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CONTENTS

Interview

In Memoriam

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Editorial

Christiana Rebelle, PhD, Editor-in-Chief

Welcome to the Winter 2025 issue of the *Journal of Prenatal and Perinatal Psychology and Health*. The articles showcase the dedication and thoughtful work of authors committed to advancing our field. Together, they honor the experiences of families, clinicians, researchers, and educators who shape pre- and perinatal care. I am excited to share this diverse collection with you.

The issue begins with a study by Zambaldi et al. on Mindful Self-Compassion training during pregnancy, which used interpretative phenomenological analysis. Their work with Brazilian pregnant women explores how mindfulness and self-compassion practices can support emotional steadiness and self-care. The study highlights the value of integrating mindfulness and self-compassion practices into prenatal care to strengthen maternal mental health.

Moran et al. then present an evaluation of the North Cumbria Maternal Mental Health Service. The outcome data demonstrate significant reductions in distress and increases in well-being. The patient feedback adds something deeper: gratitude, renewed confidence, and the return of parts of themselves they thought had been lost. Moran et al. highlight a program that is making a meaningful difference for women and birthing people navigating birth trauma and pregnancy-related distress.

Jiang et al. follow with a study that is especially important given the lingering impact of the COVID-19 pandemic. Their findings show that behavioral activation was associated with fewer postpartum depressive and anxiety symptoms among mothers who carried and delivered during such an unpredictable period. The strength of this association for mothers with depression or anxiety diagnoses speaks to the potential of accessible, supportive behavioral strategies during periods marked by stress, isolation, or disrupted access to care. Jiang et al.'s work offers guidance for clinicians and researchers.

The article by Madrid and Giovannoli invites readers to consider the connection between maternal–infant bonding and pediatric asthma. Their

review of epidemiological evidence and pilot trials of Bonding Therapy shows promising reductions in asthma severity and healthcare use. The authors call attention to the emotional bonds formed at birth and their potential for children's health. This article encourages us to examine early relationships and how they may shape long-term outcomes—echoing the heart of APPPAH.

Ikegawa's contribution brings cultural, emotional, and spiritual dimensions to the forefront. Drawing on thousands of case reports and decades of clinical work, Ikegawa describes Tamashii and Prenatal Memory Education, emphasizing communication, presence, and connection between parents and the fetus. His reflections highlight a model of prenatal support that resonates with families seeking deeper emotional grounding during pregnancy. Ikegawa's work offers readers a rich perspective on stress reduction and lifelong development.

This issue also includes a far-reaching interview with midwife and educator Ingrid Bayot by *JOPPPAH*'s Associate Editor, Dr. Cupelin. Bayot reframes the "fourth trimester" through the lenses of physiology, anthropology, and neuroscience, highlighting how early relational experiences and the hormonal dance of parenthood shape the developing social brain. Her reflections on de-gestation, parental embodiment, and community-centered care offer clinical insight and renewed appreciation for the depth of postpartum transformation.

We close with a tribute to Donna Chamberlain, by JC Chamberlain, Sr. Donna served APPPAH with generosity and devotion for many years, touching countless lives through her work, teaching, and open-hearted spirit. Her legacy lives on in the families, educators, and colleagues she supported. This tribute serves as a loving reminder of all she brought to our community.

We are also pleased to welcome Raylene Phillips, MD, MA, FAAP, FABM, IBCLC, to our editorial board. Dr. Phillips is a neonatologist and breastfeeding medicine specialist known for her leadership in relationship-based newborn care, family-integrated NICU practices, and parent–infant bonding. Her clinical experience and advocacy strengthen the work we aim to elevate through this journal, and we are grateful to have her join our board.

I want to extend my gratitude to every author, reviewer, board member, and volunteer who helped shape this issue. Thank you for being part of the *JOPPPAH* community and for continuing to support families and professionals worldwide. Please read, share, and carry this knowledge into the many spaces where birth, parenting, caregiving, and healing unfold.

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Mindful Self-Compassion Training During Pregnancy: An Interpretative Phenomenological Analysis Study

Carla Zambaldi, PhD, Pompéia Villachan-Lyra, PhD, Sirley Almeida, Nadjanara Alves Vieira, MS, Alexandra Marques-Pinto, PhD

This study explored the experiences of Brazilian pregnant women who underwent mindfulness and self-compassion training during pregnancy. Using a qualitative approach and interpretative phenomenological analysis (IPA), the subjective experiences of participants in a 9-week Mindful Self-Compassion (MSC) program were examined. Analysis of the transcripts revealed four main themes: perceived benefits of MSC during pregnancy, challenges faced during the program, evaluations of the online format, and anticipated future use of learned skills. Participants identified challenges such as fatigue and physical limitations but found MSC training to be a valuable tool for self-care, well-being, and mental health during gestation. The findings underscore the role of MSC in enhancing emotional resilience and coping strategies during pregnancy, with participants expecting to apply these skills postpartum. The study advocates for the integration of MSC training into prenatal care to support maternal mental health and improve outcomes for mothers and children.

The authors have no conflict of interest or funding to disclose. Carla Zambaldi, PhD (ORCID: 0000-0002-3821-2346), is a physician and psychiatrist serving as an adjunct professor of Neuropsychiatry at UFPE. Pompéia Villachan-Lyra, PhD (ORCID: 0000-0002-5111-7538), is an associate professor at the Universidade Federal Rural de Pernambuco (UFRPE) in the Graduate Program in Education. Sirley Almeida is a psychoanalyst at CAPS-AD Carpina-PE and faculty at UNIFAFIRE. Nadjanara Alves Vieira, MS, is a certified Voice Specialist (CFFa, CEV). Alexandra Marques-Pinto, PhD (ORCID: 0000-0002-9204-9519), is a professor and researcher at the Faculty of Psychology, University of Lisbon, and a member of CICPSI. Please send correspondence to Dr. Zambaldi: carla.zambaldi@ufpe.br.

Keywords: perinatal mental health, pregnancy, mindfulness, self-compassion

The perinatal period is a time of extreme vulnerability for women's mental health. Despite cultural expectations that motherhood is a moment of fulfillment and happiness, it is observed that, due to physiological, psychological, and social factors, this can be a stressful time that may be complicated by mental health disorders (Kendig et al., 2017). Interventions that promote self-care and the development of psychological resources aimed at resilience are crucial for motherhood, as this is a period of changes, demands, and challenges that may exceed a woman's psychological capacities. There is good-quality evidence that interventions delivered during the antenatal period prevent perinatal anxiety and depression, improve treatment-seeking, psychosocial functioning, and are feasible and acceptable across different settings and cultures (Waqas et al., 2022). There seems to be no reason to assume that interventions effective at other times in a woman's life would not be useful during the perinatal period. However, some questions may arise about whether these interventions need to be adapted for the perinatal period, whether they are effective during this stage of life, and whether their application during pregnancy is appropriate.

Mindfulness and self-compassion have emerged as valuable resources for the prevention and care of mental health, improving stress regulation, resilience, and reducing the prevalence of psychopathology (Germer & Neff, 2013; MacBeth & Gumley, 2012; Yela et al., 2022). Self-compassion refers to compassion for the experience of suffering turned inward (Neff, 2023). The three components of self-compassion include self-kindness, which involves being gentle with oneself and avoiding self-judgment and criticism; common humanity, which entails feeling connected to others through the shared experience of life rather than isolated in facing suffering; and mindfulness, which emphasizes being present with one's experience without ignoring or amplifying it (Neff, 2023). Some interventions promoting self-compassion during the perinatal period have emerged as options to reduce anxiety, depression, and self-criticism (Millard & Wittkowski, 2023; Mitchell et al., 2018). Significant relationships have been found between self-compassion and attachment to the fetus (Mohamadirizi & Kordi, 2016), less perinatal body dissatisfaction (Dryer et al., 2022), higher-quality intimate relationships (Huynh et al., 2022), less fear of childbirth (Samios et al., 2021), less

postpartum depression (Monteiro et al., 2019), and less dysfunctional beliefs about motherhood (Xavier et al., 2023).

The Mindful Self-Compassion (MSC) program was the first training program specifically designed to cultivate self-compassion (Germer & Neff, 2019; Neff & Germer, 2013). Combining the principles of mindfulness and self-compassion, the program aims to help individuals cultivate greater awareness of their thoughts and feelings, while also encouraging a kinder, more understanding response to personal struggles. Findings indicate that engaging in the MSC program can lead to significant improvements in psychological health, including reduced anxiety and depression, and increased life satisfaction, making it a valuable resource for individuals seeking to improve their mental well-being (Neff, 2023).

Despite evidence supporting the benefits of self-compassion during the perinatal period, we raise the question of how self-compassion training would be experienced and accepted during pregnancy, given the limited data available on this topic. This study aims to explore the lived experience of women undertaking MSC training during pregnancy. The interpretative phenomenological analysis (IPA) methodology is particularly suitable for this study as it allows for an in-depth exploration of individuals' lived experiences and the meanings they attach to them (Smith, 2017; Smith et al., 2009; Smith & Eatough, 2007). This methodology entails an intensive interpretation of information from a small group of participants linked by a common event in their lives. By focusing on participants' subjective interpretations, IPA provides a framework that acknowledges the complexity of human psychology, particularly in the context of skills training aimed at enhancing emotional well-being during the perinatal period.

Methods

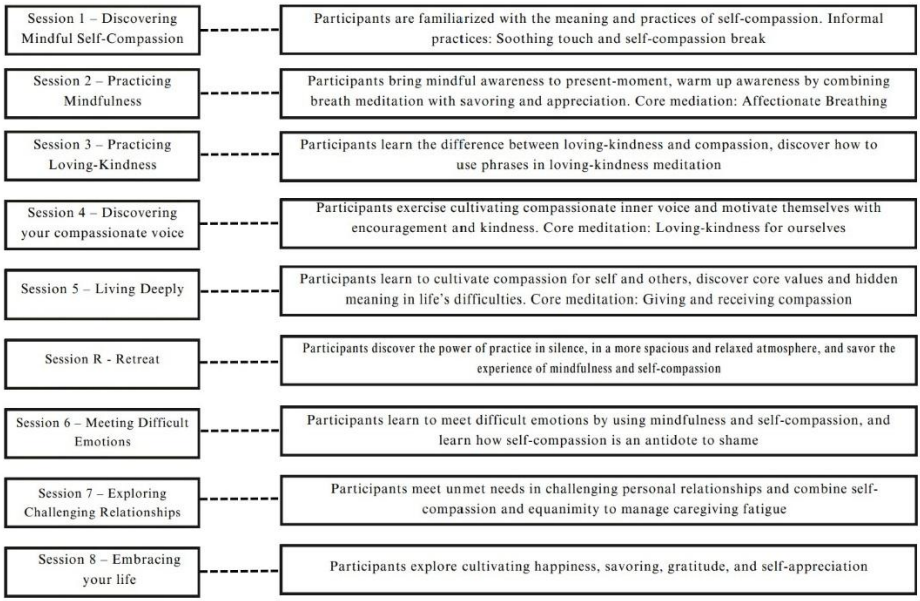
The study was approved by the Ethics Committee of the College of Psychology of the University of Lisbon and by the Ethics Committee of the Federal University of Pernambuco. All participants provided electronic informed consent prior to participation. The consent form detailed the study procedures, ensured data confidentiality, and informed participants of their right to withdraw from the study at any time without consequences. It also clarified that all data were anonymized and identified only by codes, ensuring the protection of personal information. Participants were recruited over 20 days

from Brazilian prenatal care centers. Eligible participants were pregnant women who: (a) were aged 18 years or older; (b) had no serious or acute physical or mental health condition (as identified through the MSC program's self-report screening form); and (c) attended at least six of the eight MSC sessions.

The pregnant women participated in the MSC training course, offered in an online format and conducted from September to November 2023 by two MSC-trained teachers. The sessions took place on Tuesday evenings, from 7:00 to 10:00 pm. In addition to the sessions, the course included exercises to be completed at home throughout the week. The topics of the eight sessions (each session lasted between two and three hours), plus a 3-hour retreat session, are described in Figure 1. The group initially comprised nine participants. One participant decided to withdraw following a miscarriage, and two others were excluded from the study because they missed more than three sessions.

Figure 1

Mindful Self-Compassion Program Sessions



One to two weeks after concluding the MSC, all the participants were interviewed. Individual semi-structured interviews were conducted online by a

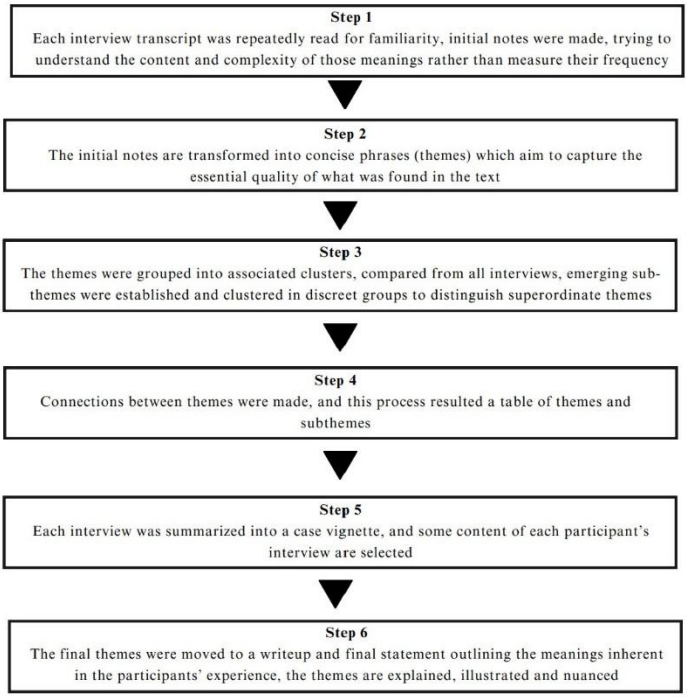
professional experienced in qualitative research interviews, who had no involvement in the MSC course. The interview topics focused on the experience of the MSC course during pregnancy: "Thinking about the MSC…a) How did you experience it? b) What about doing the MSC during pregnancy? c) What were the benefits or difficulties you encountered with the course?"

The interviews were recorded with participants' consent and manually transcribed by the first researcher (CFZ). CFZ also conducted data checking and cleaning to ensure accuracy and completeness. The IPA methodology was used to analyze and interpret the data, as shown in Figure 2. Reflexivity was applied throughout the research process to enhance the study's credibility, transparency, and trustworthiness. Reflexivity involves researchers' continuous reflection on how their own perspectives, experiences, and assumptions may influence data collection, analysis, and interpretation (Smith et al., 2009).

The analysis was conducted by CFZ, a female perinatal psychiatrist and Trained Teacher of MSC, who approached the data with curiosity to understand this group's experience of mindfulness and self-compassion during pregnancy, considering the delicate nature and vulnerability of the gestational period. PV and AMP independently read the transcripts, and the themes and subthemes proposed by CFZ were reviewed and discussed with them. Any suggestions or adjustments were incorporated through discussion until consensus was reached, ensuring reliability and agreement in the interpretation of the data.

Figure 2

Steps of the Interpretative Phenomenological Analysis

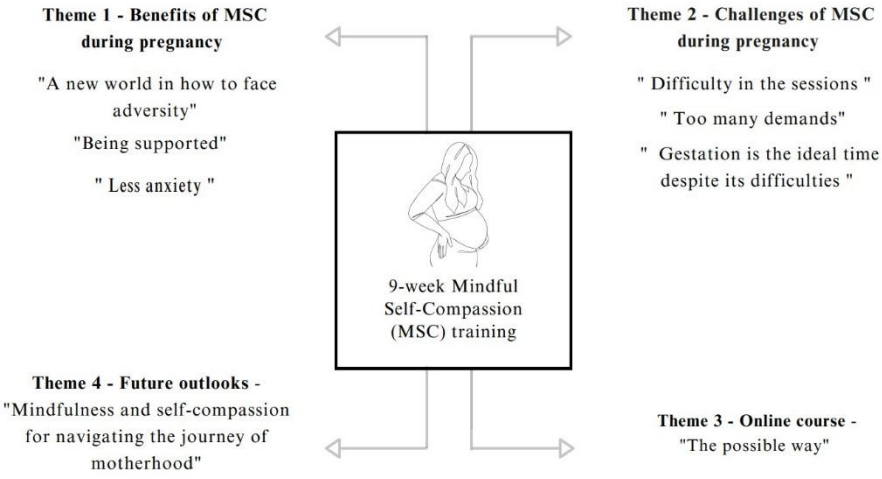


Results

The sample for the qualitative study comprised six women, but one participant did not complete the interview phase. Analysis of the interviews with the five participants resulted in four main themes and their subtopics (Figure 3). These women, with an average age of 33.3 years, ranged from 30 to 36 years old. At the initiation of the training, they were at varying stages of pregnancy, ranging from 18 to 26 weeks (with an average of 20.5 weeks). The majority were first-time mothers. The themes are described below, illustrated with excerpts from participants' narratives. Aliases were assigned to protect participants' confidentiality.

Figure 3

Themes Identified Through Interpretative Phenomenological Analysis



Theme 1: Benefits of MSC During Pregnancy

All participants reported that their experience with MSC was positive, beneficial, or advantageous. It was highlighted as a time of learning. Practicing mindfulness and self-compassion was new to them, which changed their perspective on their actions and how to face suffering.

A New World in How to Face Adversity

Rose considered it a good opportunity to have taken the course during her pregnancy. She highlighted how it helped her discover new ways to cope with life's challenges and aspects of the pregnancy, especially in seeing herself with kindness.

> It was really good for me…To be in the program while being pregnant…To have access to the exercises, training, the group, to be there together. A new world, with a new possibility of how to face situations, face adversities, and to have new internal resources to be prepared for life. I went on to receive several resource keys to deal with adversity. I felt more present in the gestation process. It brought me a better sense of presence, a place of self-compassion, of being more loving towards myself, in this moment of

> pregnancy. I was able to ask myself what I needed and offer it to me. Having a more loving dialogue. (Rose)

Bruna noticed that she was using mindfulness and self-soothing techniques during stressful moments, which she found very helpful.

> When I needed to, I'd use the "support touch" with my hands [referring to her daily life]. I went on to use meditation to control my anxiety and take the time to really savor the food, enjoy my shower, or put my feet on the floor, things that on a day-to-day basis would go unnoticed. (Bruna)

In Júlia's experience, being introduced to mindfulness during pregnancy was like a "seed falling on fertile ground." She learned new exercises, especially in self-compassion. She found herself using meditation, as well as giving and receiving compassion, when she felt the need to change her attitude in a difficult relationship.

> It was wonderful. I loved it. The MSC course embraced me. I hadn't had access to mindfulness, so it was like opening a new world that I hadn't known. We learned an exercise on transmitting compassion to the person we were talking to and to ourselves. This, for me, was very good…and by making use of this, I was able to respond with more love and empathy. I think it's wisdom that many people don't have access to, and sometimes it's like turning the key into being able to live better. (Júlia)

The formal mindfulness training, combined with day-to-day informal exercises, had a significant impact on Marina. Learning to treat herself with the same kindness she would offer a friend allowed her to adopt a more compassionate view of herself.

> Without focusing on the present, the belly keeps growing, and we don't realize it because life is happening. It's important to appreciate the moment, what we are doing, savor the moment, indeed, to live. This impacted my pregnancy. I'm very self-critical, I want to do things perfectly, and pregnancy brings its challenges… It was good to take part in MSC while pregnant. I take a breath and think about how I'd speak to another person in that situation. (Marina)

Sofia saw the MSC course as a valuable opportunity for self-awareness and for gaining tools for self-care. She viewed pregnancy as the perfect time to learn about mindfulness and self-compassion resources.

> The most positive thing was the question of always demanding of myself, of not always treating myself as a friend, and I think this was the main differential for me, and the tools, for example, to practice meditation where we speak phrases of affirmation [Loving-Kindness to ourselves meditation], or writing yourself a letter [Compassionate letter to myself], and this way of self-care was, for me, the biggest watershed moment of the experience. (Sofia)

Being Supported

Three participants stated how important it was to be part of a group with other pregnant women.

> I met new people. We were able to give each other support. It made me feel good. Comfortable. We shared what we were feeling, there were testimonials, and I saw that, regardless of the region, pregnant women many times have the same conflicts. (Bruna)

> My pregnancy has been quite peaceful, and for sure, in part because of participating in this group. Taking the course with the other pregnant women was beneficial to me. This self-care, I think, for me, was a turning point. (Sofia)

Less Anxiety

Many found that engaging in both formal and informal mindfulness exercises helped them manage their anxiety more, allowing them to stay present and fully savor the moment. Rose shared that, "Pregnancy is a great time to take part in the program, for women are more anxious at this time, worried, and all. [She] felt more anxious during pregnancy, so the course came at a good time." Another participant shared:

> It helped me a lot in controlling my anxiety, without the need for other resources. We feel very anxious during pregnancy, the breathing exercises helped me to control it. It was something that I didn't practice before, so I think it was very important. I already had an anxiety condition before getting pregnant….but MSC helped me. (Bruna)

Theme 2: Challenges of MSC during pregnancy

The participants' experience with the MSC program was also affected by challenges like fatigue, discomfort during the sessions, and difficulty completing the training exercises at home.

Difficulty in the Sessions

Most participants reported that physical discomfort and fatigue during pregnancy affected their participation in the sessions. Some had to miss sessions on days they were not feeling well, while others participated by lying down the entire time. Three of them stated that taking the course at night was tiring; they felt exhausted at the end of the session, especially the participant who had come from a full day of work. Two women highlighted the fact that it was quite difficult to remain seated during the 3-hour sessions.

> I feel that I didn't take full advantage of the program with all that it has to offer. I was tired, my body was asking for rest. I think the duration of three hours was too long. I can't stay sitting down for very long like I could before. (Rose)

The experiences of other participants echoed Rose's words. Marina expressed that "In fact, [she] thought the meeting was a bit more tiring because it was on a day that [she] needed to work all day, so the three hours became tiring." While Bruna shared that "There were days that [she] couldn't profit much from the session because I was very tired."

Too Many Demands

All participants reported limited adherence to the exercises at home between sessions, either due to forgetfulness or difficulties managing multiple demands. Bruna expressed, "Because when we are pregnant, our mind becomes more flighty, so there were things that I remembered to do, others that I forgot, and there were things that were registered inside me." Júlia noted, "It was a challenge because a pregnant woman has to reconcile with some demands." Similarly, Rose shared:

> I found it difficult to do the proposed training outside of the session time. For me, it was the feeling of having one more task, one more activity. During pregnancy, we already have a lot going on. Like, you need to do

this, do that, and this. So I didn't want to look at it like a task to be done, I left things more fluid. You know? (Rose)

Gestation is the Ideal Time, Despite its Difficulties

Despite the challenges and difficulties of taking the MSC course during pregnancy, some participants considered that this was, paradoxically, the best time to do so. "On the one hand, being pregnant was a great time to take the course, as it is a period in one's life marked by heightened anxiety," as Rose noted. Júlia reflected that pregnancy made her more open to learning: "I keep thinking, this I can use with my son, and he will benefit. It was like a seed falling on soil that was ready to receive the teachings."

Theme 3: Online Course—The Possible Way

Participants unanimously agreed that the online model facilitated their participation, affirming that they would not have been able to engage in the course had it been held in person. They highlighted its ability to connect individuals across distances, allowing them to access the MSC, which they felt was otherwise inaccessible. One participant noted, "The in-person method does not make me feel like going, because of the drive and everything" (Rose), while another emphasized, "For me, it wouldn't have been possible to do it in person. The online way brought together people from different states. It is totally doable online" (Marina). The online method was also described as not limiting the experience, as expressed by Júlia: "The online method didn't limit the experience" (Júlia). Furthermore, some participants expressed a preference for the online format, underscoring its effectiveness in meeting their needs and preferences.

Theme 4: Future Outlooks—Mindfulness and Self-Compassion for Navigating the Journey of Motherhood

Most participants expressed a strong commitment to continuing the practice of skills acquired in the MSC course, viewing it as an ongoing journey rather than a finite endeavor. Many indicated plans to revisit the material, considering it only the beginning of their exploration. Notably, four participants specifically mentioned their intention to apply the learned techniques after the birth of their baby, anticipating an increased need for mindfulness and self-

compassion during that period. Bruna said, "This is a time of many changes, with more to come, so taking the course while pregnant is one more tool to deal with what we are going through, and especially when the baby is born."

> I already feel that I've incorporated some things. Like, these are things I feel that I want to keep on using. The audios, the exercises, what I learned. I feel that I can keep going back to the material. And I want to do this. (Rose)

> This is a revolutionary path for me and for those around me. I think the hormones have made me extremely loving, more open to learning things, especially I keep thinking, I will use this with my son and he will benefit, especially a course like this, right? So I have already been overcome with positive emotions. (Júlia)

> I was able to [incorporate in my life] more of the informal exercises than the formal ones. But I also think that it's a process; this was just the beginning, we can revisit them. Pregnancy is a sensitive time of many changes, and those still to come, and I think what we learned is a tool to help us in what we are going through, and especially for when the baby is born. (Sofia)

Marina highlighted the importance of mindfulness exercises with her baby. She also noted that learning to set aside time for self-care during the week was very important and expressed her intention to return to this practice after the baby is born: "Mindfulness will impact my being a mother when I'm with the baby. It is important to enjoy the moment we are living in, to savor the moment, actually experience it, to be present in what we are doing."

Discussion

Mindfulness and self-compassion skills bring positive changes to participants' lives and daily routines, serving as readily accessible tools to enhance their well-being and help them cope with life's challenges. Being kind to oneself can signify a shift in how individuals relate to themselves, and the perinatal period may offer a unique opportunity to honor personal boundaries, recognize one's potential, and extend the same compassion to oneself that one would offer to a friend. Approaching moments of suffering with warmth rather than harshness and recognizing suffering as part of the shared human experience can help alleviate overwhelming negative emotions and reduce the

risk of developing psychopathology (Miyagawa & Taniguchi, 2020). Participants described how mindfulness practice enriched their perception and engagement with the present moment, including their awareness of their body and surroundings. Some highlighted the simple act of breathing as a valuable resource for managing stress and anxiety, and for cultivating a sense of presence. By embracing the concept of "being present" and fully immersing themselves in the present moment, they reported a deeper appreciation for life and their pregnancy journey. Moreover, many participants expressed an intention to continue using mindfulness and self-compassion skills after childbirth, particularly as supportive strategies for facing the emotional challenges of motherhood and nurturing a more mindful and compassionate connection with their babies. This allowed them to savor each moment more fully, with fewer distractions, less agitation, and reduced uncontrolled worries or ruminations, whether the experiences were pleasant, unpleasant, or neutral (Brandmeyer & Delorme, 2021; Tang & Posner, 2013).

The benefits highlighted in the participants' accounts are particularly relevant, given that during the perinatal period, women commonly experience excessive worry, fear, high self-expectations, and negative thoughts about motherhood, identity, and their abilities as mothers (Cantilino & Zambaldi, 2020). Feelings of shame and self-criticism often accompany these thoughts (Beato et al., 2022). Many women, even without a diagnosed mental illness, may see themselves as inadequate for motherhood, or struggle with idealized expectations of the maternal role, have concerns about others' judgments, self-shame, or doubts about their self-worth. The experience of shame—characterized by negative self-evaluation, identity judgment, and feelings of being bad, inferior, or unworthy—is common in motherhood (Caldwell et al., 2021). Many women compare themselves unfavorably to the ideal of a "good mother," perceiving themselves as bad, inadequate, or insufficient (Law et al., 2021). Mindfulness and self-compassion skills can be a transformative experience in this context. Some authors have highlighted that self-compassion acts as a buffer against dysfunctional attitudes and beliefs about motherhood (Fonseca & Canavarro, 2018; Xavier et al., 2023), potentially alleviating symptoms of perinatal depression and anxiety (Felder et al., 2016; Guo et al., 2020; Townshend & Caltabiano, 2019).

Participants in this group reported that the MSC group provided valuable emotional and social support. They described the feeling of being understood and the sense of belonging within the group, as participants recognized that

they were navigating similar challenges. This sense of shared experience helped alleviate feelings of isolation and loneliness, mitigating the sense of loneliness often associated with adversity (Neff, 2017). Many mothers found it beneficial to hear their peers' experiences and advice regarding self-care, coping with mental health challenges, and parenting issues. Peer support is recognized as a potentially effective strategy for preventing depression, reducing isolation, and enhancing confidence in motherhood (Fang et al., 2022; McLeish et al., 2023). Although the MSC is not specifically a peer support group, it appears to have fostered shared experiences and validated them, providing a space for sharing, learning, and skill development that helped mothers feel more connected and empowered in their maternal journey.

We identified several factors that hindered pregnant women's comfort and full adherence to the 9-week MSC course format. The weekly sessions, which lasted three hours with short breaks, were particularly taxing due to physical fatigue, discomfort, and the challenge of prolonged sitting. Participants often felt overwhelmed by the numerous demands of pregnancy, including medical appointments, tests, dietary considerations, physical activity, supplementation, and preparations for the baby's arrival. Many women missed one or two sessions due to physical discomfort, and several also did not complete the home exercises for the week. During discussions, they expressed a compelling perspective: on one hand, they felt that at another time in their lives, they might have been able to participate more fully in the course. On the other hand, they recognized that pregnancy seemed to be an ideal time for MSC courses, particularly because it is a period when they are open to change and developing psychological resources that will benefit both them and their future child.

The MSC program can be conducted either in-person or online. While some participants noted potential advantages of attending an in-person course, there was a unanimous agreement that, given their current life circumstances, the online format was the only feasible option for participation. This group included women from various Brazilian states, making in-person meetings impractical. The online and digitally delivered interventions during the perinatal period are feasible, providing flexibility, reducing time and travel demands, and improving accessibility. The direct comparisons between face-to-face and online interventions in the perinatal period remain limited, but emerging evidence suggests that digitally delivered programs can be as effective as, or even more effective than, traditional in-person formats in reducing symptoms of anxiety and depression (Ashford et al., 2016; Davis et

al., 2023; Lau et al., 2021). It is also important to recognize that the widespread implementation of online and digitally delivered interventions demands careful attention to potential challenges. These include unequal internet access and device availability, limited digital literacy, competing childcare and work responsibilities, privacy and confidentiality concerns, and possible reductions in engagement compared to face-to-face formats.

Strengths and Limitations

This study makes a unique contribution to the growing literature on mindfulness and self-compassion interventions in the perinatal period by providing qualitative insights into women's lived experiences of the MSC program in a Brazilian context, a setting where such interventions remain underexplored. The findings shed light on the practical barriers pregnant women face when engaging in structured interventions, including fatigue, time constraints, and competing responsibilities. Acknowledging this high rate of disengagement is essential, as it highlights both the logistical and emotional challenges of participation and underscores the importance of developing more flexible, context-sensitive delivery models. At the same time, the successful engagement and reported benefits among those who completed the program suggest the MSC's potential feasibility and acceptability during pregnancy, positioning this study as a valuable step toward adapting and implementing compassion-based interventions for maternal mental health across diverse cultural and socioeconomic contexts.

We believe this study can serve as a starting point for exploring potential adaptations of the MSC program to better accommodate pregnant and postpartum women. Although our findings do not yet provide sufficient evidence to propose specific modifications, they offer valuable insights into possible directions for adjustment. For instance, shorter session durations, fewer home practices, and exercises that do not require prolonged sitting positions could enhance accessibility and comfort for pregnant participants. Future research should systematically examine these possibilities and investigate the long-term effects of MSC practice on maternal well-being.

Some limitations must be acknowledged. The sample consisted of only five participants, consistent with the idiographic focus of IPA but limiting the transferability of findings to broader populations. Additionally, one participant withdrew from the interviews, and there was a notable rate of non-completion

of the minimum required MSC sessions, reflecting the practical and emotional difficulties of sustained engagement during pregnancy. Although this did not compromise the methodological adequacy of the IPA approach—which values depth over breadth—it may have influenced the diversity of perspectives represented. Furthermore, data interpretation in IPA is inherently shaped by the researcher's reflexivity and interpretative stance, which, despite efforts to ensure rigor and transparency, may introduce subjective bias. Future studies employing mixed-methods or longitudinal designs could complement these findings and expand understanding of MSC implementation in perinatal populations.

Conclusion

The findings underscore the transformative potential of Mindful Self-Compassion training during pregnancy, highlighting its capacity to enhance emotional resilience, foster self-kindness, and improve coping strategies for navigating the challenges of the perinatal period. While participants reported meaningful benefits from cultivating mindfulness and self-compassion skills, they also faced challenges related to physical fatigue and the logistics of the course format. Although these findings suggest that MSC could be a valuable complement to prenatal care, further studies are needed to explore how adaptations in program delivery might enhance feasibility and effectiveness across different populations and contexts.

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"Brought Me Back to Life": An Evaluation of the North Cumbria Maternal Mental Health Service

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Birth trauma and pregnancy-related distress are common issues for women and birthing people. The North Cumbria Maternal Mental Health Service (MMHS) was established in March 2022 in direct response to the NHS (NHS, 2019a), which called for the implementation of regional maternal mental health services and support networks. This paper evaluates the performance and effectiveness of the North Cumbria MMHS during the 2023–2024 financial year, taking into account local and national challenges and their clinical implications. Patient outcome data, collected using the Clinical Outcomes in Routine Evaluation 10 and the Warwick–Edinburgh Mental Well-being Scale, were analyzed to assess service effectiveness across 2023–2024. A thematic analysis was conducted of all qualitative patient feedback. A Wilcoxon signed–rank test showed a significant reduction in psychological distress and a significant increase in mental well-being post-intervention (p = .005). Most participant feedback was positive, and thematic analysis yielded five key themes: the importance of the therapeutic relationship, gratitude, the return to self, tools for moving forward, and areas for improvement. In conclusion, notable improvements in post-treatment outcomes were observed, and patient feedback was overwhelmingly positive. The data indicate that, despite

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significant challenges, the North Cumbria MMHS provides a vital and effective service to women and birthing people, offering unique insight into regional MMHS operations.

Keywords: maternal mental health, maternity, maternal, NHS, perinatal mental health, birth trauma, perinatal loss, Ockenden

Birth trauma and pregnancy-related distress are increasingly common issues experienced by women and birthing people across the United Kingdom (UK). Findings show that as many as 4-5% of individuals go on to develop clinically relevant post-traumatic stress disorder (PTSD) following childbirth, equating to between 25,000 and 30,000 women each year (The All-Party Parliamentary Group on Birth Trauma [APPGBT], 2024). Importantly, high rates of comorbidity have been observed between PTSD and postpartum depression, which can have a severe impact on women and their families, potentially impairing maternal-infant bonding and indirectly affecting infant health (Dekel et al., 2017; Williams et al., 2016). These issues also impose a substantial economic burden on society, estimated at £8.1 billion annually for each birth cohort in the UK (Bauer et al., 2014). This, therefore, represents a large population that may require some form of specialist psychological treatment.

In 2018, NHS England and NHS Improvement (NHSEI) ran consultation events with a range of perinatal and maternal health partners and stakeholders, ahead of the NHS Long Term Plan's publication. A significant finding was that some women with moderate-severe or complex psychological needs linked with their maternity experience were falling through the gaps in existing service provision and failed to meet the criteria for community perinatal mental health services. It was posited that these women needed specialist psychological support beyond that provided by Improving Access to Psychological Treatment (IAPT), counseling, and bereavement services. Thus, the development and implementation of regional Maternal Mental Health Services (MMHSs) were proposed in two major policy documents to address this unmet need (NHS, 2019a; NHS, 2019b).

However, national concerns about the standard of maternity care are longstanding and have been brought into sharp focus in recent years. For example, the seminal findings of the final Ockenden report (Department of Health and Social Care, 2022) highlighted numerous areas for improvement to

maternity services across England, including the integration of regional MMHSs and access to "timely emotional and psychological support without the need for formal mental health diagnosis" (p. 175). Notably, this was to be accessible to mothers, partners, and families and be delivered by psychological practitioners with specialist expertise and training in maternity care. Further, the report stated that all trusts should ensure that midwives responsible for coordinating a labor ward setting attend training to aid in advanced decision-making, with consideration for psychological health playing a key role.

Most recently, the APPGBT (2024, p. 45) heard evidence that the provision of maternity services is "very much a postcode lottery", with many having been unsuccessful in accessing mental health support due to a failure to recognize PTSD symptoms, services refusal to accept women who were not ill enough or, in some cases, too ill, and exceedingly long wait lists with no interim support available. In other cases, it was reported that women who did receive therapeutic input were often treated by psychological practitioners with no experience of working with birth trauma, leading to an immediate increase in distress. As such, despite repeated calls for the provision of specialist mental health support, the level of care for this population appears to remain largely unsatisfactory and inequitable.

Nevertheless, despite the introduction of maternal mental health teams across all NHS England localities, these services face specific challenges that can act as barriers to treatment (NHS, 2019a). For example, the APPGBT (2024) stated that 73% of these teams reported underfunding in the 2022-23 financial year and that they experienced significant difficulties securing continuous funding to ensure future service provision. Consequently, this has brought about major staffing challenges, exacerbated by the somewhat rapid creation and implementation of these services across the country. These issues can directly affect patient care, a pressing example being funding issues that result in trouble recruiting and retaining full-time staff, contributing to burnout among existing team members and increased wait times for service users during a period of life where they are uniquely vulnerable. As such, it is clear that the impact of financial decisions made at an organizational level is of key consequence to the delivery of MMHSs, available resources, and the quality of care the service is or feels able to provide.

As mentioned, a key step taken to address concerns in maternity care is the establishment of regional MMHSs, tasked with providing treatment and support for mental health difficulties arising from pregnancy and childbirth

(APPGBT, 2024). In direct response to these recommendations, the North Cumbria Maternal Mental Health Service (MMHS) was launched in March 2022. The service integrates psychology into maternity and gynecology, delivering evidence-based psychological assessments and therapy to women and birthing people with emotional difficulties that relate to, or arise from, pregnancy and childbirth. This includes birth trauma, loss, and fears and phobias impacting maternity care. The North Cumbria MMHS also aims to contribute to the supervision and training of maternity staff in psychological skills and trauma-informed care. The service sits within the Physical Health and Rehabilitation Psychology (PHRP) service and is funded for 1.4 whole-time equivalent (WTE) staff members. However, during 2023-2024, several staff configuration changes occurred at the MMHS due to maternity leave. In this case, appropriately qualified cover was achieved through external recruitment and transfer of staff from other PHRP pathways. As such, professionals working in the MMHS included Senior Clinical Psychologists, Senior Counseling Psychologists, and Cognitive Behavioural Therapy (CBT) Therapists.

This article examines data collected by the MMHS team in North Cumbria during the 2023-2024 financial year and considers patient outcomes and anecdotal experiences. It is our view that the North Cumbria MMHS provides a good case study for demonstrating the practical challenges of daily maternal mental health care whilst still delivering a high level of patient care. We will discuss how we have dealt with challenges encountered thus far, the perceived impact of these difficulties on patient outcomes, and consider how the North Cumbria MMHS may provide examples and learning opportunities for other maternity services, alongside further improvements to our own practice.

Methods

The data was collected over the 2023-24 financial year. The geographical region covered was North Cumbria (Figure 1). In this area, there are three NHS birthing venues: Cumberland Infirmary, West Cumberland Hospital, and Penrith Birthing Centre. According to as-yet-unpublished data from Family Services at North Cumbria Integrated Care, a total of 2,516 babies were born to 2,483 women across these sites during this period.

Figure 1

Map of North Cumbria (Shown in Light Gray)

Note. Reprinted from Primary Care Services North Cumbria. (2017). Where is North Cumbria? https://www.primarycarenorthcumbria.co.uk/about-us/place

The North Cumbria MMHS received 156 referrals overall, of which 139 were accepted, and 93 were assessed and treated. The average age of service users referred was 30.71 years. The majority of those referred identified as White British. Of the initial 156 referrals received, 56% of individuals had previously accessed some form of mental health service, with IAPT being the

primary source of prior support. Approximately 52.48% of those referred were based in Carlisle, 21.28% were referred from Allerdale, and 14.89% and 11.35% were referred from Eden and Copeland, respectively.

Service users can be referred by any member of their maternity care team or another healthcare professional. Referral sources consisted mainly of midwives, perinatal mental health midwives, and GPs. A full breakdown of referral reasons is shown in Table 1. It is noted that 17 referrals lacked a clear reason, including some that were missing and others that were unclear or vague.

Table 1

Reason for Referral into MMHS (n = 156)

Referral reason	Count
Anxiety about pregnancy and childbirth	10
Birth trauma	69
Fear of childbirth	11
Fear of hospital environment	1
Medical termination of pregnancy	4
Miscarriage	21
Multiple IVF attempts or assisted pregnancy	2
Neonatal death	6
Stillbirth	1
Foetal abnormalities	2
Other	12
No clear reason	17

Intervention and Outcome Data

Several treatment modalities were offered to service users, including one-to-one Cognitive Behavioural Therapy (CBT), Eye Movement Desensitisation and Reprocessing (EMDR), and Compassion Focused Therapy (CFT), with some service users being offered more focused support around birth planning and preparation. Indirect work was also carried out where appropriate, mainly via group case discussions, care coordination, and MDT working. Assessment and treatment were carried out via several different mediums, including face-to-face, video conferencing, and telephone. Overall, the service had an average

referral-to-assessment time of 43 days and an average assessment-to-treatment time of 33 days.

Outcome data were collected both pre- and postintervention using two measures validated for routine use: the Clinical Outcomes in Routine Evaluation-Ten-Item Version (CORE-10; Barkham et al., 2013) was used as a measure of psychological distress, with scoring categories shown in Table 2. The Warwick–Edinburgh Mental Well-being Scale (WEMWBS; Tennant et al., 2007) was used as a measure of general mental well-being. Service users were also invited to complete a service feedback measure, developed internally by the MMHS team, once their work with the service had ended. This measure comprised both qualitative and quantitative items, with the latter optional. For this evaluation, both outcome data and service feedback from the 2023–24 financial year were analyzed.

Table 2

CORE-10 Scoring Categories

Score	Descriptor
0-5	Healthy
6-10	Low Level
11-14	Mild
15-19	Moderate
20-24	Moderate-to-Severe
25+	Severe

Regarding the qualitative data, a thematic analysis was conducted by one of the authors (CM) to identify recurrent themes regarding how individuals experienced the MMHS and what was most important to them. This process followed that outlined by Braun, Clarke, Hayfield, and Terry (2019), consisting of 6 reflexive phases: Familiarisation with raw data, inductive generation of codes, construction of themes, revision of themes, defining themes, and producing the final report. This data was collected via anonymous surveys sent to clients following the conclusion of their treatment with the team, which asked them to rate and describe their experience.

Results

In total, 12 completed sets of pre- and postintervention outcome measures were collected, with results indicating largely positive change (Table 2).

Table 3

Median Outcome Measures Scores Pre-Intervention and Post-Intervention (n = 12)

Outcome measure	Pre-intervention median score	Post-intervention median score	Median Difference Estimate	Effect Size (95% confidence interval)
CORE-10	14.00	4.50	7	-1.24 (-2.17- -0.37)
WEMWBS	40.00	55.00	-12.5	1.58 (0.67- 2.5)

To determine whether there was a statistically significant difference between pre-intervention and post-intervention outcome scores, a Wilcoxon signed–rank test was performed, which indicated a statistically significant decrease in CORE-10 scores post-intervention (Table 3), with a large effect size. With median scores falling from 14 to 4.50, as higher scores suggest greater distress or symptom severity, these results show a significant decrease from moderate-severe psychological distress to low levels. Here, only one negative rank was observed compared with nine positive ranks, suggesting that the majority of service users recognized a decrease in psychological distress post-intervention. For two cases, no difference in scores was seen, with psychological distress remaining at low and moderate levels.

Likewise, as shown in Table 3, a significant increase in WEMWBS scores was observed post-intervention, with a median increase of 40-55. The effect size was again large. Higher WEMWBS scores indicate greater positive mental well-being, with the results suggesting improvement post-intervention. In this case, no negative or tie ranks were observed, and all service users reported post-intervention increases in positive mental well-being.

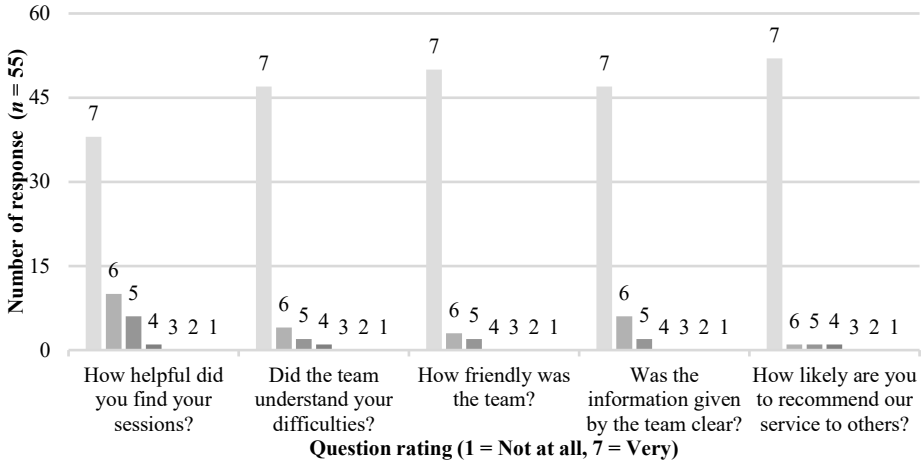
Quantitative Service Feedback

As previously stated, 55 service users provided quantitative service feedback at various points in their journey through the North Cumbria MMHS (including during and after the intervention). Scores for quantitative items

ranged from 1-7, whereby 1 indicated “Not at all” and 7 indicated “Very”. Feedback was largely positive, with the majority of respondents answering 7 to each question (Figure 2), suggesting that the service is providing a valuable resource. Service users consistently reported that their sessions were helpful, the team was friendly, and their clinician understood the difficulties they were experiencing.

Figure 2

Quantitative MMHS Patient Feedback (n = 55)



Further, service users were asked to share what they felt the North Cumbria MMHS currently did or delivered well, with key responses including helping patients understand their difficulties, giving them hope, and empowering them to make decisions about their care (see Table 3). For those who selected “other”, service users reported that the MMHS had “made [them] feel heard and understood,” “helped [them] feel [their] power and worth again” and “brought [them] back to life.” For a complete list of “other” responses, see Appendix.

Qualitative Patient Feedback

In total, 41 service users provided qualitative feedback for the MMHS about what they felt the service did well and any other comments or feedback on their experience. Thematic analysis of these responses revealed five

prevalent themes: The importance of the therapeutic relationship, gratitude, the return to self, tools to manage moving forward, and areas for improvement.

The Importance of the Therapeutic Relationship

The first theme identified was the importance of the therapeutic relationship, specifically how individuals were made to feel by practitioners and how they perceived staff's attitudes towards them and their difficulties. Overall, MMHS staff were regarded as "incredibly kind and supportive" and helped individuals to "feel understood, respected and safe." The majority of comments received centered on the "amazing work by caring and compassionate health workers" who were "exceptionally approachable and made [them] feel very comfortable." In particular, service users reported the service helped to validate their experiences and "feel that [their] worries and fears weren't irrelevant or unjustified; that they weren't just silly things."

Other key elements included service users feeling able to "talk freely about [their] experiences in a safe space," being "given the time…to process events that had happened" and being "guided by exactly the right person who understood maternal struggles and [their] complexity." Service users felt that "communication was good and appointments were made to suit [their] needs and availability," which helped them access appropriate support. One service user remarked, "Very friendly member of staff working with myself who I felt comfortable talking to and sharing my worries and fears." With another expressing a similar sentiment, "This service was fantastic. [Practitioner] was brilliant. I felt like I had someone to go to." The supportive attitudes of clinicians were highlighted by another who stated, "The support provided by the service has been invaluable. [Practitioner] has shown kindness, patience, and understanding at a time when I have felt my lowest."

Gratitude

The second theme identified was the gratitude individuals expressed for the support offered by the MMHS and how it has "truly been a lifeline at a time of need." Service users spoke of being "eternally grateful" for a service they viewed as "essential" and credited the approach of "getting to the root of the issue" as vital to their journey. Further, it was commonly noted that individuals "don't know where [they] would be right now" without the service's input and felt it "got [them] to a place [where they] felt [they] could cope." Importantly,

the feedback highlighted that individuals "couldn't have asked for a better experience" and would "highly recommend the service" to others in a similar position.

> I cannot thank this service enough at a time when a lot of avenues plus services post-natally had not managed to stop a downwards spiral; she not only stopped it but helped me to climb out of the hole with many new skills. Motherhood is a hard journey made a lot easier with the support and guidance of this service. (P47)

The vital role of the interventions offered by the MMHS was also remarked on, "I cannot thank my psychotherapist enough. The EMDR therapy I received has been paramount in my recovery, and I am so grateful this service is available."

The Return to Self

The third theme identified was the return to self, underscoring the transformative effects of the work completed in allowing individuals to reclaim their lives and feel more in control. Several service users detailed how their experience "had been truly life changing" and had "brought [them] back to life. [Giving] my husband his wife back and my babies their mummy back." This extended into individuals feeling like they were "now the person [they] wanted to be" and that the work had "helped [them] reclaim life and control" to "feel [their] power and worth again."

The role that the MMHS played in patients' recovery journey was described as one as "They scooped me up at my lowest and turned things around for me… After six months of hell, I'm finally back to me again and enjoying the last part of my maternity leave."

Another patient spoke of the role the MMHS played in allowing them to have a positive experience following the birth of their child. "It was truly life-changing, and I appreciated the support through my latest pregnancy. We finally welcomed our little daughter, and it is because of this service that I felt ready for this little wonder with an open heart" (P50).

Tools to Manage Moving Forward

The fourth theme identified relates to individuals learning particular tools and being given tangible resources to take away in order to help them move

forward. Specifically, individuals reported that they were given "good strategies to take away," focusing on emotional regulation, teaching them "how to cope with feelings [and] to prevent them from escalating in the future," and to "detangle [their] thoughts and feelings and get a better understanding." Service users also felt they were given a valuable "understanding [of] how the brain works," with one noting that their practitioner "explained how the brain is working and what is going on when [they] have flashbacks and PTSD symptoms." In addition, others reported that their sessions had "really helped [their] communication with loved ones," which had a positive impact on wider family dynamics and improved understanding of their experience in those around them.

> I am hopeful this will give me the skills going forwards to manage with life's difficulties without it taking hold of me as it has in the past. I hope that I will now not struggle in the same repetitive way. (P47)

One service user described the importance and effect of these strategies as helping them "tremendously to deal with previous trauma relating to pregnancy loss. I gained valuable understanding about my feelings and coping mechanism and we were able to develop strategies and move through grief."

Areas for Improvement

The final theme identified was areas for improvement. A total of four suggestions were made by service users, two of which related to the Birth Reflections service, which sits separately from the North Cumbria MMHS. The complaints in this instance related to long wait times and the wish for it to be integrated into the MMHS, with suggestions that "1 or 2 debrief style session[s] in the first few weeks" with Birth Reflections should precede any input from the MMHS.

> I also want to chase an appointment with a midwife to go through my notes, formerly known as the reflections service. It has been 8 months since I first requested this. I feel like the answers I need and the opportunity to speak to a midwife will help me through my trauma, along with therapy sessions. For me, they need to coincide. (P9)

> CBT has been brilliant, but I was first told I would receive a 2-step approach: CBT alongside my reflections, which I requested 16 months ago now. I am yet to hear from the reflections service despite chasing. I am

> really disappointed, as this is the last step in my healing, and I really need that closure to be able to move on. (P21)

This comment by P21 highlights the overall difficulties faced in maternal mental health care. While the service offered valuable input, wait times and experiences across the NHS can be further areas for improvement; raised was the need for more communication about appointment waiting times. Here, one patient reported that her practitioner "had to take time off work due to illness but then did not respond to [their] message after returning to work for 2 weeks." As such, this patient felt that they had "to chase to find out [their] next appointment" and "was left in limbo for 5 weeks and felt almost worse than before [they] started [their] therapy."

Lastly, two individuals suggested "open up to dads too," indicating a desire for the MMHS to expand its inclusion criteria to include fathers and partners who may have experienced difficulties throughout the maternity journey.

> I also think it would be beneficial to include partners/husbands in some way. In my experience, the trauma from the birth of our first child impacted my partner hugely too; therefore, if they could be incorporated, it would be brilliant. (P42)

Discussion

A Wilcoxon signed–rank test showed significant differences in outcome measure scores post-intervention with the North Cumbria MMHS. Specifically, a significant decrease was observed in scores on the CORE-10, indicating a reduction in psychological distress and symptom severity following MMHS input. In addition, a significant increase in WEMWBS scores was observed post-intervention, suggesting improved mental well-being. These results, alongside quantitative service user feedback speaking to sessions being regarded as helpful and clinicians as sensitive and understanding, support the clinical relevance of the North Cumbria MMHS in making meaningful change to the lives of service users. However, at this time, we are unable to provide any estimates of general cost savings attributable to this work, as healthcare usage proved difficult to accurately cost and calculate for this clinical population.

The service benefits are further demonstrated by the thematic analysis of qualitative feedback, which revealed key themes: the importance of the therapeutic relationship, gratitude, the return to self, tools to manage moving

forward, and areas for improvement. These insights provided valuable information on service users' views of the care they received from the North Cumbria MMHS. In summary, these findings highlighted that the quality of therapeutic relationships was foundational to all work undertaken and that this dynamic, rooted in kindness and compassion, allowed service users to feel understood, safe, and respected. The authors believe that this paved the way for positive appraisals of working with the MMHS, with service users reporting that the input received was essential to their recovery journey and enabled them to reclaim aspects of their lives and identity they believed had been lost. Service users also reported learning helpful tools and being given tangible resources, which aided their ability to emotionally regulate, communicate more effectively, and improve their understanding of their experience. Finally, four areas of improvement were suggested by service users: the desire to see the North Cumbria MMHS work more closely with the NCIC Birth Reflections service, better communication surrounding expected waiting times, and the expansion of our criteria to include fathers and partners.

A key recommendation from the final Ockenden report was timely access to psychological support, with personalised input for those with complex needs to be delivered by specialist practitioners experienced in maternal mental health care (Department of Health and Social Care, 2022). The authors argue that the North Cumbria MMHS meets both identified needs, as evidenced by positive patient feedback. Despite the majority of referrals being related to birth trauma, the service has helped women who have experienced a variety of birth and pregnancy-related difficulties. All of those accepted into the MMHS received specialist, individualised care from a qualified Clinical Psychologist or Cognitive Behavioural Therapist, with targeted support and psychoeducation being provided by Assistant Psychologists, where clinically appropriate. This offer demonstrates that the service is operating in line with the recommendations outlined in the NHS Long Term Plan (NHS, 2019a) regarding access goals for mothers.

Importantly, all feedback received by the North Cumbria MMHS has been overwhelmingly positive, with a consensus that the service has delivered an important and beneficial intervention in a timely manner. However, areas for improvement noted by service users noticeably centered on elements outside of the service's immediate control, given current provisions. For example, feedback highlighted the lack of support for fathers and partners who have been impacted by pregnancy and/or childbirth. This is also reflected in the final 2022

Ockenden report, which highlights that services ought to provide timely psychological support to all those impacted by the maternity journey, including partners and families (Department of Health and Social Care, 2022). This is an area that the North Cumbria MMHS team is aware of, and staff do attempt to signpost to appropriate support where possible. However, despite recognising the growing need, the service does not routinely provide care for this group at present, due to limited resources. Findings show that witnessing a partner's birth trauma can have a significant impact on the observer's mental health and relationships in the postnatal period. Yet, no nationally recognized support is in place for fathers (Daniels et al., 2020). As such, we recommend that voluntary and third-sector services be supported and adequately funded to fill this gap. It is also important to recognize the wait experienced by one service user and the effect that this was reported to have, as quoted above. The service aims to see all users in a timely manner; however, at times, factors such as clinician availability or geography may result in some waiting longer than others. Waiting times across the NHS as a whole have increased in recent years, and this, coupled with the previous challenges of operating in North Cumbria, provides further arguments for adequate funding.

Clinical Implications

The North Cumbria MMHS has faced several challenges since its inception. For instance, North Cumbria has a large geographic footprint, which can present a significant barrier to access, as clients may be based at substantial distances from clinical hubs and may be unable to travel independently or rely on public transport. As such, the service has had to operate as flexibly as possible, offering remote therapies, such as CBT and EMDR, via telephone and video conferencing to reduce the "postcode lottery" observed at a national level (APPGBT, 2024).

The size of the service itself has posed an additional challenge, with funding secured only for 1.4WTE members of staff. The number of referrals the North Cumbria MMHS received during the study period was almost triple the anticipated number when the service was established, with the access rate nearly double the target. This indicates that current commissioned funding is insufficient, with staff from the wider PHRP team being asked to contribute their available clinic time to meet demand—an unsustainable option moving forward. Importantly, this has wider implications for whom the service can offer

provision to, given limited resources due to suboptimal staffing numbers, resulting in difficulties offering new patient assessments or longer-term, direct psychological input. This is also compounded by referrals for service users who are quickly approaching their estimated due date and therefore require prioritisation. In practice, this means that those who may have been waiting for input from a qualified practitioner may be further disadvantaged, reinforcing the need for adequate funding to enable the service to meet local needs.

Limitations

The most notable limitation of the present review is the lack of pre- and postintervention outcome measures that were completed and returned by service users. It was initially thought that the low number of outcomes collected may be predominantly due to clinician error. For example, it is not uncommon within the North Cumbria MMHS to complete an extended period of assessment or for service users to have their baby before the work reaches a formal conclusion. As such, this may mean that clinicians could forget to complete the outcome measures at either point or may not have the appropriate opportunity to administer them. There is also a risk of response or self-selection bias in the feedback reported, with those who had positive experiences possibly more likely to respond than those who did not. Furthermore, patient experience data were collected at various points in the patient journey (including during and post-intervention), which may pose a further limitation.

It must also be recognised that, as mentioned above, the sample size of both outcome measures ($n = 12$) is small and, as such, the statistical power and generalizability of this may be limited. In a bid to combat this, strides were taken to make digital distribution the primary method of outcome collection. However, a poor response rate to outcome measures sent via text message or email has been observed. In response, further steps have now been taken to minimise this issue moving forward, including the introduction of reminder messages for those who do not respond. The importance of collecting outcome measures regularly has also been emphasised to clinicians working within the MMHS.

Conclusions

This evaluation shows that the North Cumbria MMHS provided effective mental health care to women across the region who have experienced birth and

pregnancy-related difficulties over the 2023-24 financial year. Significant improvements in psychological distress and overall well-being were observed post-intervention (p = .005), and qualitative patient feedback was overwhelmingly positive, highlighting the qualities of the therapeutic relationship as being key to the work completed and in allowing women to feel more like themselves. Despite covering a large geographic area, the service successfully utilised communication technologies to ensure that appointments were widely available and access was equitable. Further, despite the challenges identified in collecting pre- and postoutcome measures, steps have been taken, and efforts are ongoing to improve data collection for future years.

These efforts include sending reminder messages for digital reporting and building outcome measures into the digital record-keeping process, prompting clinicians to complete the CORE-10 and WEMWBS as part of their note-taking and reporting. Recently, calls for drastic improvements in maternal mental health care at a national level have been made. Based on the current findings, the authors would argue that the North Cumbria MMHS provides a sufficient model for other MMHS services moving forward and demonstrates the importance of offering specialist, timely, and person-centered psychological intervention to women experiencing difficulties in the perinatal period.

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Behavioral Activation and Postpartum Mental Health among Mothers During the COVID-19 Pandemic

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The current study examined whether behavioral activation strategies, characterized by engaging in activities that promote well-being, such as exercise and mindfulness practices, during the COVID-19 pandemic, were associated with postpartum depressive and anxiety symptoms, and whether mental health diagnoses during pregnancy moderated these associations. Participants were 351 mothers of infants aged 8-10 months, drawn from the Perinatal Experience and COVID-19 Effects (PEACE) Study. Participants completed baseline and follow-up surveys via REDCap, assessing demographics, maternal mental health history, depressive and anxiety symptoms, and behavioral activation. Among participants, 29.7% reported clinically relevant depressive symptoms and 19.5% reported generalized anxiety symptoms; 12.8% reported a depression diagnosis and 19.4% reported a generalized anxiety diagnosis. Behavioral activation was associated with fewer postpartum maternal mental health symptoms. Mental health diagnoses during pregnancy were positively associated with postpartum mental health symptoms within this pandemic cohort. Importantly,

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depression diagnosis during pregnancy moderated the association between behavioral activation and postpartum mental health symptoms, with more behavioral activation linked to lower symptomatology, particularly for mothers with a depression diagnosis. Behavioral activation through work during the pandemic was associated with fewer postpartum mental health symptoms, especially for mothers with a depression or anxiety diagnosis. Engaging in behavioral activation may mitigate postpartum mental health symptoms among mothers with mental health diagnoses during pregnancy. Interventions that promote behavioral activation may enhance maternal resilience during crises.

Keywords: maternal mental health, depression, anxiety, diagnosis, behavioral activation, COVID-19 pandemic

The COVID-19 pandemic has impacted individuals globally, with mothers of infants facing specific challenges, including work-from-home demands, concerns about the virus, difficulty accessing childcare, sleep problems, and job insecurity (Kinser et al., 2021; Kracht et al., 2021). Such stressors during the pandemic are linked to increased maternal depressive and anxiety symptoms (Racine et al., 2021). Although individuals with pre-existing mental health conditions may be more vulnerable to the pandemic's psychosocial effects (Pfefferbaum & North, 2020; Sanchez et al., 2023), less is known about behavioral activation (e.g., engagement in meaningful or rewarding activities) brought about by the pandemic and how behavioral activation interacts with pre-existing mental health diagnoses to impact maternal well-being. This study aims to investigate associations between behavioral activation during the pandemic and postpartum maternal mental health among mothers with a depression or anxiety diagnosis during pregnancy. The findings may inform prevention and intervention strategies for enhancing maternal mental health during global health crises like the pandemic.

While most studies have focused on the negative impacts of the pandemic (Cameron et al., 2020; Chaves et al., 2022; Liu et al., 2021; Mata et al., 2021), some studies have reported behavioral activation that individuals engaged in response to the pandemic, such as spending more time with family, paying more attention to personal health, and increasing physical activity (Büssing et al.,

2021; Cornell et al., 2022; Williams et al., 2021). A small number of studies have investigated the association between behavioral activation during the pandemic and mental health in a general perinatal population (Davenport et al., 2020; Phipps et al., 2023). For example, Davenport et al. (2020) found that perinatal women engaging in more physical activity during the pandemic were associated with lower depressive and anxiety symptoms. Similarly, Phipps et al. (2023) indicated that for pregnant women, increasing physical activity could be a way to decrease anxious-depressive symptomology during a pandemic. Several studies showed that behavioral activation, e.g., adopting coping strategies, was associated with better psychological health during the COVID-19 pandemic (Fullana et al., 2020; Lubis et al., 2024; Shamblaw et al., 2021). However, less is known about the impact of behavioral activation during the pandemic on maternal mental health, especially for those with a mental health diagnosis.

Mothers with a mental health diagnosis are more vulnerable to the pandemic's psychosocial effects and may experience more severe mental health symptoms (Pfefferbaum & North, 2020; Ravaldi et al., 2020; Sanchez et al., 2023). Behavioral activation may have a more pronounced impact on these individuals because there is greater potential for improvement (Trapani et al., 2024; Williams et al., 2021; Yan et al., 2022). For instance, a systematic review showed that behavioral activation, e.g., engaging in mindfulness practices, was effective in reducing depressive and anxiety symptoms in perinatal women with mental health conditions, whereas these practices might be less helpful for individuals without such conditions (Yan et al., 2022).

Our study sought to investigate associations between behavioral activation during the COVID-19 pandemic and postpartum mental health symptoms when infants were 8-10 months of age among mothers with a depression or anxiety diagnosis during pregnancy. We further examined the moderating role of mental health diagnoses on the association between behavioral activation and maternal mental health symptoms. We also assessed whether mental health diagnoses moderated the association between specific behavioral activation during the pandemic—mindfulness, relationships, activities, work, and generosity—and postpartum mental health symptoms. Our hypotheses were as follows:

H1: More behavioral activation during the pandemic would be associated with fewer maternal mental health symptoms.

H2: Mental health diagnoses during pregnancy would be positively associated with postpartum maternal mental health symptoms.

H3: Higher behavioral activation during the pandemic would be more strongly associated with lower maternal depressive and generalized anxiety symptoms among mothers with a mental health diagnosis than for those without a diagnosis.

As the behavioral activation we captured spanned specific domains (mindfulness, relationships, activities, work, and generosity), we also explored whether the above hypotheses would hold for each domain. As such, we ran separate models for specific activity domains.

Methods

The study included 351 individuals drawn from the Perinatal Experience And COVID-19 Effects (PEACE) Study. We collected online survey data from participants who consented to participate during the perinatal period, spanning the second trimester through six months postpartum. Participants were eligible if they were at least 18 years of age, living in the U.S., and between the second trimester of pregnancy and six months postpartum at the time of enrollment. Eligible participants completed the baseline survey between May 21, 2020 and September 15, 2021.

Participants were initially recruited through various channels, including email listservs, social media, word of mouth, and Facebook groups. A follow-up survey was conducted between November 19, 2021 and August 31, 2022, when the infants were approximately 8–10 months old. Both baseline and follow-up surveys took 30–40 minutes and were administered via REDCap. The surveys assessed maternal demographics, mental health history, mental health symptoms, and behavioral changes during the COVID-19 pandemic. Ethical approval for this study was obtained from the Institutional Review Board at Mass General Brigham. All participants provided informed consent for their data to be used in the research.

Measures

Mental health diagnoses. Mental health conditions during pregnancy were assessed through participant self-reports at the baseline survey. Participants were asked whether they had depressive or generalized anxiety disorder during their most recent pregnancy. There were four response options: “Yes, diagnosed and treated,” “Yes, diagnosed but not treated,” “Suspected, but not diagnosed,” and

"No." For each condition, a binary variable was created: individuals diagnosed with the condition formed one group, irrespective of treatment status, and all other participants formed another group. Diagnoses were not considered mutually exclusive.

Behavioral activation. Behavioral activation engaged during the COVID-19 pandemic was assessed using 16 items from the Epidemic-Pandemic Impacts Inventory (EPII) (Grasso et al., 2020) at the follow-up survey. Participants reported the time they spent engaging in specific behaviors on a seven-point scale ranging from "Very much less" to "Very much more." A principal component analysis (PCA) was conducted to investigate the underlying structure of behavioral activation during the pandemic (Bandalos & Finney, 2018). The final PCA on 14 items (two items were excluded due to low factor loadings) revealed five principal components. The Kaiser-Meyer-Olkin (KMO) measure was 0.75, and Bartlett's test of sphericity was statistically significant ($\chi^2 = 1593.64$, $p < .001$), supporting the factorability of the correlation matrix (Shrestha, 2021).

After varimax rotation, five components were identified: mindfulness, relationships, activities, work, and generosity. Mindfulness (component 1) exhibited loadings between 0.42 and 0.80 on four items (e.g., "being appreciative of things usually taken for granted" and "paying attention to personal health"). Relationships (component 2) had loadings ranging from 0.51 to 0.89 across three items (e.g., "spending quality time with family or friends in person or from a distance"). Activities (component 3) had loadings of 0.55-0.63 across three items (e.g., "exercising or doing physical activity" and "spending time doing enjoyable activities like reading books and puzzles"). Work (component 4) displayed loadings of 0.67 and 0.88 on two items "being efficient in productive work or employment" and "finding meaning in work or employment"). Generosity (component 5) showed loadings of 0.75 and 0.76 on two items (e.g., "volunteering to help people in need"). A factor loading above 0.30 generally indicates a moderate item-factor correlation (Tavakol & Wetzel, 2020).

A composite total score was computed by summing 14 items to reflect overall behavioral activation. Subscale scores were calculated by summing items within each component to capture specific behavioral activation. Higher scores indicate more behavioral activation. Cronbach's alpha values indicated acceptable reliability for the overall behavioral activation score (0.77) and for each subscale: mindfulness (0.75), relationships (0.70), activities (0.66), work (0.77), and generosity (0.75).

Depressive symptoms. Participants' self-reported depressive symptomatology was assessed using the Center for Epidemiological Studies – Depression (CES-D) (Radloff, 1977) at the follow-up survey when infants were between 8 and 10 months of age. The CES-D is a 20-item measure that evaluates feelings of hopelessness, worthlessness, and low mood experienced over the past week, as well as neurovegetative symptoms. Responses were provided on a four-point scale, indicating the frequency of each experience from "Rarely or none of the time (less than 1 day)" to "Most or all of the time (5–7 days)." A sum score was calculated, with higher scores reflecting greater subjective depressive symptoms, ranging from 0 to 60. In this study, the Cronbach's alpha for this measure was 0.91, indicating strong reliability.

Anxiety symptoms. Participants' self-reported generalized anxiety symptoms were measured using the 7-item Generalized Anxiety Disorder Scale (GAD-7) (Spitzer et al., 2006) at the follow-up survey, when infants were between 8 and 10 months of age. The GAD-7 assesses various experiences such as worry, irritability, restlessness, and dread over the past two weeks. Response options, ranging from "Not at all" to "Nearly every day", measured the frequency of each experience. The sum of the items yields a total score, with higher scores indicating greater subjective anxiety, ranging from 0 to 21. The Cronbach's alpha for this scale in the current sample was 0.90, indicating strong reliability.

Covariates. Maternal age, household income (0 = less than $74,999, 1 = $74,999-149,999, 2 = $150,000-224,999, 3 = more than $225,000), and maternal COVID-19-related experiences were included as covariates. COVID-19-related experiences were assessed on a 5-point self-developed scale. A composite score was calculated by summing items across four dimensions (health worries, risk worries, resource worries, and grief). In the current sample, Cronbach's alpha for COVID-19-related experiences was 0.91.

Statistical Analyses

Preliminary analysis showed that the study variables confirmed a normal distribution, and the predictors showed acceptable levels of collinearity (VIF < 5). A series of multiple hierarchical regression models were conducted, regressing depressive and anxiety symptoms separately on predictor variables: sociodemographic characteristics and maternal COVID-19-related experiences

(Block 1), mental health diagnoses during pregnancy (Block 2), behavioral activation during the pandemic (Block 3), and the cross-product between behavioral activation and mental health diagnoses (Block 4). Analyses were conducted using SPSS 28.0.

Results

The demographic characteristics of our study sample are displayed in Table 1. On average, participants were 33.3 years old (*SD* = 3.5). The large majority of the participants identified as White (93.2%), had at least a college education (95.4%), and reported a household income over $75,000 (89.0%). The majority were employed (86.0%) and worked remotely (85.4%). Completion dates of the baseline survey ranged from 69 to 284 days (average = 124 days) after March 13, 2020, the date the pandemic was declared a national emergency in the U.S. Among participants, 5.7% had a diagnosis of COVID-19 perinatally. In the sample, 12.8% reported a diagnosis of depression, and 19.4% reported a diagnosis of generalized anxiety during their most recent pregnancy. Among participants, 29.7% reported moderate or severe depressive symptomatology, and 19.5% reported moderate or severe anxious symptomatology.

Table 1

Demographic Characteristics and Key Variables (N = 351)

Variables	Means (*SD*, Range) or *%*
Maternal age (years)	33.3 (3.5, 22.0-50.0)
Maternal race	
White	93.2%
Black or African American	0.6%
Hispanic or Latino	3.1%
Asian and Pacific Islander	3.1%
Maternal education	
Less than college	4.6%
College	26.8%
Masters	44.2%
Doctorate	24.5%

Variables	Means (*SD*, Range) or *%*
Household income	
<$74,999	11.0%
$75,000-149,999	38.8%
$150,000-224,999	29.1%
>$225,000	21.1%
Employment	
Employed	86.0%
Not employed	14.0%
Telework/Work from home	
Yes	85.4%
No	14.6%
Pandemic duration (days)	124.0 (44.0, 69.0-284.0)
Diagnosis of COVID-19	5.7%
Mental health history during pregnancy	
Depression diagnosis	12.8%
Anxiety diagnosis	19.4%
Mental health symptoms	
Depression (CES-D)	12.8 (9.3, 0.0-58.0)
< 16	70.3%
≥ 16	29.7%
Anxiety (GAD-7)	5.6 (4.7, 0.0-21.0)
< 10	80.5%
≥ 10	19.5%
Behavioral activation	55.9 (10.4, 20.0-83.0)
Mindfulness	17.5 (3.8, 4.0-27.0)
Relationships	8.7 (4.0, 3.0-21.0)
Activities	10.5 (3.5, 3.0-21.0)
Work	7.1 (2.6, 2.0-14.0)
Generosity	6.5 (2.6, 2.0-14.0)

The percentages of overall and specific behavioral activation during the COVID-19 pandemic are presented in Figure 1. Overall, most participants (72.9%) reported decreased overall engagement in behavioral activation. For specific domains, 66.4% of the participants reported increased engagement in mindfulness activities, such as being more appreciative of things usually taken for granted. On the other hand, 72.4% of the participants reported decreased engagement in relationships, like spending less quality time with family or friends, and 55.6% reported decreased engagement in activities, such as exercising less or doing less physical activity. Nearly half of the participants (45.8%) reported decreased engagement in work, such as being less efficient or finding less meaning in work or employment, and 48.4% reported decreased engagement in acts of generosity, like volunteering less to help those in need.

Figure 1

Percentages of Behavioral Activation Engaged During the COVID-19 Pandemic

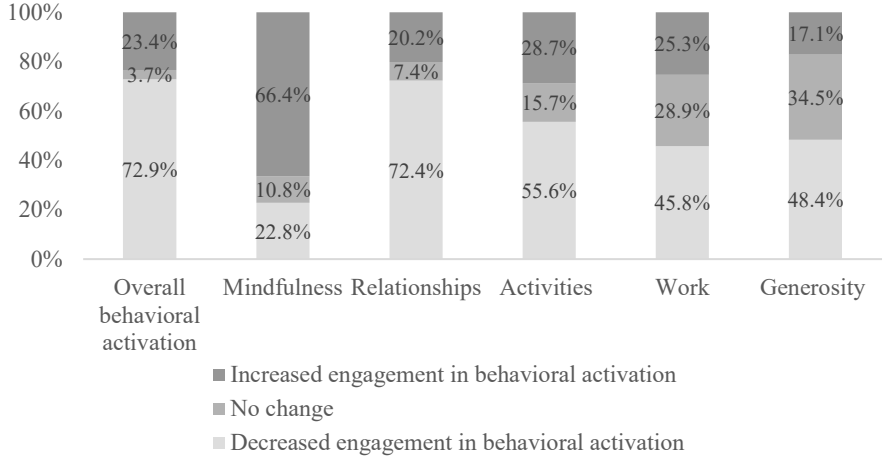


Table 2 shows associations between predictors and maternal depressive and generalized anxiety symptoms. Depression diagnosis was positively associated with active depressive symptoms (B = 4.90, SE = 1.35, $p < .001$). Generalized anxiety diagnosis was positively associated with active generalized anxiety symptoms (B = 1.30, SE = 0.62, $p < .05$). Greater behavioral activation was negatively associated with depressive symptoms (B = -0.17, SE = 0.05, $p < .001$). We observed interaction effects between behavioral activation and depression diagnosis in predicting depressive symptoms (B = -0.36, SE = 0.14, $p < .01$) and predicting generalized anxiety symptoms (B = -0.16, SE = 0.08, $p < .05$).

Table 2

Multiple Regression of Overall Behavioral Activation

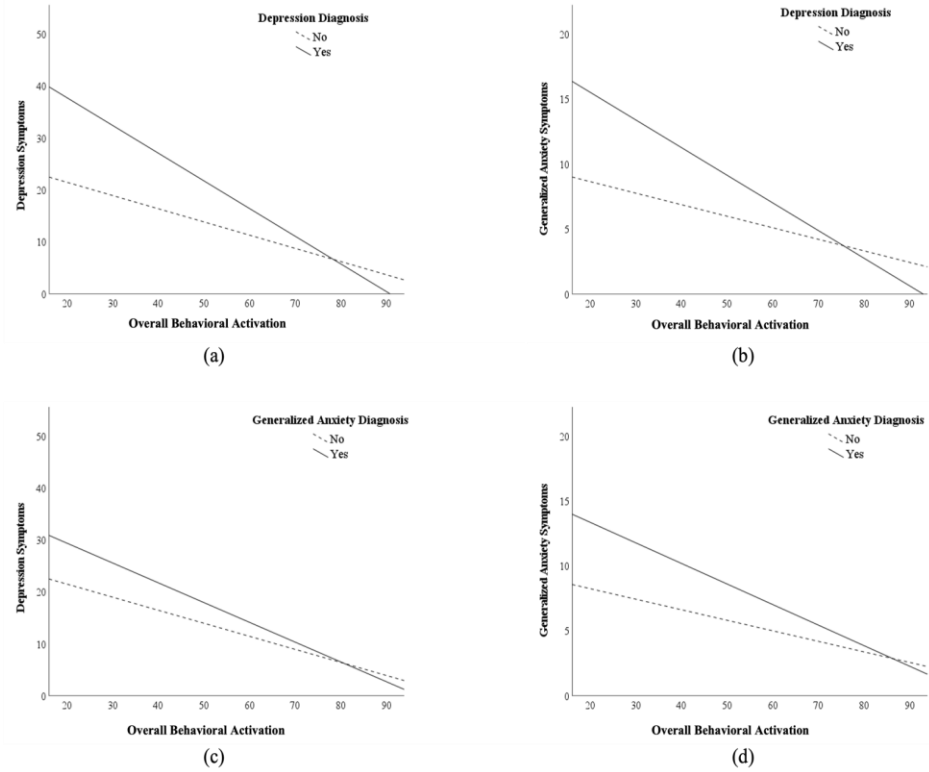
	Depressive Symptoms				Generalized Anxiety Symptoms			
Predictor Variables	*B*	*β*	*R2*	*⊿R2*	*B*	*β*	*R2*	*⊿R2*
1. Covariates			0.26	0.26***			0.25	0.25***
Maternal age	0.17	0.06			0.03	0.02		
Household income (ref ≤ $74,999)								
$75,000-149,999	11.51	0.09*			2.83	0.05		
$150,000-224,999	5.44	0.10*			0.77	0.03		
>$225,000	-4.35	-0.08			-3.36	-0.12**		
COVID-19-related experiences	0.27	0.39***			0.16	0.45***		
2. Mental health diagnoses			0.31	0.05***			0.28	0.03**
Depression diagnosis	4.90	0.18***			0.97	0.07		
Generalized anxiety diagnosis	0.92	0.04			1.30	0.19*		
3. Overall behavioral activation	-0.17	-0.19***	0.36	0.05***	-0.02	-0.03	0.29	0.01
4. Interaction terms			0.37	0.01*			0.30	0.01*
Behavioral activation x depression diagnosis	-0.36	-0.14**			-0.16	-0.13*		
Behavioral activation x generalized anxiety diagnosis	0.05	0.03			0.01	0.01		

Note. Multiple regression predicting maternal depressive and generalized anxiety symptoms based on sociodemographic characteristics, mental health diagnoses during pregnancy, and overall behavioral activation during the pandemic (values are based on the full model obtained in Block 4) (N =351). $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Simple slope tests revealed that higher behavioral activation during the pandemic was associated with lower levels of postpartum depressive symptoms, and this association was stronger for mothers with a depression diagnosis during pregnancy (B = -0.50, SE = 0.11, t = -4.39, $p < .001$) than for those without a diagnosis (B = -0.17, SE = 0.04, t = -3.76, $p < .001$) (Figure 2a). More behavioral activation during the pandemic was associated with reduced symptoms of postpartum generalized anxiety, but only among mothers with a depression diagnosis during pregnancy (B = -0.18, SE = 0.06, t = -2.99, $p < .01$) (Figure 2b). No interaction was seen between behavioral activation and generalized anxiety diagnosis in predicting either postpartum depressive or anxiety symptoms (Figures 2c and 2d).

Figure 2

Depression and Generalized Anxiety Symptoms Based on Overall Behavioral Activation During the Pandemic and Mental Health Diagnoses



Note. The moderation effects were significant in (a) and (b), but not significant in (c) and (d). For interpretation purposes, the values in the figures represent raw data values.

The effects of specific behavioral activation strategies (i.e., mindfulness, relationships, activities, work, and generosity) during the pandemic were then assessed in a new model (Table 3). Depression diagnosis was positively associated with active depressive symptoms (B = 4.96, SE = 1.36, p < .001). Generalized anxiety diagnosis was positively associated with active generalized anxiety symptoms (B = 1.25, SE = 0.61, p < .05). Behavioral activation through work was negatively associated with depressive (B = -0.41, SE = 0.17, p < .05) and generalized anxiety symptoms (B = -0.21, SE = 0.09, p < .05). Interaction effects was observed between behavioral activation through work and depression

diagnosis in predicting depressive symptoms (B = -1.11, SE = 0.53, $p < .05$) and predicting generalized anxiety symptoms (B = -0.61, SE = 0.25, $p < .05$). Another significant interaction between behavioral activation through work and generalized anxiety diagnosis was observed in predicting generalized anxiety symptoms (B = -0.46, SE = 0.20, $p < .05$).

Table 3

Multiple Regression of Specific Behavioral Activation

	Depressive Symptoms				Generalized Anxiety Symptoms			
Predictor Variables	*B*	*β*	*R2*	*⊿R2*	*B*	*β*	*R2*	*⊿R2*
1. Covariates			0.26	0.26			0.25	0.25
Maternal age	0.18	0.07			0.05	0.04		
Household income (ref ≤ $74,999)								
$75,000-149,999	11.44	0.09*			2.92	0.05		
$150,000-224,999	6.07	0.11			1.06	0.04		
>$225,000	-4.45	-0.08*			-3.41	-0.13**		
COVID-19-related experiences	0.26	0.38***			0.15	0.42***		
2. Mental health diagnoses			0.31	0.05***			0.28	0.03**
Depression diagnosis	4.96	0.18***			1.04	0.07		
Generalized anxiety diagnosis	0.66	0.03			1.25	0.10*		
3. Specific Behavioral Activation			0.36	0.05***			0.31	0.03
Mindfulness	-0.19	-0.08			-0.01	-0.01		
Relationships	-0.12	-0.05			0.02	0.02		
Activities	-0.21	-0.08			0.02	0.01		
Work	-0.41	-0.07*			-0.21	-0.07*		
Generosity	-0.14	-0.04			-0.14	-0.08		

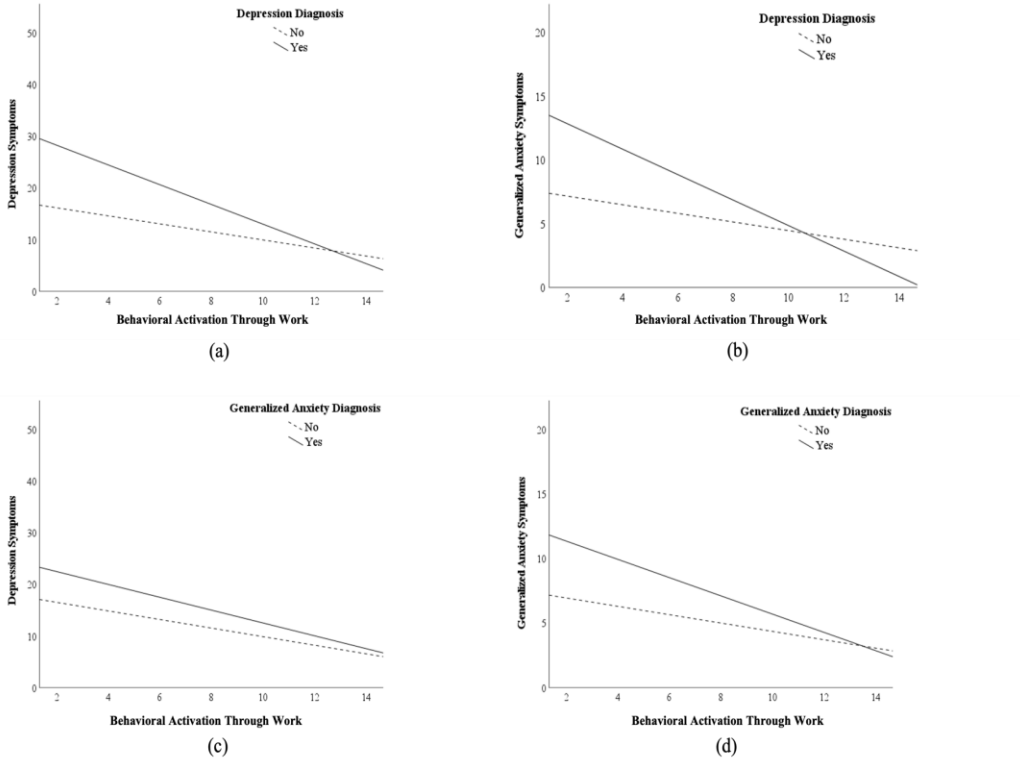
	Depressive Symptoms				Generalized Anxiety Symptoms			
Predictor Variables	*B*	*β*	*R2*	*∆R2*	*B*	*β*	*R2*	*∆R2*
4. Interaction Terms			0.37	0.01			0.32	0.01*
Behavioral activation through work x depression diagnosis	-1.11	-0.12*			-0.61	-0.12*		
Behavioral activation through work x generalized anxiety diagnosis	0.00	0.00			-0.46	-0.13*		

Note. Multiple regression predicting maternal depressive and anxiety symptoms based on sociodemographic characteristics, mental health diagnoses during pregnancy, and specific behavioral activation during the pandemic (values are based on the full model obtained in Block 4) (N =351). $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

Simple slope tests showed that higher behavioral activation through work during the pandemic was associated with lower postpartum depressive symptoms, and this association was stronger for mothers with a depression diagnosis during pregnancy (B = -1.59, SE = 0.43, t = -3.68, $p < .01$) than for those without a diagnosis (B = -0.40, SE = 0.17, t = -2.29, $p < .05$) (Figure 3a). As shown in Figures 3b and 3d, more behavioral activation through work was associated with decreased symptoms of postpartum generalized anxiety, but only among mothers with either a diagnosis of depression (B = -0.76, SE = 0.23, t = -3.37, $p < .01$) or generalized anxiety (B = -0.56, SE = 0.17, t = -3.28, $p < .01$). No interaction was observed between behavioral activation through work and generalized anxiety diagnosis during pregnancy in predicting postpartum depressive symptoms (Figure 3c).

Figure 3

Depression and Generalized Anxiety Symptoms Based on Behavioral Activation Through Work and Mental Health Diagnoses



Note. The moderation effects were significant in (a), (b), and (d), but not significant in (c). For interpretation purposes, the values in the figures represent raw data values.

Discussion

The present study examined associations between behavioral activation during the COVID-19 pandemic, mental health diagnoses during pregnancy, and maternal postpartum mental health symptoms when infants were between 8 and 10 months of age. Further, we examined the moderating effect of mental health diagnoses on the association between behavioral activation during the pandemic and maternal mental health symptoms. Our findings from the models of overall and specific behavioral activation showed that (1) more behavioral activation during the pandemic was associated with fewer postpartum mental health

symptoms; (2) mental health diagnoses during pregnancy were linked to active postpartum mental health symptoms; and (3) more behavioral activation during the pandemic, especially those related to meaningful work, appeared to decrease postpartum mental health symptoms, particularly for mothers with a depression or generalized anxiety diagnosis during pregnancy. Taken together, the findings suggest that increasing behavioral activation that supports maternal mental well-being can help develop prevention strategies to address the specific challenges mothers face during crises.

Our findings indicated that more behavioral activation was associated with lower postpartum depressive and anxiety symptoms in mothers of 8-10-month-old infants, aligning with previous studies on perinatal women (Davenport et al., 2020; Phipps et al., 2023). For example, a study using ANOVA analyses showed that women engaging in behavioral activation (e.g., moderate-intensity physical activity) had significantly lower anxiety and depression scores (Davenport et al., 2020). Another study suggested that increasing behavioral activation in health behaviors, such as physical activity, was beneficial for the mental health of pregnant women during a pandemic (Phipps et al., 2023). Similarly, other studies have shown that adopting behavioral activation, particularly coping strategies such as mindfulness, yoga, and seeking support, enhances mental health in perinatal women (Shidhaye et al., 2020; Trapani et al., 2024).

Consistent with the literature (O'Hara & Wisner, 2014; Ravaldi et al., 2020; Seimyr et al., 2013), we observed that mental health diagnoses during pregnancy were positively associated with maternal postpartum mental health symptoms during the pandemic. Mothers with a depression or anxiety diagnosis may face additional challenges during the pandemic, as they navigate not only their own mental health struggles but also the added stressors of managing household responsibilities, social isolation, fear of infection, childcare, financial worries, and potential employment concerns (Khoury et al., 2021; Kinser et al., 2021; Kracht et al., 2021). Additionally, it is possible that disruptions to mental health services during the pandemic left mothers without the necessary care, further worsening their conditions (Cameron et al., 2020). The present finding, in alignment with previous research, emphasizes the essential need for targeted mental health support for mothers during such global crises.

Our findings contribute to the literature by examining the moderating role of mental health diagnoses during pregnancy on the association between behavioral activation and maternal postpartum symptoms. We found that more behavioral activation was associated with fewer postpartum depressive and anxiety

symptoms, particularly among mothers diagnosed with depression during pregnancy. In line with previous studies (Badon et al., 2022; Cornell et al., 2022; Williams et al., 2021), our findings suggest that increasing behavioral activation in response to the pandemic—such as spending more time with family or friends, focusing on personal health, and engaging in mindfulness practices—may be more effective for mothers with a depression diagnosis. One possible explanation is that mothers with higher levels of depressive symptoms may experience more noticeable reductions in these symptoms as a result of behavioral activation (Trapani et al., 2024; Yan et al., 2022). Thus, individuals with more severe depression might benefit more from the implementation of behavioral activation. Another possible explanation is that, despite the pandemic reducing behavioral activation in the current sample, mothers who increased behavioral activation may have intentionally created opportunities to engage in more positive activities than before. For mothers with a mental health diagnosis, this proactive strategy may have been learned (Fullana et al., 2020; Huh et al., 2023; Shidhaye et al., 2020). The prior knowledge of adopting various forms of behavioral activation could have contributed to mothers' ability to alleviate symptoms of depression and anxiety more effectively during the pandemic (Muzik et al., 2015; Sanchez et al., 2023).

With separate models, we also tested the moderating role of mental health diagnoses on the association between specific behavioral activation–mindfulness, relationships, activities, work, generosity–and maternal mental health symptoms. Only behavioral activation through work showed a significant effect. In this study, we focus on the perceived meaningfulness of work-related activities and their effects on maternal mental health during the pandemic. We observed that more behavioral activation through work during the pandemic was linked to lower mental health symptomatology, particularly among mothers with a depression or anxiety diagnosis. A potential explanation is that work may provide mothers with a sense of purpose and fulfillment (Merida et al., 2023). Previous studies have shown that a strong belief in the meaningfulness of life, taking action to address the situation, and staying busy are beneficial behaviors during the pandemic (Garros et al., 2021; Kar et al., 2021; Kolakowsky-Hayner et al., 2021).

Additionally, it is worth noting that, although the pandemic led to a reduction in work-related activities in the present sample, individuals with a mental health diagnosis who remained engaged in behavioral activation through work were actually protected against increasing symptoms. The positive impact of work-

related behavioral activation may help maintain a sense of purpose during challenging times (Kanter et al., 2010). Overall, our findings suggest that engaging in behavioral activation, such as meaningful work, could mitigate the risk of mental health diagnoses during pregnancy turning into postpartum mental health symptoms.

Limitations

The limitations of the study should be acknowledged. First, we relied on the self-reported experiences of mental health symptoms and history, which may be subject to recall bias. Second, the sample was predominantly White, highly educated, and well-resourced, limiting the generalizability of the findings to the broader population. Third, we used the principal component analysis with the items in the Epidemic-Pandemic Impacts Inventory scale to assess the dimensionality of behavioral activation during the pandemic. Despite our results showing acceptable internal consistency, further studies across diverse populations and contexts are warranted to establish comprehensively the psychometric properties. Furthermore, the work subscale of the behavioral activation measure consists of only two items. Although it is unlikely that work-related activities primarily drove overall behavioral activation, future research utilizing a more comprehensive assessment of work-related behavioral activation would further clarify the relative contribution of the work-related domain. Additionally, we did not collect information on the duration of mental health diagnoses, which could moderate the association between prenatal diagnoses and postpartum mental health symptoms.

Clinical Implications

Our findings suggest that mothers who received a diagnosis of depression or anxiety during pregnancy may see improvement in postpartum mental health symptoms when engaging in more behavioral activation during times of crisis. This has important clinical implications. Mental health diagnoses in pregnancy, in this sample and other research, are associated with mental health symptoms in the postpartum period (Badon et al., 2022; Khoury et al., 2021; Yan et al., 2022). As such, postpartum mental health support and secondary prevention should be seen as a key part of supporting women with mental health diagnoses in pregnancy, with an emphasis on strategies such as psychoeducation, early screenings, and treatment adherence (Park et al., 2020; Waqas et al., 2022). For

instance, encouraging more behavioral activation, such as finding meaning in daily activities or engaging in rewarding behaviors that promote a sense of purpose, may mitigate postpartum mental health symptoms in women with mental health diagnoses during pregnancy (Badon et al., 2022; Kolakowsky-Hayner et al., 2021). As a result, these strategies may enhance maternal psychological well-being and resilience during challenging times.

Conclusion

Our study highlights the protective role of behavioral activation during the COVID-19 pandemic in mitigating postpartum mental health symptomatology, particularly among mothers with depression or anxiety diagnoses during pregnancy. The findings highlight the importance of supportive prevention programs and resources in enhancing efforts focused on coping mechanisms, which are essential for improving maternal mental health, promoting well-being, and building resilience among mothers in times of crisis.

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Pediatric Asthma: Improvement with Bonding Therapy

Antonio Madrid, PhD, Richard Giovannoli, PhD

Pediatric asthma remains one of the most prevalent chronic conditions affecting children worldwide, yet its origins extend beyond genetics and environmental triggers. Emerging research highlights the profound influence of early life experiences, particularly maternal stress and disruptions in maternal-infant bonding—on the development and severity of asthma. This article explores these psychosocial factors in depth, synthesizing epidemiological evidence and clinical findings to show how disruptions in bonding at birth significantly increase asthma risk. It also introduces Bonding Therapy, a novel intervention aimed at repairing maternal-infant bonds, and examines its potential to improve asthma outcomes. By bridging biological and psychosocial perspectives, this discussion underscores the importance of addressing early relational health as a critical component of pediatric asthma prevention and treatment.

In a study of 150 mothers of asthmatic children, Mrazek et al. (1991) found a link between early problems in coping or parenting and the subsequent expression of asthma. Klinnert et al. (2001), surprised by this finding, noted that this link between parental stress in caregiving and the subsequent development of asthma was the first documented report of such a connection. Maternal stress is caused by many factors: Cesarean section deliveries, maternal health issues, psychological problems, maternal grief, and Cesarean section deliveries, to name a few. A Finnish study of 60,000 births found that mothers who delivered by Cesarean section were 50% more likely to have a child who later developed asthma (Kero, 2002). Emergency Cesarean section

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deliveries (even more stressful) raised the asthma rate up to 60%. This finding was replicated by Roduit et al. (2009), who studied 2,917 children.

Annesi-Maesano and colleagues, using a British cohort of 2,583 mothers, investigated whether in utero and perinatal influences contribute to the development and severity of asthma in childhood (Annesi-Maesano et al., 2001). They claimed that childhood asthma was more frequently reported by mothers when there had been health complications during pregnancy, labor, or delivery, or when the child was ill during the first week of life. They concluded that there is evidence that in utero and perinatal factors may increase the risk of developing asthma. Similarly, a Norwegian study of over 1.5 million mothers and 5,938 asthmatic children found that many types of pregnancy complications represented a risk factor for the development of asthma in the offspring.

Kozyrskyj et al. (2008) studied healthcare records of 13,907 children and their mothers from Manitoba databases. Healthcare or prescription medication for depression or anxiety was used to define maternal distress, and asthma status was determined from the children's asthma prescription records. They found that the risk for childhood asthma was increased among children who were exposed to continued maternal distress from birth until age 7 years. Similarly, a Puerto Rican study concluded that maternal depressive symptoms were associated with an increased risk of asthma hospitalizations by one year of age (Lange et al., 2011).

Mother-child interactions have been shown to predict the development of asthma in the child by school age. Mantymaa et al. (2003) observed that maternal stress is associated with physical illnesses, such as asthma or infection. As mentioned above, Klinnert (2001) investigated many factors associated with childhood asthma and found that a global assessment of parenting problems was a predictor of asthma development by age 3. In that same vein, Wright and colleagues (2010) at Harvard found that higher levels of caregiver-perceived stress at 2 to 3 months were associated with an increased risk of subsequent wheezing among children during the first 14 months of life. Further, they found that prenatal stress was associated with altered innate and adaptive immune responses, concluding that stress-induced perinatal immunomodulation may impact the expression of allergic disease in these children.

Cassibba et al. (2004) found that children affected by asthmatic bronchitis were less securely attached than healthy comparisons. These children showed

less harmonious and comfort-seeking behaviors than healthy children, suggesting an insecure attachment style. Yatsenko (2016) reviewed these studies and suggested that these risk factors are most likely the result of disrupted maternal-infant bonding. *Maternal-infant bond* is a term developed by Klaus and Kennell (1976), who discovered that a child will not bond with their mother if they are separated from their mother at birth or if the mother is distracted by personal issues.

Bonding Disruptions and Childhood Asthma

Three studies investigated the relationship between pediatric asthma and the difficulties mothers experience in bonding with their babies. Using the maternal-infant bonding paradigm of Klaus and Kennell, these studies examined the incidence of bonding problems in a pediatric asthma population compared with a well-baby group. In the first of these studies, Feinberg (1988) showed that bonding disruptions occurred three times more frequently in mothers of asthmatics than in mothers of well-babies (84% vs. 24%). Schwartz (1988) found almost identical numbers: 86% vs. 29%. Pennington (1991) found that four "non-bonding events" were most predictive of asthma: delay in holding the baby, family death in the first year, emotional problems during pregnancy, and maternal emotional problems in the first year. He concluded that bonding disruptions appear to be the mediating variable linking pediatric asthma to the various maternal factors and stressors identified by previous researchers.

If bonding disruptions are the link between all of these perinatal factors and pediatric asthma, the next question logically surfaced: "What happens if the mother of an asthmatic child becomes bonded to her asthmatic child?" This question was subjected to three pilot clinical trials. In these studies, each of the mothers was treated with a therapy that focused entirely on processing the traumas surrounding the birth of her child and then creating an imagined, idealized birth. The hypothesis was that this would repair the disrupted maternal-infant bond and affect the child's asthma.

Bonding Therapy for Asthma

Bonding Therapy is a three-fold intervention in which, first, the event or events that disrupted bonding need to be identified (Madrid et al., 2000). It is usually the case that the child was separated from the mother at birth or the

mother was grieving from some event in her own life. Second, the event or events need to be healed. Third, the mother needs to experience a different, more joyful birth, without the event or events present that interfered with bonding. This therapy is done entirely with the mother.

The first Bonding Therapy study (Madrid et al., 2000) involved six mother-child pairs. Five of the six children, including two infants, experienced complete or nearly complete remission from asthma symptoms, as measured across 18 variables. In the second study (Madrid et al., 2004), asthma symptoms improved in 12 of 15 children. Eight of the 10 children who were taking medication no longer needed to continue them. In the third study (Madrid et al., 2005), the previous findings were strengthened using more stringent measures of asthma symptoms. Except for the two older adolescents, every child in the study showed improvement in all five categories of the Asthma Monitor: getting work done, shortness of breath, awakening at night, use of a rescue inhaler, and asthma out of control.

Every child in this study (except the two older adolescents) improved in the STEP measure of asthma severity, with the average moving down from "Moderate Persistent or Severe Persistent" to "No Asthma or Mild Intermittent." There were fewer unscheduled doctor visits, fewer trips to the emergency room, and every child had fewer housebound days. This treatment does not seem to work for older adolescents, perhaps because bonding improvement has little effect on adolescents who are developmentally in the process of trying to separate from their parents.

These studies confirmed the claim that childhood asthma can be healed. Several studies have investigated the hypothesis that disruptions in maternal-infant bonding are related to childhood asthma, finding that most asthmatic children had births that pointed to disruptions of bonding as compared to children without asthma. A few studies investigated the effects on children when their mothers underwent Bonding Therapy, which processed and healed disruptions and guided the mother to imagine the birth the way she wanted it, without the disruptions interfering (Madrid et al., 2000, 2004, 2005). A total of 37 mothers were treated in this fashion, and 31 children improved in absenteeism, playing without wheezing, having a cold without wheezing, improvement of overall health, and reduction or elimination of medications. Younger children did better than adolescents. The conclusion from these investigations is that childhood asthma is likely linked to perinatal disturbances

such as separation at birth and maternal distress, and correcting these bonding disruptions can improve the child's health.

Conclusion

The evidence reviewed underscores the importance of considering psychosocial and perinatal influences—particularly maternal-infant bonding disruptions—in understanding and managing pediatric asthma. While preliminary findings on Bonding Therapy offer promising avenues for intervention, the limitations of current research highlight the need for more rigorous, large-scale, and culturally diverse studies. Future work should aim to clarify causal pathways, identify critical developmental windows, and evaluate long-term outcomes of bonding-focused strategies. By integrating these insights into clinical practice and public health initiatives, we can move toward more holistic, preventive, and personalized approaches to pediatric asthma care—ultimately improving health trajectories for children worldwide.

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Integrating Tamashii and Prenatal Memory Education for Maternal Stress Reduction and Lifelong Development

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Pregnancy is both a biological and psychological process in which maternal stress can profoundly influence fetal and child development (Glover, 2015; Van den Bergh et al., 2020). Conventional prenatal care primarily addresses physical health, but cultural frameworks such as Tamashii (魂, soul, spirit) and tainai kioku (胎内記憶, prenatal memory) offer insights into the emotional and spiritual dimensions of pregnancy. These Japanese concepts suggest that the fetus possesses consciousness and communicative capacity, reframing pregnancy as a relationship between conscious beings rather than a purely physiological event (Ikegawa, 2005). This paper integrates these ideas within the framework of Prenatal Memory Education (PME), which emphasizes two-way communication between parents and the fetus. Drawing upon 25 years of clinical practice, over 11,000 case reports, and relevant literature, this perspective proposes PME as a globally relevant, culturally grounded model for reducing maternal stress and enhancing lifelong development.

Tamashii and Prenatal Memory in Cultural Context

In Japanese thought, Tamashii transcends Western definitions of soul, encompassing life energy, spirit, and ancestral connection. Within this worldview, conception marks the continuation, not the creation, of consciousness, and the unborn child is regarded as a sentient being capable of relationship and emotion. The phenomenon of prenatal memories (tainai kioku), in which children recall experiences in the womb or shortly after birth, has been widely reported in Japan (Ikegawa, 2005), reinforcing the cultural

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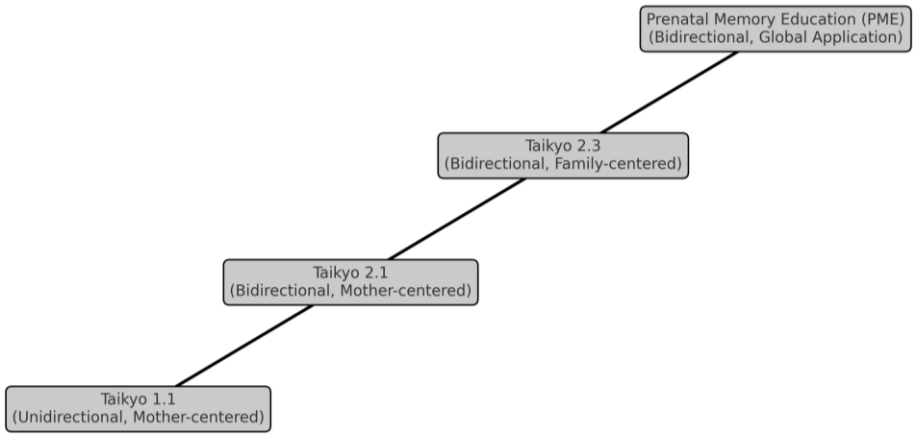
belief in prenatal awareness. Integrating Tamashii into prenatal education reframes pregnancy as a spiritual and relational journey—one in which both parents engage with the unborn child in conscious dialogue.

The Prenatal Memory Education Framework

PME builds upon traditional Taikyo (胎教, prenatal education), evolving from unidirectional, mother-centered communication (Taikyo 1.1) to bidirectional, family-centered engagement (Taikyo 2.3). The latest stage, PME, positions the fetus as an active participant in communication, with applications beyond Japan.

Figure 1

Evolution of Taikyo to Prenatal Memory Education



Note. The conceptual progression moves from unidirectional, mother-centered Taikyo (1.1) to bidirectional, family-centered Taikyo (2.3), culminating in PME as a globally applicable model.

Scientific and Clinical Foundations

Although empirical trials remain limited, converging lines of evidence support the theoretical and clinical foundation of PME. Neuroscientific research demonstrates that the fetal brain begins forming Default Mode Network (DMN) connectivity, associated with self-awareness and memory, during gestation (Barta et al., 2022; Gao et al., 2015; Liu et al., 2020).

Epigenetic studies further show that maternal stress during pregnancy can induce heritable changes that alter gene expression and influence the long-term well-being of offspring (Heijmans et al., 2008; Meaney & Szyf, 2005).

Clinically, over 25 years of observation reveal that parents practicing PME often report reduced anxiety, greater family harmony, and deeper father-child bonding. Follow-up data suggest that children whose fathers engaged in prenatal dialogue are more likely to exhibit self-direction, positive effects, trusting relationships, and prosocial behavior in adulthood. Complementary findings have been reported in Wonder Baby Therapy (Ito, 2024), where prenatal dialogue similarly reduced maternal stress and enhanced family well-being, reinforcing the patterns observed through PME (Ikegawa, 2025). The most accessible PME practice involves the father or partner placing a hand on the mother's abdomen while speaking gently and empathetically to the unborn child. This simple, cost-free act fosters maternal relaxation, strengthens parental bonds, and encourages shared participation in pregnancy.

Limitations and Future Directions

Current evidence supporting this framework is primarily observational, lacking standardized outcome measures and controlled experimental designs. Cultural context may also influence the results, underscoring the need for replication across diverse populations. Future research should focus on conducting longitudinal, controlled studies that integrate psychological and neurobiological assessments and on cross-cultural validation to ensure global applicability. Incorporating neuroimaging and biomarker analyses could help clarify the underlying mechanisms of prenatal communication and stress modulation. Moreover, advancing this field will require interdisciplinary collaboration among experts in medicine, psychology, anthropology, and related disciplines to create a more comprehensive understanding of how prenatal memory education and the concept of Tamashii influence maternal and child well-being.

Conclusion

The integration of Tamashii and Prenatal Memory Education represents a paradigm shift in prenatal care—one that recognizes the unborn child as a conscious partner in a relational process. By fostering bidirectional communication and reducing maternal stress, PME supports not only maternal

well-being but also the development of emotionally resilient, compassionate children. Combining traditional Japanese wisdom with emerging neuroscience provides a holistic framework for pregnancy as a collaborative family journey, nurturing lifelong well-being for both parent and child.

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Reimagining the Fourth Trimester: An Interview with Ingrid Bayot on Maternal Physiology, Culture, and Connection

Ekaterina Cupelin, PhD

Ingrid Bayot is a midwife and trainer in perinatal care and breastfeeding. She holds a Diplôme Universitaire in Human Lactation and Breastfeeding and has been providing training in French-speaking Europe and in Quebec, where she has lived since 1996. She was a lecturer (2001-2021) at the University of Québec at Trois-Rivières in the Baccalaureate in Midwifery Practice. Ingrid Bayot is the author of numerous articles and books, including *Le quatrième trimestre de la grossesse* (Érès, 2018, 2025) and *Les défis du quatrième trimestre de la grossesse* (Érès, 2025).

Ekaterina Cupelin (EC): Welcome, Ingrid. Thank you for accepting this invitation. Your book, *The Fourth Trimester of Pregnancy* [*Le quatrième trimestre de la* grossesse] (Bayot, 2025, 2018), has become a valuable resource for understanding a transition phase that is often overlooked. To start with, could you share what you are working on at the moment?

Ingrid Bayot (IB): I recently finished a sequel called *Fourth Trimester Challenges* [*Les défis du quatrième trimestre de la grossesse*] (Bayot, 2025, October 5). It focuses on the history and condition of mothers, and everything that happens in between. There are always two parts to my books: understanding where we are now through anthropology, sociology, and history, and exploring what we can do with all that today. In my first book, I focused

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on the mother in her fourth trimester. Here, I focused on the parents, faced with the baby and the mind-bogglingly incoherent discourse they will hear. Turning to history and anthropology, we see that for millennia, babies have often been separated from their mothers, leading to higher birth rates but little maternal motivation and frequent separation. Modern Western periculture emerged from attempts to keep babies alive in orphanages, not from observing family dynamics. In the late 19th and early 20th centuries, advances in hygiene and microbiology shaped this model, which was focused on survival. This survival-driven periculture became the standard.

EC: We still rely on these rules, which are no longer relevant or needed.

IB: Currently, parents are exposed to a blend of outdated, rigid mother-baby separation customs, which may have been appropriate in their original context but are ill-suited to healthy baby development today. We've oversimplified and mechanized baby care, missing important historical and cultural factors. Late-20th-century research, including neuroscientific attachment theory, helped us rediscover babies' relational, sensory, and neurological needs. This shift reminds us that proximity, responsiveness, and interaction are fundamental. Babies need close contact, quick responses, and communication. Yet, new parents often get conflicting, authoritarian advice—like being told to practice skin-to-skin while also making the baby sleep alone, which is confusing. I address these issues in detail, making the science clear and accessible. Key insights include sensory continuity after birth, recognizing signals beyond crying, and the baby's capacity to form memories during sleep. These are just a few foundational keys, with more explained in my book.

EC: You're not an ordinary midwife. Can you explain where you get all this inspiration for such a wide perspective?

IB: I think I'm a compulsive reader. What you see behind me there is just a tiny part; there's another wall of books opposite like that, and there's a third in my bedroom. I graduated as a midwife in 1981 and spent ten years working night shifts in a multicultural clinic in Brussels. Moving between delivery rooms, I saw how the same event—childbirth—varied dramatically depending on people's backgrounds, language, and preparation. Over time, I watched obstetrics shift toward routine interventions, which troubled me. In 1989, I

joined a pioneering neonatology team in Brussels that emphasized parental involvement and techniques such as skin-to-skin and kangaroo care, long before these practices were mainstream. This experience showed me that medicine and compassion aren't opposites; you can have technology and still keep care human. Later, I focused on prenatal education and training, working extensively in France and, since 1996, in Quebec as a university lecturer. I chose teaching because it allowed me to share what I'd learned across many cultures and systems. I value keeping an open mind and questioning accepted traditions for the sake of better, more humane care.

EC: In *The Fourth Trimester of Pregnancy*, you describe the postnatal body as going through a vast process of deconstruction and reconstruction. Why is this reality so often ignored, reduced to the idea of regaining one's former body? And how can language help us perceive it differently?

IB: Pregnancy isn't just about the womb—it's about the whole woman. Her entire body adapts, not just the uterus. The musculoskeletal and cardiovascular systems, breathing, kidneys, and liver all change. Pregnancy brings major physical transformations, and after birth, the body begins what I call "degestation." Childbirth brings a sudden transformation, where the baby, placenta, and fluids are expelled almost instantly, yet our bodies remain in a pregnant state and begin to readjust. I've pieced together bits from various physiological texts to describe how the body shifts after birth—a stage rarely addressed in medical literature. The word "degestation" doesn't exist in our language, and without a word, the concept is missing from our culture. Naming it helps us recognize this unique phase, where the body transitions from pregnancy and the baby requires ongoing care—what I call "post-gestation."

EC: And the words "postnatal" and "postpartum" sound more like an afterthought. After the "major" event—the birth—but not naming the stage that comes. Are you saying that they are not enough?

IB: The word "postpartum" is now almost synonymous with depression, which is troubling. Antidepressant prescriptions are sky-high, and suicide is the leading cause of maternal mortality. That should make us question why a normal stage of life brings such pain. Pregnancy and birth aren't illnesses, yet many women experience real physical and emotional challenges. The

postpartum body itself can be shocking—suddenly altered but not yet healed, messy, leaky, emotional, and nothing like the models we see in magazines. If health professionals used more positive and realistic language, women could feel safer settling into and caring for their changed bodies, giving themselves the tenderness they truly need.

EC: In your book, you write about the "hormonal dance." Why do you think our culture is reluctant to recognize these organic anchors, and how can healthcare professionals better integrate them without reducing mothers to their biology?

IB: Most people focus on the drop in pregnancy hormones. Yes, they do fall, but the mothering hormones—oxytocin, endorphins, dopamine—increase when you start mothering. These hormones flood the body and reach the brain's reward center. We need this all our lives—this constant hormonal seesaw. But cultures of mother-baby separation and advice not to "get too involved" lead to hesitation about mothering. Breastfeeding boosts neurotransmitters, but when it's hard or painful, a mother can experience only negative hormonal shifts. Our ancestors breastfed, carried, and slept with their babies. There were tough constraints, but also immediate gratifications. That's how humanity survived and evolved throughout. We must be careful not to reduce women to biology; feminism's response is understandable. Still, we ignore inconvenient truths or try to be free, but no one is untouched by social influence. We need to make the most of each stage and embrace the real joys of motherhood, especially when we have community and support.

EC: How do you see the role of the psychologist in this process?

IB: Just being aware of our history will help them. Humans thrived thanks to the support of tribal life, where mothering was learned through hands-on experience and collective care. In modern times, many mothers lack this deep, early exposure to caregiving and may carry emotional wounds or have grown up in smaller, less nurturing families. When these women become mothers, they often feel isolated and insecure. True postpartum care must be holistic: mental support through words and therapy, physical care like massage or enveloping treatments, and social connection through community and practical aid. Psychologists and other professionals should collaborate and look beyond

talking or medical approaches, ensuring mothers have a support circle—like the tribe once provided—that meets all their needs.

EC: You dedicate an entire section to the "male fourth trimester." Can we discuss the father's experience or that of non-gestating partners?

IB: Fathers who do skin-to-skin contact produce the same immediate gratification hormones as mothers. Prolactin rises, oxytocin and endorphins surge, and if they sniff their baby's head, dopamine kicks in. Encourage them—it's written into their biology. This proves that before warrior societies turned men into aggressors, men naturally fathered children. We have to break free from this ancient script. Men deserve leave after birth, too; they can't be in work "testosterone mode" and active fatherhood at the same time. The "fourth trimester" isn't just for mothers. Fathers who embrace this aspect of themselves and feel valued are an extraordinary asset. Both parents enter this tender phase during the fourth trimester, a stage meant to be experienced, not rushed. Around three months, the baby becomes more predictable, and parents reintegrate their relationship into parenthood. Biological anchors exist for both men and women, though in different degrees. Even bottle-feeding mothers can experience the gratification of nurturing. All mothers seek closeness, but breastfeeding mothers experience more hormone-induced gratification—if breastfeeding goes well.

EC: You write about the notion of freedom during a period of mothering with so many constraints. Could maternal freedom bring an extra dose of empathy in humanity?

IB: If tribes have succeeded and humanity has survived for 300,000 years, it's because our social brains are built in infancy. The core of the social cerebrum is formed through mothering, received from mothers and alloparents. A baby, secure with its mother, learns from the tribe—not through school, but through living and observing. Tribal survival depended on empathy, recognition of social cues, ritual, and conflict resolution. Living closely with others demanded profound social skills—skills we're losing. What fuels recurring social violence is the mistreatment of the very young—a cycle passed down generations. My intuition is that the root of ongoing social violence is the mistreatment and separation of babies from mothers, and longstanding restrictions around

mothering. Good enough tribal life meant caring for new mothers and then the mothers gradually ventured out, feeling safe, so that they could nurture their babies—a beneficial circle. Well-mothered, secure babies become socially skilled citizens. Not perfect—never angels—but fully human. Good enough.

EC: You're talking about a "good enough mother," as described by Winnicott?

IB: I'm talking about a group that's good enough, that works—not perfect, but viable for everyone. A stressed-out mother can't mother peacefully. For thousands of years, war has unraveled our social fabric, and recent periods of confinement have deepened loneliness and hardship for mothers. Loneliness traps mothers, leaving them with no freedom, only burdens. Some mothers end up resenting their babies—not that it's the baby's fault, but admitting this anger is a huge relief. Recognizing anger allows us to acknowledge their struggles and consider better support. If we can support new mothers with psychological, physical, and social care, we can build a supportive safety net. It won't be perfect, but a multi-professional approach can meet both psychological and social needs.

EC: Yes, to be able to go out with your baby and be supported enough so that you no longer feel isolated.

IB: Yes, that's right. In tribal societies, support for mothers comes from the community. The tribe brings food, helps with the household, and looks after older children. The idea is that support comes to the mother, not the other way around. Later, when the mother is ready, she ventures out and joins groups—little "micro-tribes" like coffee-pushchair or psychotherapy circles. We can also form temporary micro-tribes. I sang in a choir for ten years—it nourished me through a period when I felt quite shaken. Singing together bonds people, releases oxytocin, just as ancient rituals must have done. Even today, celebrations create social bonds. Creativity and belonging support families and strengthen us socially and biologically—it's about returning to our human basics. We've been off course for 5,000 to 10,000 years. Real change needs political action as well. Still, political action won't matter unless we address the "artists' entrance,"— the family. To connect, we need a functioning social brain, developed through empathy and early oxytocin. Mothers often

compromise their own well-being, feeling burnt out—not from giving too much, but from a lack of support and even criticism.

EC: Thank you, Ingrid. How would you like to close this interview?

IB: Ultimately, what matters most is life itself—the child, the future. Our children are not our reproductions; they are not simple extensions of ourselves. Instead, they are the continuation of life, ready to embody their own paths, with their own strengths, doubts, and complexities. We give what we can, offer the best of ourselves, and then let life unfold as it must. Our children are not merely our legacy—they are life moving forward. Above all, it is this respect for life, for humanity—so intelligent, so sensitive—that we must never lose sight of. That is what's essential.

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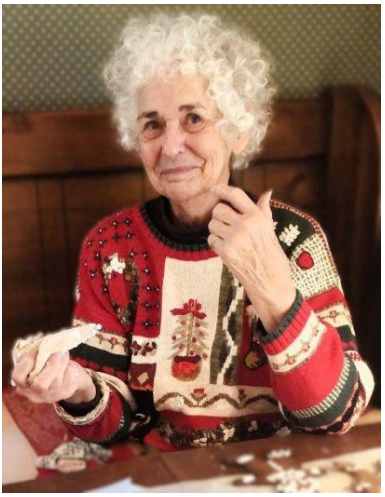
Honoring Donna Chamberlain—Educator, Advocate, and First Lady of APPPAH

JC Chamberlain, Sr.



Donna Chamberlain passed just before noon on October 8th. It was befitting that she waited for a full moon's energy to move on. She was my stepmom for 46 years. She married my father, David, in 1979, at the Coronado Cays, where they used to swim with Dick Van Dyke in the protected harbor—only in California.

She grew up in Worthington, Ohio, and graduated from The Ohio State University. Yes, she loved the Buckeyes and earned a degree in plant science and agronomy. She became a Master Gardener. She was a beekeeper and a fantastic cook. She especially loved her garden tractor that she used to get around their property in a grove of Sequoia at 3,000 feet.

She founded Birthing and Early Parenting Educators in Nevada City, where they have had a retirement home for the past 24 years. She faithfully served APPPAH (Association for Pre- and Perinatal Psychology and Health) and was recognized in 2015 as Volunteer of the Year.

For seven years, while David was President of APPPAH, she gracefully filled the role of First Lady, entertaining visitors and conference speakers, and was received with David by leaders of countries around the world as they traveled to share the news that babies are conscious before birth.

Donna was a prolific reader, writer, and an avid gardener. She always felt a strong connection with our spiritual helpers in the non-physical world. She was a beautiful, creative, dedicated, energetic, healthy example of how to live our best life. She is with David again now, tripping the light fantastic.

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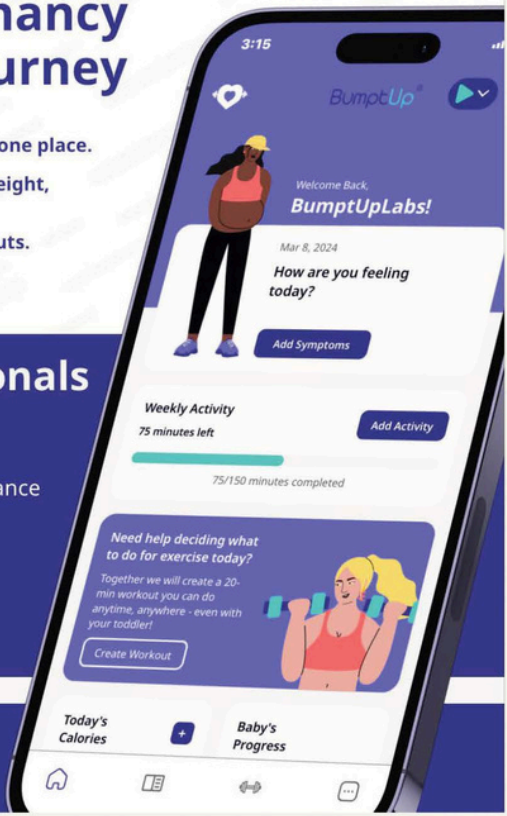

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