ADVANCES IN MENTAL HEALTH
https://doi.org/10.1080/18387357.2023.2210703

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European health professionals' knowledge, attitudes and beliefs about perinatal depression and body image concerns

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ABSTRACT

Objective: Health professionals who work with women in pregnancy and postpartum are rarely educated in psychosocial aspects of body image and mental health, despite this being a time of significant bodily change for women. This study presents the results of a needs assessment to determine the extent, nature, and format of health professional education in relation to body image and perinatal mental health.

Method: Participants were $N = 257$ health professionals (89% female) from 16 European countries, recruited through the authors professional networks, who completed an online survey about their existing knowledge and experience, and preferences for further education.

Results: Current knowledge about body image was low, and open-ended comments indicated that body image was integrated into pregnancy and postpartum care within the context of encouraging weight loss. Health professionals saw opportunities for the inclusion of conversations about body image and mental health within their clinical care and a need for training about 'what to say' to mothers, as well as recommendations for diagnostic and referral pathways, and more general information about postpartum body image and mental health that could inform their practice.

Discussion: This research indicates the need for health professional education in relation to perinatal body image and mental health.

ARTICLE HISTORY
Received 19 August 2022
Accepted 1 May 2023

KEYWORDS
Pregnancy; body image; postpartum; perinatal; health professionals

Introduction

The pregnancy and the postpartum period are times of significant change to the size and shape of women's bodies, and to identity and mental health (Prinds et al., 2020; Rallis

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et al., 2007). Given the extent to which women are engaged with health systems, and interact with health professionals through this time, it is important that professionals' knowledge in relation to body image and mental health is understood.

Gestational weight gain [GWG], and perinatal anxiety and depression [PND] are recognised as being two of the largest and most complex challenges in pregnancy and postpartum care (Shorey et al., 2018). Although clinicians may consider these physical and psychological health outcomes to exist separately, there are multiple studies revealing direct relationships between PND and GWG (Braig, Logan, Reister, Rothenbacher, & Genuneit, 2020; Garay, Sumption, Pearson, & John, 2021), in that women with increased Body Mass Index [BMI] and higher GWG have been found to be more likely to experience PND (Bliddal et al., 2015; Han et al., 2016). Having a high BMI and having increased GWG is associated with higher levels of body dissatisfaction (Gruszka et al., 2022; Hartley et al., 2018; Weinberger et al., 2016) and in turn, body dissatisfaction is also known to lead to increased GWG (Fealy et al., 2020; Plante et al., 2019).

The relationship between PND and body image has also been confirmed across pregnancy and the postpartum period (Downs et al., 2008; Gjerdingen et al., 2009; Hartley et al., 2018; Solorzano et al., 2022). In one study, levels of body satisfaction during pregnancy were the strongest predictor of postpartum depression (Downs et al., 2008). These findings have led to calls for the screening of body dissatisfaction (Riquin et al., 2019) and implementation of body image interventions during pregnancy to reduce the risk of depression in mothers (Han et al., 2016). This need for resources is also expressed by mothers; in one US study, 80% of women indicated they would have appreciated information about expectations of body changes in pregnancy and postpartum (Vanderkruik et al., 2022). Despite this interest from women, and the inter-relationships between body dissatisfaction, GWG, and PND, none of the large trials of interventions for GWG or PND have included material to address body image concerns (Cluxton-Keller & Bruce, 2018; Shieh et al., 2018).

Health professionals, including general practitioners, nurses, and midwives are well placed to offer support in relation to body image and postpartum depression but do not typically receive any training in psychology or psychosocial aspects of care (Bringsén et al., 2021; Plante et al., 2020). A study of French Canadian health professionals found that only 25.4% felt totally comfortable asking about pregnant women's weight concerns (Plante et al., 2020). A study conducted among North American obstetricians and gynecologists reported that less than one-third of professionals assessed for body image dissatisfaction in routine antenatal care, and only half thought that assessment of eating disorders was a part of their role (Leddy et al., 2009). The literature is dominated by reports of weight stigma in health care, and among health professionals, that leads to health care avoidance, and poor maternal and child outcomes (Nagpal et al., 2021; Rodriguez et al., 2019). No prior studies have evaluated the provision of information about, or training of health professionals in body image, in Europe.

As research evidence about the importance of body image for maternal mental and physical health builds, there have been calls for training of health professionals in relation to postpartum body image, in order to ensure they are better able to support women after birth (Erbil et al., 2012; Incollingo Rodriguez & Nagpal, 2021; Olander et al., 2021; Riquin et al., 2019; Roomruangwong et al., 2017). The current research responds to these calls and aims to conduct a needs assessment to explore health professionals' current

knowledge, attitudes, and beliefs about postpartum depression and body image concerns, as well as their preferences for training on these issues.

Materials and methods

An online survey was distributed to and completed by health professionals in April-July 2020. This research was approved by the Victoria University Human Research Ethics Committee, HRE:19-112. No ethical approval was required in European countries as the study focused on the participants' professional experience.

Instruments

The survey used was developed specifically for this study and included direct questions in relation to working with mothers of children aged 0–5 years, and the understanding of, and experience in working with women in relation to body satisfaction and perinatal depression. Given the lack of standardised measures suitable for this purpose, all items were developed by the research team, based on the existing literature. The survey was developed by the first author and other authors (all of whom are also health professionals) gave feedback to ensure clarity and face validity of the instrument.

The survey included two multiple-choice questions that asked participants to indicate the prevalence of PND and body dissatisfaction. Six options were provided, two of which were deemed 'correct' for perinatal depression (15%, 20%) and three for body dissatisfaction (70%, 80%, 90%) according to international reviews and meta-analyses published in this area (Kilpela et al., 2015; Riquin et al., 2019). Open-ended questions asked professionals to explain their responses to these multiple-choice questions. We also asked open-ended questions about how the issues of body dissatisfaction and postnatal depression come up in their professional practice, and what opportunities they see for incorporating body image in their work with women. Finally, we asked about preferences for training materials, asked through multiple choice questions with responses on a Likert scale. Participants were asked to respond to a question about their preferred format for training materials, rating each option (e.g. in person conferences) on a Likert scale from Strongly Agree (1) to Strongly Disagree (5). Lower mean scores, therefore, indicate a stronger preference for this training format. Demographic data regarding the professionals' age, gender, country of work, profession, and years of experience in that profession were also self-reported.

In order to ensure that professionals understood the concept of body image, we defined this in the survey as follows: 'When we talk about body image, we refer to the way that people think about the way that they look, not their actual appearance.' We also defined perinatal and maternal depression as 'Perinatal depression refers to a major or minor depressive episode that occurs during pregnancy or within the postpartum year. Maternal depression refers to depression in mothers during pregnancy and the first year and beyond.'

To ensure greater data accuracy, the survey was delivered in multiple languages. The survey was developed in English and was translated into French, Italian, Swedish, Greek, Romanian, Serbian, and Estonian (as these were the languages used by collaborators on the project) using Qualtrics auto-translation, then checked by a native speaker of the

language, with minor corrections made for accuracy. Data were collected in these multiple languages, and back-translated by native speakers to English for analysis.

Procedure

Participants were recruited through existing professional networks of the authors in their own country, and other countries in Europe using snowball sampling methods. An email invitation, accompanied by a participant information sheet, was disseminated, and a survey link was provided. Completion of the questionnaire was used as implied consent to participate in the study. A wide range of health professionals were approached for recruitment, including midwives, nurses, specialist and general medical professionals, psychologists, and the managers, leaders, and coordinators of these health professionals. The exact number of professionals who received the invitation is not known.

Health professionals completed the survey online in their language of choice. Responses in Romanian, Greek, Swedish, Estonian, and Italian were sent on to collaborating authors who were native speakers in those languages, for translation back to English. Participants in some other countries still elected to complete the survey in English.

Data analysis

Quantitative data were cleaned and analysed in SPSS Version 27. The first author completed the coding and data analysis process. Participants self-reported their professional role, and this was categorised according to whether they had general medical and nursing backgrounds (e.g. physician, nurse, etc.), dental, or counselling roles, or if they were specialists in relation to birth and maternity care, such as obstetricians and midwives. Correct responses to the two multiple choice knowledge questions were determined using current published prevalence literature, whereby two of the six responses were categorised as 'correct' for postpartum depression, and three were deemed correct for the prevalence of body dissatisfaction. Inductive thematic analysis was used to guide coding and determine the emergent themes derived from the open-ended comments (Braun & Clarke, 2006). Coding and synthesis was conducted by one coder on the English data, after it had been back-translated by other authors, ensuring that these other authors were also familiar with the data from their countries. All authors provided input to the themes presented in the results until agreement was reached to ensure that they were aligned with their knowledge of the data that they had translated from their country.

Results

A total of 265 participants completed the online questionnaire. Participants who indicated that their profession was outside of the scope of the project, or not considered a 'health professional' (e.g. postal worker) were removed ($n = 7$). The remaining 257 participants were included in the analyses, including 229 women (88.9% female) and 26 men (10.1% male), two selected 'prefer not to say' or 'other'. Participants were from 16 different European countries, including Malta ($n = 76$), Sweden ($n = 53$), Estonia ($n =$

30), Serbia ($n = 22$), Greece ($n = 21$), Romania ($n = 18$), Italy ($n = 20$), and eight European countries with 1–2 participants each. The age of participants ranged from 20 to 70 and the mean was 41.2 years (SD 11.04).

Participants were asked to detail their professional role. These were organised into categories according to whether participants had general medical backgrounds, specialised in maternity care, or had dental or counselling backgrounds. We also asked participants to detail the number of years' experience they had in that particular profession. A number of participants were currently students studying nursing and other fields, who listed their experience as 0 years, so the range of responses was from 0 to 40 years and the mean experience was 14.73 years (SD 10.14) (Table 1).

Knowledge about postpartum depression and body image concerns

Participants were asked to select the proportion of mothers that they thought experienced perinatal depression, according to the international literature. In total, 43.4% ($n = 112$) of participants responded with what was considered a 'correct response', with 24% ($n = 62$) indicating that 20% of women, and 19.4% ($n = 50$) indicating that 15% of women experience perinatal depression. More professionals underestimated the prevalence of perinatal depression, with 16.3% indicating that 10% of women, and 3.5% ($n = 9$) indicating that 5% of women experience these conditions. In addition, 10.5% ($n = 27$) of professionals indicated that 25% of women, and 6.6% ($n = 17$) indicated that 30% of women experienced postpartum depression, which is higher than international prevalence data.

When asked in an open-ended question to explain the answer they had given to the prior multiple-choice question, many mentioned that this is a very common problem in their opinion, but that the statistics are likely to be underestimated as many women do not present for treatment: 'I think many mothers experience a mild form of perinatal depression which very often will not be disclosed or reported' (Female Public Health Doctor, Malta). Professionals also listed the risk factors for the development of perinatal depression, such as: 'The ability to face changes can be widely affected by socio-economic and cultural background. Also, hormonal changes connected to the pregnancy and the post-partum period must be considered' (Female Medic-University Teacher, categorised as 'Medical Professional', Italy). A few professionals indicated that their response to the multiple-choice question was 'just a guess' or based on 'personal experience'. Some

Table 1. Category of professional background of participants.

Category	Including	Number % (*n*)
Medical	Doctors and medical professionals not specific to perinatal health care, including physician, surgeon, general practitioner (GP), paediatrician, pharmacist, nurse, nursing student	50% (129)
Maternity	Midwife, emergency care midwife, medical professionals specific to perinatal care, eg. obstetrician/ObGyn	32.9% (85)
Dental	Dental assistant, dentist, orthodontist, medical professionals relations to dental health	11.6% (30)
Counselling	Counsellor, psychologist, social worker, psychiatrist	3.5% (9)
Student	(area of study not specified)	1.6% (4)

professionals gave a reference for their response, indicating that they had probably looked this up online.

In relation to the experience of body image issues among mothers of children aged 0–5 years, only one-third (33.3%) of professionals correctly estimated the prevalence of these concerns at either 70% (16.7%, $n = 43$), 80% (11.6%, $n = 30$), or 90% (5%, $n = 13$). In addition, 46.2% ($n = 119$) underestimated the proportion of mothers experiencing body image concerns to be 50% (26.0%, $n = 67$) or 60% (20.2%, $n = 52$). Two participants (0.8%) overestimated the proportion of women experiencing body image concerns to be 100%, which is higher than international prevalence data indicates.

In explaining their response to the questions about the prevalence of body image concerns in mothers, many professionals mentioned the current societal expectations and media influence more broadly, and not specific to motherhood, for example: 'I think most women have issues with their appearance' (Male Dentist, Serbia), and 'every person I know who has recently given birth experiences this' (Female Assistant Nurse, Sweden). Many participants mentioned the specific nature of the pregnancy, birth, and breastfeeding processes in creating an environment where women might feel more dissatisfied with their bodies.

Other professionals mentioned that appearance may be a low concern after becoming a mother, and mothers may appreciate their bodies more:

> I think that when they have a child, especially more of them, mothers shift their focus to taking care of their children, and their 'perfect' appearance is less important than before. There are a lot of cultural differences on that issue, but I think that this attitude dominates in our environment, especially if they are loved and respected by the partner. (Female Specialist in Obstetrics and Gynaecology, Serbia)

Some participants indicated that the options they had to choose from in responding to the question about prevalence were too high, and that body image concerns were much less prevalent, in their clinical experience, or in their country, for example, 'In our country, pregnancy is a joyful condition, given the condition observed in clinical practice the answers offered are too high' (Female specialist in Paediatric Dentistry, Serbia). One participant, a female midwife from Malta, wrote 'never imagined that this age group have problems with their body image'. Overall, there did not seem to be any major differences in the responses to this question based on the category of health professionals and their expertise.

Opportunities for incorporating body image into practice

In response to the direct question, almost one-third of participants indicated that they did speak with mothers about their body image (31.6%, $n = 81$), and a little over a quarter of participants did not (27.3%, $n = 70$), while 44.5% ($n = 114$) did not respond to this item. Participants were asked to explain how they talk about body image with mothers in their professional role in their own words in response to the open-ended question: In your professional role, how and when does body image arise as an issue with mothers?

Specific time periods were often mentioned, e.g.: 'The last trimester of pregnancy and the first year after birth' (Female Orthodontic Specialist, Serbia) or 'About a year after delivery when they start feeling that they will not return to normal' (Female Obstetrician,

Malta). The majority of participants mentioned that they discussed body image during the postpartum period. Some participants referred to body image being a concern across the lifespan:

> The problem of the appearance of one's own body in mothers occurs much earlier and before pregnancy. It intensifies during and after pregnancy. (Orthodontist, Serbia, gender not specified)

Professionals indicated the specific clinical presentations that would warrant a conversation about food, body image, or weight. For example, a female dentist from Estonia stated that: 'If a pregnant woman was eating a lot and was snacking constantly during pregnancy and her teeth got damaged, the issue of weight and nutrition should be raised' (Female Dentist, Estonia). Midwives often mentioned that discussions about body image formed a part of routine clinical care. For example:

> At the first health interview when they are asked to weigh themselves, you notice a feeling of uneasiness and, not infrequently a negative attitude towards weight. This is often based on a poorer self-image, some eating disorder, problems in the background etc. (Female Midwife, Sweden)

Another midwife explained her approach in the following quote: 'In my professional role when caring for mothers during the antenatal and postnatal period, some mothers speak about how their bodies changed during pregnancy mainly mentioning weight gain, development of stretch marks and skin pigmentation' (Female Midwife, Malta).

Some professionals described proactive, exploratory approaches to encouraging body appreciation:

> Through open-ended questions about how they look at themselves, their expectations of their changed body during and after a pregnancy and how they relate to their self-image and their body. Then try to get them to think about how they can feel pride and self-respect. (Female Midwife, Sweden)

Discussions regarding expectations for weight and shape changes were mentioned by some professionals, for example:

> I like to explain to mothers the changes that they will experience and that these changes are normal and should be accepted as part of the normal physiological process. I also like to prepare them in advance of the changes that will happen postpartum. (Female Women's Health Doctor, Malta)

Midwives, in particular, seemed to encourage patience and 'giving yourself time', for example: 'Explain that it will take up to 1 year for the body to go back to normal after having a baby. It is difficult at first but can be done without much effort. Time heals' (Female Midwife, Malta). Other professionals offered a balanced approach – encouraging acceptance of the bodily changes that come alongside the transition to motherhood with a focus on the wellbeing of the child: 'I mostly comfort them that it takes time for things to return to normal and that the most important thing is that they have become mothers and that the baby is well and healthy' (Female Paediatrician, Serbia). In contrast to these proactive approaches, other participants indicated that they were more responsive in their focus on body image with mothers:

> I do not force it but I do explore how they are feeling about themselves as a whole and the issue comes up naturally. I tend to normalise and work on acceptance with this issue but also solution focused when needed. (Female Psychologist, Malta)

More frequently, professionals mentioned discussing body image with their clients within the context of physical health advice, and guidance around postpartum weight loss. Exercises to heal the abdomen, and exercise in general were mentioned as strategies that were discussed, for example: 'We recommend walking and gentle exercise during pregnancy and post-childbirth period. Women should not let themselves go and they must try to find time for exercise and beauty care' (Female Midwife, Greece). Diet and nutrition were also commonly mentioned, generally within a framework of gestational weight reduction: 'By explaining what changes will occur in order to prepare mothers. Discussion of healthy diet. Encouraging physical activity to maintain healthy weight throughout pregnancy' (Female Midwife, Malta). Perspectives from professionals more distant to maternity care (e.g. dental and medical professionals) tended to focus around weight loss, for example: 'After giving birth, mothers are immediately concerned about getting back into their shape … . they usually seek advice regarding weight reduction and to strengthen the tummy muscles' (Female Managing Pharmacist, Malta). A General Practitioner [GP] also indicated that 'I'm usually asked to help with dieting, information about healthy meals and exercise' (Female GP, Malta). Psychologists and those with a counselling background often mentioned eating disorders. Breastfeeding was commonly mentioned as an aid for weight loss, for example:

> Antenatally, to reassure them the change in body shape is normal. Also, discussion on healthy eating and safe exercise habits, in preparation for the postnatal period. Encouragement on breastfeeding, which also helps with body image. I market it as the ideal fat burner. (Male Public Health Consultant, Malta)

Among many professionals, there was the sense that returning to pre-pregnancy weight was possible and advisable. For example, 'Talk about nutrition and exercise. To be careful, the weight gain during pregnancy might not be that easy to get rid of' (Female Doctor, Malta).

Another midwife from Greece wrote: 'This change is normal to a certain extent. If the changes are dramatic all that is needed is a healthy diet and a strong will to regain the previous state of the body' (Female Midwife). Others were more focussed on high weight being the main issue: 'Describe the changes as normal. Also talk about weight as many are overweight, which is a major health problem' (Female Ultrasound Midwife, Sweden).

More than half (58%, $n = 150$) of the participants did not provide a response to this question, which may indicate that they do not engage in discussions around body image. Some mentioned the lack of time to give attention to this topic: 'Afterwards [after birth], and in the antenatal clinic within the hospital, there is limited time to deal with or discuss these issues. I usually go into this with my private patients or friends' (Female Midwife, Malta). Others did not see this as being within the scope of their practice 'It is not in the domain of my profession, so I do not talk about it professionally with my patients' (Female Dental Specialist, Serbia), or reported that body image is not the dominant concern during the timing of their interactions with mothers, for example: 'I usually meet highly pregnant or newly delivered. I usually do not think that problems with body image come so quickly after childbirth' (Female Nurse in Gynaecology Clinic, Sweden).

Finally, some health professionals described 'body image' in such a way that indicated that they might be misinterpreting the term as representing what people actually look

like, rather than how they feel about the way they look, for example: 'We talk about weight gain in pregnancy, healthy eating and the importance of breastfeeding in order to regain the previous body image' (Female midwife, Greece). It is possible that health professionals misinterpreted the understanding of this term, despite the fact that this was defined within the content of the survey.

What professionals would like to know

Professionals responded to open-ended questions asking what they would like to know about the topic with a wide range of detailed responses, generally centred around recognising psychosocial issues, and how to respond, in terms of specific language, but also recommending practical tools, and referrals for additional support. Medical doctors and midwives, in particular, mentioned a need for diagnostic and screening tools to determine whether there might be body image or mental health issues impacting on their clients, with a female Doctor in Malta recommending: 'Guidelines and tools to quantify the degree of mental health affected'. Language and communication were most frequently highlighted as something professionals wanted to know: 'How to behave and how to guide women through a support process' (Female Paediatrician, Italy). 'Literally what to say to support these mothers. Often, I can only come up with "I'm very sorry/I understand – things will get better"' (Male OB/GYN, Malta). 'Practical examples of how to tackle this issue' (Female Midwife, Malta) that could be used with women, or passed on to women, to support body image and mental health were also suggested. Opportunities for referral to local services were requested, as seen in this example from a Male Medical Doctor in Malta:'I think we need to be able to identify this issue and then have the right teams to refer to.'

With regard to the specific knowledge required, many professionals indicated that they would like to know more regarding the physiology, and psychology of mothers across the pregnancy and postpartum period. Statistics, prevalence, and information about the extent of body image and postpartum were also commonly mentioned. Others indicated the outcomes that they would like to see for their clients: 'How to motivate and uplift women to be happy with their body and focus on being healthy and strong vs being thin and weigh less' (Female Medical Doctor, Malta).

Preferences for the format of training

Participants were asked to respond to a question about their preferred format for training, rating each option on a Likert scale from Strongly Agree (1) to Strongly Disagree (5). Lower mean scores, therefore, indicate a stronger preference for this training format. Results are presented in Table 2, listed in order of most to least preferred format. There was extensive missing data for these items, with around 50% of participants not responding to these questions.

Responses to open-ended questions explaining their ratings were brief but reinforced the time-poor nature of busy health professionals. Online options were thought to be more convenient, and efficient use of time, even though in-person events offered 'a greater opportunity to communicate with other experts and exchange experiences in the field' (Female audiologist, Serbia). Blended learning, or a mixture of modalities

Table 2. Preferences for the format of training materials.

Rank	Preferred format	Strongly agree (1) % (*n*)	Somewhat agree (2) % (*n*)	Neither agree nor disagree (3) % (*n*)	Somewhat disagree (4) % (*n*)	Strongly disagree (5) % (*n*)	Mean
1	• Fully Online (*N* = 134)	38.1% (51)	33.6% (45)	11.9% (16)	9.7% (13)	6.7% (9)	2.13 (1.22)
2	• Short face to face workshops supported by online materials (*N* = 133)	33.8% (45)	36.1% (48)	15.0% (20)	6.8% (9)	8.3% (11)	2.20 (1.22)
3	• At Conferences (*N* = 136)	27.9% (38)	31.6% (43)	19.9% (27)	10.3% (14)	10.3% (14)	2.43 (1.28)
4	• Face to face workshops onsite (*N* = 127)	25.2% (32)	30.7% (39)	19.7 (25)	13.4 (17)	11.0 (14)	2.54 (1.30)
5	• Face to face workshops offsite (*N* = 131)	24.4% (32)	33.6% (44)	18.3% (24)	8.4% (11)	15.3% (20)	2.55 (1.35)

were recommended, and considered particularly important for 'psychological topics' so that role-plays and interaction could enhance clinical skills.

Discussion

This study sought to explore the existing knowledge and experiences of 257 health professionals across 16 European countries, in terms of mental health and body image in mothers of 0–5-year-old children. Professionals expressed a need for further training to support the development of their knowledge and practice with mothers in relation to these topics, and preferred access to online training.

In general, from the multiple choice and open-ended responses, it seems that there is scope to improve health professionals' understanding of body image as a concept, and mechanisms for raising and maximising opportunities to discuss body image with their clients. The majority of professionals, who came from a medical, maternity, or dental background, did not have familiarity or training in a psychological concept such as body image. Other research from the US found that less than one-third of professionals assess for body image dissatisfaction in a routine antenatal care (Leddy et al., 2009). Subsequently, there have been widespread calls internationally for more training in body image and mental health for professionals in maternity and medical care (Bringsén et al., 2021; Erbil et al., 2012; Nunes et al., 2014; Plante et al., 2020; Roomruangwong et al., 2017) and to use a systems approach to embed information and understanding across health care settings (Prinds et al., 2020).

Participants had a stronger awareness of the prevalence of perinatal depression compared to body dissatisfaction, with 42% indicating the correct international prevalence of postpartum depression. This may have been difficult for professionals to recall with confidence, given that the prevalence of depression varies by country, and may be better detected in some countries, compared to others, due to the resources available for maternity care. Nevertheless, professionals were interested in learning more about supporting the mental health of mothers in general. Other research has found that perinatal health care professionals have had minimal mental health training, and saw mental

health as being beyond their scope of practice and suggested this lack of training as a barrier to the provision of perinatal care (Byatt et al., 2012; Plante et al., 2020). A systematic review of studies identifying gaps in provider's knowledge around perinatal mental health reported that, despite the wide variety of methods to determine knowledge, or measure perceived knowledge, practitioner's level of skills and knowledge was generally low- and midwives received the least amount of pre-service education in perinatal mental health (Legere et al., 2017). US-based research among nurses and home-visitors found that they relatively high comfort levels in asking women about symptoms of postpartum depression, but low levels of self-perceived knowledge (Thomason et al., 2010).

This study was strengthened by the broad scope of data collection across a range of professionals, on an understudied topic. However, there were many limitations to the work. Self-report data on questionnaires may not capture the full extent of health professional's knowledge, experiences, and preferences. The lack of widely available standardised measures of knowledge and attitudes meant that we had to develop items specifically for this work, and we do not have information about the reliability and validity of this tool. As we relied on snowball sampling through professional networks to recruit participants, the data are from a small number of European countries, relied on the networks of authors, and are not representative of Health Professionals in Europe more broadly. Despite the methodological shortcomings, this research provides enough information to guide the development and implementation of health professional training on this topic.

Conclusion

Although evidence is building to indicate relationships between body image, GWG and PND as risk factors and health outcomes, there is a lack of research connecting all three. The interconnectedness of these issues offers significant opportunities for transdiagnostic interventions that prevent multiple negative outcomes using a more holistic approach. Such interventions and clinical approaches would need to be implemented by health professionals, and it is clear that more education in relation to GWG and PND are required. No previous studies have investigated health professional's attitudes towards, and knowledge of body image in mothers in Europe, or the rest of the world. More resources should be directed towards determining the extent of, and supporting the experiences of, psychosocial issues in mothers across European countries. Urgent attention to perinatal mental health across Europe is required now more than ever due to the COVID-19 pandemic, as highlighted by a swift meta-analysis (Hessami et al., 2022) including studies in Italy (Mappa et al., 2020; Zanardo et al., 2020), and Greece (Dagklis et al., 2020). Raising awareness of body image and mental health issues in the postpartum period among Health Professionals may enable them to feel more confident in questioning and providing advice and referral for support for lifestyle opportunities, or targeted interventions during this time, which may contribute to widespread improvements in maternal health and wellbeing.

Acknowledgements

The authors would like to acknowledge the contributions of the funding body, collaborators, and participants, as well as early contributions to the work from Professor Peter Hagell, Kristianstad University.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by Horizon 2020 Framework Programme [grant number Erasmus plus 2019-1-SE01-KA202-060422].

Data availability statement

Please contact the corresponding author for access to anonymised datasets.

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