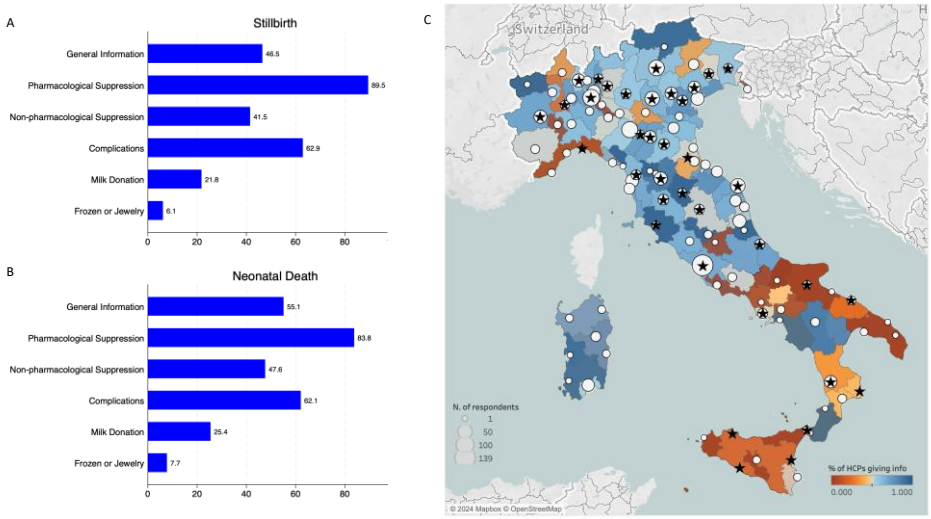

Figure 2. Type of information provided by respondents regarding lactation after perinatal loss in case of stillbirth (panel A) and neonatal death (panel B). Panel C illustrates the geographical distribution of respondents: white circles represent the locations of responders, with size indicating number; regions shaded in blue denote a higher

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percentage, and those in red a lower percentage of professionals providing lactation information. Black stars highlight the locations of human milk banks.

Table 4 shows that HCPs tended to give more information on milk donation to parents after neonatal death than after stillbirth, in particular regarding milk conservation ($p<0.05$).

Generally, written information on lactation management was lacking in discharge materials. Only 15.8% of healthcare professionals provided information through leaflets, although they were deemed to be quite useful (mean 3.9, SD 0.9 on a scale of 1-5).

Table 4. Type of information on milk donation, given after perinatal loss (analysis restricted to those HCPs who had actually given information on milk donation). *p<0.05.

Type of information	Stillbirth n (%)	Neonatal Death n (%)	χ^2, p
Inclusion/exclusion criteria	56 (47.5%)	68 (56.7%)	χ^2=1.66 , p=0.19
How and where to collect milk	84 (71.2%)	95 (79.2%)	χ^2=1.62 , p=0.20
How to store milk	70 (59.3%)	87 (72.5%)	χ^2=4.03 , p=0.04*
How to transport milk	52 (44.1%)	65 (54.2%)	χ^2=2.04 , p=0.15
Total	118 (100%)	120 (100%)	

Figure 2 (panel C) displays a map with stars marking the locations of human milk banks (HMBs) across Italy. Regions shaded in blue represent the highest percentage of healthcare professionals who provided information about milk management, while those in red represent the lowest percentage (percentages were calculated exclusively from respondents who had the opportunity to offer such information). The findings reveal an absence of a significant correlation (Rsq=0.01; p=0.87) between the presence of a local HMB and the likelihood of healthcare professionals providing information on this topic.

3.4. Follow Up and Outpatient Services

Regarding follow-up programs, 267 healthcare professionals (21.8%) indicated that their facility offered a formal care pathway to support women post-discharge. Among these, 99 (37.1%) reported that women commonly brought up lactation management concerns during follow-up visits. The most frequently mentioned issues were emotional difficulties (35.6%), breast engorgement (16.9%), challenges with pharmacological lactation suppression (14.2%), non-pharmacological lactation suppression (6.7%), and mastitis (4.1%). Additionally, a mere 28.1% of healthcare professionals reported the existence of dedicated outpatients service in their local community aimed at assisting parents with lactation concerns following a perinatal loss.

3.5. Open-Ended Questions

The majority of healthcare professionals, accounting for 76.2%, contributed to open-ended questions, sharing insights into the most challenging facets of bereavement care concerning stillbirth and neonatal death. We identified several principal themes through the frequency of their mention (m) and assigned a normalised score (s) on a scale from 0 to 10:

- **Communication (m 66 / s 8.6)**: emerged as a fundamental aspect, underscoring the vital role of effective, empathetic communication in navigating the delicate circumstances surrounding perinatal loss. Its high frequency and score indicated its paramount importance in providing sensitive and supportive care.
- **Finding the right words (m 60 / s 7.4)**: this theme, with its significant score, highlighted the profound challenge healthcare professionals faced in articulating comfort and empathy. It

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reflected the intricacy of verbalising support in a way that acknowledged the immense grief while offering solace.

- **Empathy (m 39 / s 5.9)**: A critical component, illustrating the need for healthcare providers to connect emotionally and understand the depth of the parents' loss, while maintaining professional boundaries.
- **Pain (m 30 / s 4.5)**: Captured both the physical anguish of the mother and the emotional suffering of all involved. This theme's notable presence in the responses underscored the pervasive impact of grief and loss in these scenarios.
- **Helplessness/Impotence (m 25 / s 3.8)**: Reflected a sense of powerlessness often felt by professionals in the face of such profound loss, impacting their sense of efficacy and contributing to emotional strain.
- **Bureaucracy (m 13 / s 2.3)**: Particularly highlighted in stillbirths, this theme points to the complexities and challenges of navigating administrative procedures during emotionally charged times, adding another layer of difficulty to the care process.
- **Not crying (m 9 / s 2.7)**: More pronounced in stillbirths, it signifies the struggle of healthcare professionals to manage their own emotional responses in a professional setting, illustrating the personal impact of these events.
- **Silence (m 8 / s 1.7)**: Unique to stillbirths, this theme encompassed the literal absence of the newborn's sounds and the broader societal reticence surrounding stillbirths. It may symbolise the profound depth of loss and the emotional complexities entwined in providing care.

4. Discussion

It is widely known that perinatal loss has a huge impact on parents' psychological wellbeing [21]. In the last twenty years, literature has deepened the knowledge about the emotional burden of HCPs who are at the forefront of perinatal bereavement care [17,18,22–24]. Frustration, impotence, guilt and sense of personal failure are among the most common emotions experienced by HCPs [22–24]. Our results confirmed this emotional difficulty to face bereavement care during both prenatal and neonatal period:

> "*I didn't feel up to the task of caring for the couples in such a very delicate and intimate moment for them*".
>
> *A young midwife*

Emotional issues could have hampered HCPs' attitude for training on bereavement care. A sense of personal failures, as described above, could play a key role in developing burnout syndrome which is linked to a decrease in professionalism and personal job investment [25]. HCPs' strain in dealing with their own emotions should be acknowledged, due to the essential part played by their emotional experience in caring for parents after a loss. Professional knowledge and care cannot be separated from such aspects. In a study conducted by McCreight (2005) [24] semi-structured in-depth interviews, with a narrative frame, were carried out with nurses: during the interviews, the emotional impact on nurses of perinatal loss strongly emerged, allowing nurses to consider their emotions a resource in their clinical practice. Scheduled debriefing appointments with staff, based on a narrative approach, could be used to improve HCPs' self understanding. Considering the high emotional impact on staff that care for grieving parents, this strategy could make emotional experience functional to clinical practice itself and not a barrier. Furthermore, our data have shown emotional difficulty was lower in HCPs with a specific training in perinatal loss bereavement care, while assisting stillbirth. Although the statistical significance of the result was borderline, previous researchers point out the positive correlation between specific training and HCPs' psychological wellbeing [17,18]. In this sense, training could be considered a protective factor.

More than half of respondents pointed up the absence of a formal protocol around perinatal bereavement care in their workplace. This is a crucial point, as highlighted in the CLASS study [26]: adherence to international standards is linked to a greater satisfaction of care and, more importantly,

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to lower grief and post-traumatic stress symptoms in bereaved parents. The stigma around perinatal death [27], the lack of formal training around this topic [16,28,29], and the fact that Italian recommendations on stillbirth management were only recently published [7], could explain the embarrassing delay of our country in adopting national bereavement care pathways. However, the respondents were aware and agreed to the pivotal role of having a protocol and a formal training to guarantee respectful and tailored care:

> *"Staff training is essential and [care] should not be left to chance or rely on personal empathy in difficult situations such as the puerperium period or the management of lactation of a woman who suffered a perinatal loss."*
>
> *A nurse*

Vocational training for HCPs usually gives priority to academic knowledge overshadowing the relational and communication skills [30]. Considering this issue and the HCPs' needs, hospitals decision makers should offer a formal training about perinatal bereavement care including specific aspects such as the management of lactation after a loss.

Getting to the heart of the LISTEN study, HCPs in our sample deemed themselves to have a very poor training about lactation suppression techniques. This situation could explain that a quarter of the sample didn't give any information about lactation management after a perinatal loss as well as those that didn't know what to say to parents about this topic or thought that it wasn't on their duties. Furthermore, this lack of knowledge could clarify why some non-pharmacological interventions to suppress lactation were considered useful, at least to some degree, even if they are known to be harmful. For instance, it has been demonstrated, for many years, that breast binding, ice packs, or analgesics could cause breast engorgement and pain [31,32]. It's essential to underline that if women are uninformed about their options an informed choice and shared decision making process can't be guaranteed. Although the Italian recommendations about stillbirth are recent and they report poor information about lactation management, international guidelines agree on the significant role played by this aspect within bereavement care [8,11,33,34]. The Perinatal Society of Australia and New Zealand [8] underlines that giving information about lactation is a critical point due to the emotional value carried by breastfeeding [35]. Moreover, some women could not be aware that milk production starts even when a baby is stillborn. This unexpected event required very sensitive care from HCPs.

Concerning information about suppression, every woman should have the possibility to decide the best way of action with her HCPs. Non-pharmacological options [11,33,34] should be offered as well as milk donation. This last option was taken a few times into account by our sample, although literature shows the undoubted benefits for some women who choose this option [36]. Our data underlines that HCPs were more likely to give information about milk donation after a neonatal death than a stillbirth. This result could be explained by the fact that mothers with a baby hospitalised in a neonatal intensive care unit usually have already started to pump milk. It could be possible that in such a situation HCPs feel more comfortable to talk about this topic than after a stillbirth. As mentioned before, the grief process is very individual and unique: for this reason, HCPs should promote a shared decision making approach on milk management [11,15,37] with the aim to empower women during their grieving process. This aspect was well explain by a midwife of our sample who usually give information about milk donation:

> *"I believe it is right that a couple has to know every option. Grieving parents could decide to transform what they have into a gift for other families."*
>
> *A midwife*

An interesting fact is that HCPs usually give more information about lactation suppression or management after a stillbirth than after a neonatal death. This data could be explained by two factors. On the one hand, the absence of a dedicated midwife who supports mothers in the neonatal intensive care unit (NICU) during the hospitalisation of their baby and after the death. On the other hand, the

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poor support given to mothers to manage lactation in NICU by nurses. This latter hypothesis is confirmed by literature which shows the lack of effective lactation support in this context [38].

Additionally, Italy is known for having a significant number of HMBs, which is the highest in Europe [39], indicating a strong commitment to neonatal care. However, our research suggested that there is a discrepancy between the presence of HMBs and the level of information provided to parents who have experienced the loss of a child. This finding implies that the main barriers may be related to cultural issues and a lack of knowledge about this topic, rather than a shortage of services. It is known that there are noticeable differences in the quality of services between different regions in Italy: southern regions tend to have lower quality services compared to the central and northern regions [26]. These differences could be attributed to cultural factors within the healthcare community. However, it is worth noting that Sardinia, which is typically similar to the southern regions in terms of healthcare performance, stands out by providing high levels of lactation information despite the absence of HMBs. This exception indicates the need for a cultural shift in healthcare practices to improve bereavement care throughout Italy.

As mentioned before, another issue about lactation management is the possible complications which can appear after both pharmacological and non-pharmacological suppression [6]. This aspect was witnessed by our sample who encountered complications, such as breast engorgement, during follow-up visits. For this reason, women should be informed face to face about this possibility by HCPs and written information should be given [8,11,33,34]. Generic information about this topic could be distressing for grieving mothers, so tailored written materials should be created [8]. Moreover, such information should include pros and cons of every strategy of lactation suppression and, when possible, what to do in case of complications [6]. Receiving proper and specific information is a key aspect of bereavement care [8,40] which allows mothers to make an informed decision without being forced toward a decision taken by others. Furthermore, an informed decision could prevent physical and emotional complications linked to milk management.

Concerning the more appropriate timing for informing mothers about their options of lactation management, guidelines of the Ireland Health Service Executive encourage giving such information right after the diagnosis to facilitate informed decision making [11]. In addition, a lactation specialist consultation is advisable [8]. Our respondents usually give such information within 24 hours from childbirth and a little, but not insignificance, part of them talked about this topic only if a mother specifically asks about it. Moreover, a period of time of 24 hours (from childbirth to discharge) gives HCPs an excessive margin of discretion in deciding the most appropriate moment to inform mothers. In this sense, informing mothers about their options right after the diagnosis allows them to have as much time as possible to make a decision, considering that drugs for suppression should be taken within 24 hours from childbirth [11].

Qualitative analysis on HCPs words offered valuable insights into the nuanced challenges faced in the context of stillbirths and neonatal deaths, confirming the quantitative data shown above. Difficulties in communication and providing comfort highlighted the delicate role of offering solace in the midst of profound grief. Additionally, “navigating bureaucracy” emerged as a significant challenge, emphasising the administrative hurdles added to the emotional burden. Managing personal emotions was another critical aspect: impotence was the main feelings expressed by HCPs which could impair the care provided to parents. These quotes and themes collectively underscore the multifaceted nature of the challenges in perinatal care. They illuminate the need for targeted training and support for healthcare professionals, not only in clinical skills but also in emotional intelligence, communication, and administrative competencies. This holistic approach is vital in ensuring that healthcare providers are equipped to handle these complex situations with sensitivity, empathy, and effectiveness.

In the end, this study showed the inadequacy of both the follow-up programs and the knowledge of our sample about these programs, when available. Again, all the major international guidelines about perinatal bereavement care agree about the pivotal role played by continuity of care [8,11,33,34]. Salgado et al. (2021) shows how continuity of care is an essential part of the “Perinatal

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bereavement safety thermometer" which highlights ten important aspects that actively impact on maternal psychological wellbeing and grieving process [41]. Further, couples who experience a perinatal death should be referred to a bereavement service which could appropriately take care about all the clinical and psychological issues that arose after loss. This aspect is highlighted also within the recent Italian recommendations around stillbirth care which focused on clinical and psychological support after the discharge [7].

To guarantee an informed decision and to prevent adverse outcomes, bereaved mothers should receive guidance and support from qualified HCPs [6]. Lactation management issues after a perinatal loss are actually disregarded in our country, but instead they should become a priority aspect to improve due to its medical, psychological and emotional implications for mothers [10].

4.1. Strength and Limitations

This study marks a significant advancement in examining lactation management following perinatal loss within Italy, particularly through the lens of healthcare professionals (HCPs). The LISTEN study, by integrating the emotional and knowledge-based responses of participants, offers a comprehensive insight into the intricacies of providing care in such delicate circumstances. Moreover, the substantial size of the sample and its widespread geographical coverage ensure a highly representative understanding of the national landscape, further enhancing the study's contribution to this critical area of healthcare.

While the study offers valuable insights within the context of Italy, it also highlights the necessity for further research in diverse cultural and healthcare settings globally. The regional focus of the LISTEN study, insightful as it is, invites future research endeavours to examine how these findings might be applicable or vary in different international contexts. Additionally, acknowledging the inherent limitations typical of survey-based research, it becomes imperative for future studies to address the potential for response bias. This will contribute to a more faithful representation of actual practices and attitudes in the real world. Furthermore, a thorough investigation into various confounding factors that might affect the responses of healthcare professionals is recommended. Such an exploration would enrich our comprehension of the requirements and challenges in providing lactation support following perinatal loss, thereby enhancing care standards in this critical area.

5. Conclusions

The LISTEN study underscores HPCs' lack of knowledge and emotional difficulties in managing lactation after a perinatal loss. Considering such issues, Italian recommendations around stillbirth care should be improved and expanded to aid HCPs during their clinical practice.

Furthermore, training courses about communication and lactation support and management should be regularly scheduled. Our data shows that it is necessary to improve HCPs' knowledge not only about lactation management after a perinatal loss, but also about physiological issues such as suppression. This topic involves both grieving and not grieving mothers; nonetheless, lactation suppression can occur for many reasons which could be not linked to perinatal loss. Moreover, lactation support should be enhanced in NICU by improving nurses' knowledge and ensuring midwives' presence. In the end, a cultural shift in the healthcare community is paramount to enable mothers to make an informed choice by offering tailored information and lactation management options.

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Institutional Review Board Statement: The survey was voluntary and anonymous, no personal data were recorded, in no way it was possible to identify the single respondents. Informed consent was provided at the start of the survey once participants had read the participant information and met the eligibility criteria. Data were acquired in compliance with GDPR regulation (General Data Protection Regulation, European Union 2016/679). The research proposal was approved by the Florence University Commission for Ethics (prot. 25810, 06/02/2023).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: We encourage all authors of articles published in MDPI journals to share their research data. In this section, please provide details regarding where data supporting reported results can be found, including links to publicly archived datasets analyzed or generated during the study. Where no new data were created, or where data is unavailable due to privacy or ethical restrictions, a statement is still required. Suggested Data Availability Statements are available in section "MDPI Research Data Policies" at https://www.mdpi.com/ethics.

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Abbreviations

The following abbreviations are used in this manuscript:

HCPs	Healthcare Professionals
NICU	Neonatal Intensive Care Unit
HMBs	Human Milk Banks
PTSD	Post-Traumatic Stress Disorder
GDPR	General Data Protection Regulation
UN IGME	United Nations Inter-agency Group for Child Mortality Estimation
PSANZ	Perinatal Society of Australia and New Zealand

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