



“The Name of This is Fourth Trimester. A Lot of People Don’t Know About it”: A Qualitative Analysis to Inform the Development of a Web-Based Tool

Mariela Rodriguez¹ · Airia S. Papadopoulos² · Julia Coleman³ · Allison Bryant⁴ · Kristine Merz^{5,6} · Lisa Marceau^{5,6,7}

Accepted: 19 May 2023 / Published online: 12 June 2023

© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2023

Abstract

Objective The purpose of this qualitative study is to understand the pregnant and postpartum experiences of Black women in the United States to inform the development of a web-based mobile tool.

Methods Participants were recruited through Facebook Groups. There were a total of 19 women that participated in one of five focus group discussions. Participants ranged from being in their 3rd trimester of pregnancy through 6 months postpartum. The thematic content analysis was performed to identify emerging themes.

Results Four themes emerged from the focus group discussions: beliefs about postpartum motherhood, experiences during pregnancy, experiences of the postpartum period, and tool recommendations. Key results from these themes demonstrated the difficulties that women faced in having their concerns resolved by healthcare professionals, receiving adequate educational and social support during the COVID-19 pandemic, and having adequate information to help breastfeed and cope with changes they experienced throughout the postpartum period.

Conclusion The results highlight the difficulties that Black women experienced throughout pregnancy and the postpartum period. The main findings show that women lacked support in receiving information about the postpartum period, had their concerns dismissed by healthcare professionals, and received inadequate support. These findings can inform the practice of healthcare professionals and inform the development of other non-clinical, digital resources to fill in these gaps. Future research in this area is planned to further develop and pilot the tool among a broader population of women.

Significance

What is already known on this subject? The rate of Black women experiencing pregnancy-related deaths in the United States continues to increase. Several factors, such as discrimination and difficulty accessing healthcare contribute to racial inequities in maternal health outcomes.

What this study adds? The results demonstrated how Black women experienced difficulties in having their concerns resolved by healthcare professionals. Additionally, the results highlight the lack of information available to help navigate the postpartum period. The COVID-19 pandemic affected support and preparation levels. These findings can inform the creation of non-clinical, digital resources and guidance delivered by obstetrician-gynecologists, midwives, and doulas.

Keywords Postpartum · Pregnancy · Maternal Health · Fourth Trimester · Health Disparities

✉ Mariela Rodriguez
Marielarodriguez473@gmail.com

¹ Mathematica Policy Research, P.O. Box 2393, Princeton, NJ 08540, USA

² Collective Insight, 4 Pickard Ln, 01864-2451 North Reading, MA, USA

³ Carelon Research, 55 Chapel Street, Newton, MA 02458, USA

⁴ Massachusetts General Hospital, 55 Fruit Street, 02114 Boston, MA, USA

⁵ Orange Square, 15 Victory Highway, West Greenwich, RI 02817, USA

⁶ Joyuus, LLC, 15 Victory Highway, West Greenwich, RI 02817, USA

⁷ Alpha Millennial Health, Cumberland, RI, USA

Introduction

The postpartum period is a critical time for women and has been defined among various studies as the period between delivery and six weeks or delivery to twelve months (Chauhan & Tadi 2022; Romano et al., 2010). During the postpartum period, women transition into a new state of normal, filled with changes in their mental health, relationships, responsibilities, and daily life (Rai et al., 2015; Romano et al., 2010). Additionally, women face a greater risk of adverse health outcomes throughout the postpartum period. (Slomian et al., 2019; Xiao et al., 2014). Current recommendations advise women to attend a postpartum follow-up visit within the first three weeks after birth (ACOG, 2018). However, access and affordability have been identified among the factors that hinder a woman's ability to attend these visits within the first three months (Baldwin et al., 2018; DiBari et al., 2014; Parekh et al., 2018).

Black women have three times the risk of dying during their pregnancy or postpartum period and are less likely to receive healthcare (Kozhimannil et al., 2011; Petersen et al., 2019; Thiel de Bocanegra et al., 2017). Experiences of racism and discrimination from the healthcare system have affected prenatal and postpartum care retention (Okoro et al., 2020). These factors contributing to health inequities can be ameliorated by understanding women's experiences and needs throughout the postpartum period. This understanding may foster the creation of digital tools that fill gaps in care and facilitate self-care throughout the postpartum period.

This study was conducted as part of a Community Health Needs Assessment (CHNA) for a Small Business Innovation Research Grant (SBIR). The grant provided funding to conduct preliminary pilot research and create a prototype of a web-based tool that delivers self-care information and resources to postpartum women. Focus group discussions (FGDs) were conducted to understand the experiences of Black women throughout pregnancy and the postpartum period. The findings from this study were utilized to inform the creation of the prototype of the tool. This study sought to understand the experiences of Black women throughout pregnancy and the postpartum period and what features of a tool can fill those gaps.

Materials and Methods

This study was approved by the New England Research Institutes Institutional Review Board and all research activities were conducted in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments. Qualitative methods were used to adhere to

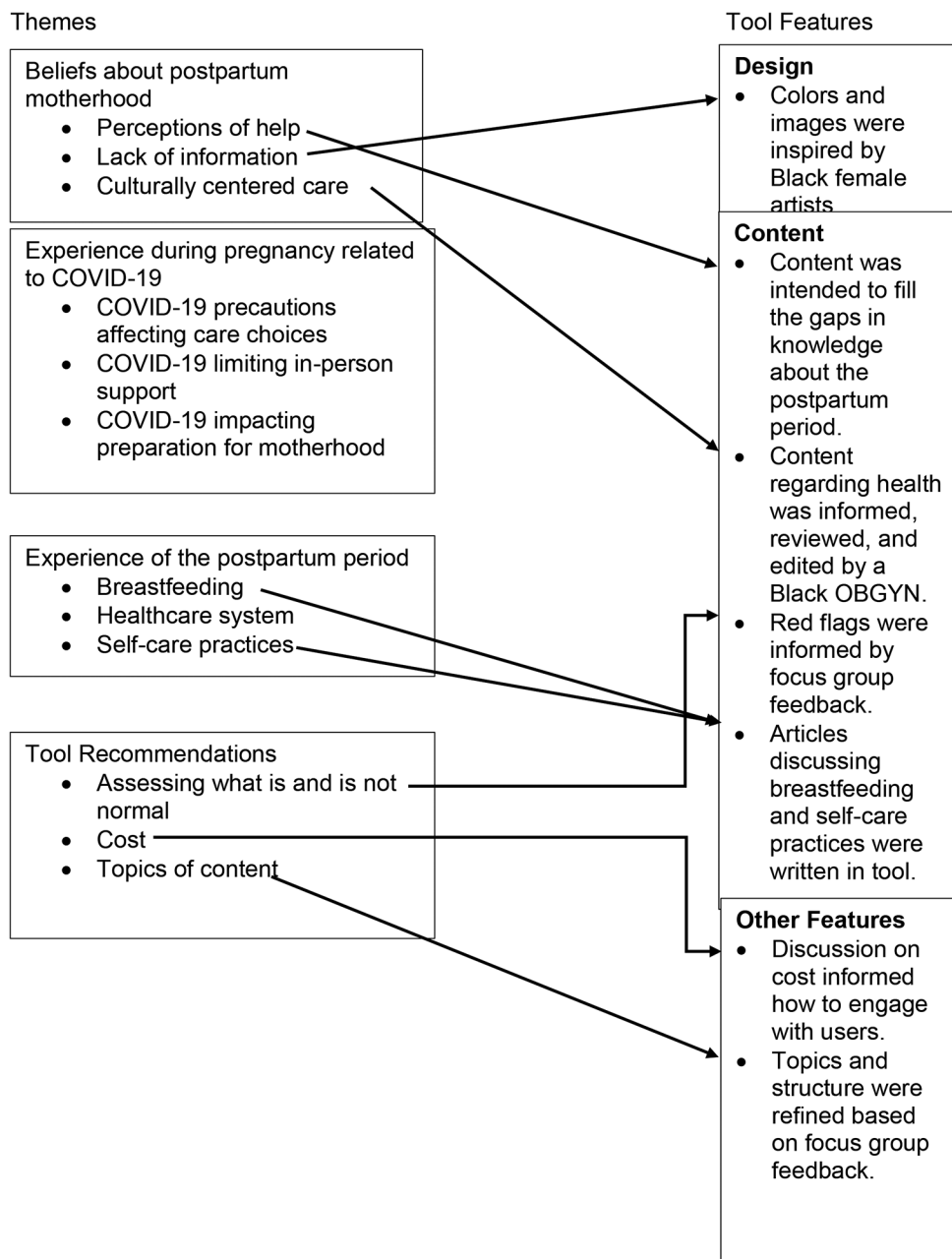
the methodology of human-centered design through engaging key stakeholders at every stage of the creation process and translating feedback into impact of the tool (see Fig. 1) (Holeman & Kane, 2020).

Recruitment for the FGDs utilized a purposive sampling technique through posting flyers on Facebook groups located nationwide. The groups were intentionally chosen as they serve as a resource of information and community for women of color. The flyer informed participants about the opportunity to contribute to the development of a tool for postpartum women and contained a link to an eligibility screener. Basic demographic characteristics, such as pregnancy and postpartum status, race and ethnicity, age, and annual household income were collected in the screener. Eligibility criteria included: age 18 or older, identified as Black or African American, currently pregnant for six months or more, or gave birth within the past six months. Eligible participants were contacted to be scheduled and required to complete a consent form prior to participating in the FGDs.

A total of five FGDs were scheduled between April 12, 2021 and April 19, 2021. The FGDs were conducted and recorded through the video conferencing platform Zoom (Zoom Video Communications, Inc.) and lasted approximately 90 minutes. Participants were compensated with a \$50 Amazon gift card. The interviews were moderated by a Black woman in the same age group as participants with extensive experience in qualitative interviewing as a cultural anthropologist. A semi-structured interview guide based on standard qualitative methods was created to question the challenges, needs, and experiences throughout pregnancy and the postpartum period. A research associate was present throughout the FGDs for notetaking and technical assistance purposes.

The FGDs were transcribed through the software Temi (Temi), verified for accuracy, and de-identified. Thematic content analysis was performed by the research associate in NVivo12 (QSR International) to create codes using an inductive approach. The research associate then applied deductive reasoning to organize the codes into similar, overarching themes. The initial draft of the codebook contained seventeen themes which were further condensed. The final codebook contained four primary themes and twelve subthemes. Throughout the coding process, the research associate discussed the codebook with another researcher to confirm credibility and preserve rigor. This methodology supports the rigor of this study to ensure that confirmability and dependability of findings was attained (Stenfors et al., 2020). Additionally, the methods used throughout the interviews and analytic process used the COREQ checklist (Tong, 2007).

Fig. 1 Human centered design to inform tool features



Results

Participant Characteristics

Nineteen women participated in the FGDs (Table 1). All nineteen women identified as Black or African American. Three women identified as multiple races and ethnicities, such as Black and Hispanic or Black and Asian. Most women had already given birth, while two were currently pregnant during the study. Participants’ mean age was thirty-two. Three participants reported an annual household income less than \$40,000, while all other participants reported a household income greater than \$40,000.

Qualitative Themes

Across the five FGDs, four primary themes emerged: beliefs about postpartum motherhood, experience during pregnancy, experience during the postpartum period, and tool recommendations. Among these themes, twelve major sub-themes emerged (Table 2).

Beliefs About Postpartum Motherhood

The first theme involved beliefs about the postpartum period that the women formed during their experience. Among the pregnant women in the FGDs, this theme reflected their

Table 1 Interview participant characteristics (N = 19)

Participant Characteristics	Frequency (%)
Pregnancy Status	
6 months pregnant or more during the focus group (April 2021)	2 (11%)
Gave birth within past 6 months at the time of the focus group	17 (89%)
Race/Ethnicity (More than one race may apply)	
Black or African American	19 (100%)
Hispanic	2 (11%)
Asian	1 (5%)
Mean Age in Years (Age Range)	32 (25–40)
Annual Household Income	
\$0-\$19,000	1 (5%)
\$20,000-\$39,999	2 (11%)
\$40,000-\$59,999	7 (37%)
\$60,000 or above	9 (47%)

Table 2 Qualitative themes and subthemes

Main Theme	Subthemes
Beliefs about postpartum motherhood	Perceptions of help Lack of information Culturally centered care
Experience during pregnancy related to COVID-19	COVID-19 precautions affecting care choices COVID-19 limiting in-person support COVID-19 impacting preparation for motherhood
Experience of the postpartum period	Breastfeeding Healthcare system Self-care practices
Tool recommendations	Cost Assessing what is and is not normal Topics of content

preconceived thoughts about the postpartum period. This theme contained three major subthemes: the women's perceptions of help, lack of information, and culturally centered care.

Perceptions of Help

Women expressed mixed perceptions regarding help, including the reluctance to ask for help during the postpartum period. Participants felt influenced by society's expectation of women effortlessly handling motherhood's challenges alone. The women overcame that expectation upon realizing that receiving help would not affect their maternal competency. They shared:

"It's like asking for help, not trying to do, not trying to be superwoman, which I try to, but yeah, not trying to be super woman is asking for help..." (FGD3)

"... and the part about like asking for help, like, I just felt like I was failing if I asked for help. ... because I was drowning and I was like, I should be able to do this. Like nobody told me stuff was going to be so hard. Am I failing? Why, why is this so hard for me?" (FGD4)

Lack of Information

Participants reported a lack of awareness about the postpartum period and breastfeeding, specifically the difficulties they would face. Participants shared how they felt unprepared for what to expect or how to overcome challenges. They highlighted how these topics should be discussed more by healthcare professionals and women to increase awareness. They stated:

"Like I'm telling you like, the name of this is fourth trimester. A lot of people don't know about it." (FGD1)

One woman spoke about her early experiences with breastfeeding:

"In the beginning I'm freaking out because I'm thinking, 'Oh my God, I only got a couple of drops coming out. My baby is going to starve to death.' Like I, I knew, like I knew that was something that I should have, I should have known." (FGD4)

Culturally Centered Care

Participants identified culturally centered care as an influential factor in decision-making, especially when choosing providers or discerning the credibility of research sources. Participants expressed how this factor determined whether the information was applicable to their life. One participant quoted:

"I just want to make the best-informed decision I can for my baby. ... that's why I think it's very important that that's ... why culturally it's important to take that into consideration when you're researching." (FGD5)

Despite this preference, women described the paucity of cultural representation in providers and resources. A participant described her rationale for seeking providers that provided culturally centered care:

"But, in regard to how I seek care, I already tried to find women of color or people of color to be my health

providers. Just because I feel that they might advocate for you more than someone who is not because they might understand the issues and difficulty that you're having..." (FGD3)

The preferences for culturally centered care, learning to ask for help, and lack of available information capture participants' beliefs about the postpartum period.

Experience During Pregnancy

The second theme described the participants' experiences throughout pregnancy. The main subthemes indicated how COVID-19 affected care choices, limited in-person support, and impacted preparation.

COVID-19 Affecting Care Choices

Across three FGDs, participants highlighted how COVID-19 precautions affected prenatal visits. The women were most impacted by attending virtual visits only despite their preference of receiving in-person care. Women found themselves switching providers to fulfill their preference :

"I had started with one and had several meetings over video, but didn't realize that she was never going to meet me in person until literally I was in labor. And I was like, I don't feel comfortable only seeing you showing up at my birth. And so ended up barring her." (FGD4)

Another woman explained the role that in-person visits had:

"...but that's, that's why I went the nontraditional midwife route because I'm still able to see somebody in person, even with the breastfeeding journey as well... I know that postpartum I'd at least have somebody I can see in person and not have to do a telemedicine visit with them." (FGD1)

COVID-19 Limiting In-Person Support

Across all five FGDs, women described how COVID-19 precautions limited in-person support. The lack of in-person support was common during ultrasound appointments and delivery. Women reflected on the disappointment they felt when hearing their infant's first heartbeat alone:

"So me hearing our baby's heartbeat for the first time at six (weeks), he [partner] couldn't, he had to wait that whole time. And that really sucked." (FGD5)

Another woman explained the disappointment in not being able to share the birthing experience with additional family:

"I would really have liked to have my mom there as well, because she was there to have my son with me, with my son, but I can only have one person. So, it's like I had to pick and choose. And I didn't like to have to do that because I would have rather had both of them there." (FGD3)

COVID-19 Affecting Preparation

The level and type of preparation practiced among women was also impacted by COVID-19. Some women had virtual education classes while others had none. Women expressed how attending virtual meetings affected their sense of feeling prepared for childbirth and breastfeeding. They stated:

"So like the whole like labor and delivery course that they offer parents was a zoom meeting like this, which was less interactive. And even the breastfeeding course was the same way, so I didn't really feel prepared for it." (FGD1)

"And I think COVID had a part, I didn't get to go to any birthing classes. I didn't get to do any breastfeeding classes. So kind of the things that I feel like would have helped, I didn't get it." (FGD4)

Due to participants representing a nationwide sample, participants across FGDs had distinct experiences depending on their state's mandates regarding COVID-19 precautions. However, all women shared how their pregnancy was impacted by COVID-19.

Experience of the Postpartum Period

The women discussed the range of experiences faced throughout the postpartum period. The three subthemes consisted of topics regarding breastfeeding, experience with the healthcare system, and self-care.

Breastfeeding

Across FGDs, participants mentioned how their breastfeeding experiences did not meet their preconceived expectations. The women explained how the discordance between expectations and reality affected their perception of being a competent mother. Especially since most women perceived that breastfeeding would be easy and pain-free. They stated:

“Well while I was pregnant, I set in my head a goal to exclusively breastfeed for the first six months. And I thought it was going to be easy. I’d just put him here and he’d just latch and it’d be perfect every time, but it didn’t happen that way at all (chuckles).” (FGD1)

“My little one had a tongue tie and a lip tie in the beginning so breastfeeding wasn’t, you know, I knew it would be uncomfortable, but, I wasn’t sure how uncomfortable, you know.” (FGD2)

Healthcare System

Additionally, women described how their concerns were neglected during their interactions with the healthcare system. These interactions occurred during delivery, postpartum checkups, and lactation consultations. The women expressed how their concerns were easily dismissed and passed off as a “normal” occurrence:

“...I had a concern because I had just pelvic pain that just lasted for so long. And it was always brushed under the rug, like, ‘Oh yeah, that happens when I had my baby, that happened to me.’” (FGD4)

Another participant described how this treatment inclined her to switch providers:

“After I, after I had her during the postpartum period, they were helpful. One of them wasn’t and I requested a different one.” (FGD1)

Self-Care Practices

The participants discussed engagement with self-care throughout the postpartum period. However, participants often dismissed their own self-care needs to take care of the baby. Therefore, basic needs, such as showering and eating are often postponed for substantial periods of time. They stated:

“Because it’s easy, it can slip away so fast. Like it’s like one day and then before you know it, three months has passed and you go back and think I really didn’t, I haven’t done much for myself.” (FGD5)

Another woman stated:

“... Caring for yourself. I feel like that’s the last thing. Like I make sure the baby’s okay. I make sure that my husband’s okay.” (FGD3)

Challenges pertaining to receiving care, breastfeeding, and incorporating self-care into their lives was common across the women’s experiences.

Tool Recommendations

The fourth theme consisted of recommendations for a web-based tool. Many subthemes described the tone, design, and promotion for the tool. The three major subthemes involved cost, assessing symptoms, and topics of content.

Cost

Participants shared that an appropriate cost for the tool would depend on its utility. Many women expressed their willingness to pay for the tool if it is useful. However, one woman emphasized the importance of making the tool free to ensure access for all women. Even though one woman shared this perspective, the quote has been included to highlight the immense need for tools that help postpartum women:

“I would expect at the surface level for it to be accessible, for certain things to be accessible without a fee, just if I’m being transparent, because I feel like this is something that should be available to people, you know, regardless of whether or not they have the monetary means to...” (FGD4)

Assessing Symptoms

Women also shared their desire to assess which symptoms are normal. They expressed how this information would determine when to seek care by a health professional. Additionally, participants wanted to learn the range of symptoms they can experience throughout the postpartum period. Participants explained how they would prefer to hear experiences from other mothers:

“And I feel that if somebody’s already been through it, although everybody’s journey is different, it’s good to know, ‘Oh, so-and-so went through this,’ or this is normal. Like nine out of 10 moms have experienced this feeling.” (FGD3)

Participants also mentioned the utility of a feature that clarifies the severity of symptoms:

“And I know it’s different for each individual as well, but I think it would be important again to say, this is normal, this isn’t normal, this is when you should probably call your doctor or, you know, a nurse line.” (FGD2)

Topics of Content

The participants mentioned a wide range of topics that should be included in the tool. These topics included mental health, nutrition, and how to incorporate self-care. However, across all FGDs, the women vouched for inclusion of all topics. Their rationale was that the postpartum period consists of countless experiences with one’s partner, child, family, and self. Therefore, no topic should be “off-limits.” They shared:

“I don’t know. I feel like there, there really shouldn’t be any topics that are off limits, because I feel like that’s the reason why some women you know, feel so lost when it comes to them having a baby and just the process.” (FGD3)

Other women highlighted other reasons for inclusion of all topics:

“You know, you never know what, what you need until it comes up. So I don’t think that anything is, you know, taboo me personally.” (FGD1)

The tool recommendations assisted in determining the tool’s cost, features to assess symptoms, and selection of topics.

Discussion

The challenges that Black women face throughout pregnancy and the postpartum period must be understood to create resources that appropriately address their needs. The purpose of this study was to understand how these experiences could assist in the creation of a tool aimed to help women throughout the postpartum period. The key findings indicate that Black women lack information to prepare for the postpartum period, struggle to have their concerns resolved by healthcare professionals, and experienced limited support due to COVID-19 precautions.

Our findings highlight the need for increased awareness about the postpartum period and breastfeeding among women. These results align with findings from past studies that identified how lack of knowledge, information, and support from healthcare professionals contributed to

breastfeeding challenges (Avilla et al., 2020; Feenstra et al., 2018; Gianni et al., 2019). Our findings regarding a lack of awareness about the postpartum period were consistent with other studies (Martin et al., 2014). These experiences engender an uncertainty of symptoms that become a major concern for women during the postpartum period.

Similarly, other studies have found how Black women struggle to have their concerns resolved during prenatal, childbirth, and postpartum visits (Altman et al., 2019; Oribabor et al., 2020). These interactions with the healthcare system are an example of institutionalized racism that affect Black women’s health outcomes (Salm Ward et al., 2013). These experiences are of paramount importance since they affect the woman’s inclination to seek care for themselves and their children (Alhusen et al., 2016; Giurgescu et al., 2011). Findings from previous studies and maternal mortality rates highlight the immense need for more comprehensive treatment by healthcare professionals. These findings also highlight the need for tools and resources that fill the gap in providing information.

Challenges regarding support levels during the COVID-19 pandemic persist in recent studies. Women have expressed the implications of not having in-person support throughout pregnancy, delivery, and the postpartum period (Bremner et al., 2021; DeYoung & Mangum, 2021). The absence of in-person support has contributed to women feeling inadequately prepared for motherhood. Research has highlighted the lack of educational support available through virtual classes and telemedicine visits (Barbosa-Leiker et al., 2021; Bremner et al., 2021; Spatz & Froh, 2021). These findings highlight the need for additional measures of support for pregnant and postpartum women with COVID-19 precautions enacted, or as virtual care becomes institutionalized post-pandemic.

This study has several limitations. Since recruitment and FGDs were online, lack of internet access may have hindered participation for some women. However, online FGDs facilitated the ability to obtain a nationwide sample. Since participants were contacted during the height of the COVID-19 pandemic, their experiences may differ from women in other time periods. Despite this factor, our findings emphasize how COVID-19 exacerbated the existing structural challenges with healthcare access and support. Additional research that explores COVID-19’s lasting impact amongst a broader population of women would be helpful to understand whether these experiences persist.

Overall, these findings underscore the factors that impact Black women’s pregnant and postpartum period experiences. Findings from this study demonstrate what Black women seek from resources that assist them throughout the postpartum period. Most importantly, the findings highlight

how current methods of preparing and educating women for the postpartum period can improve.

Conclusions for Practice

The experiences Black women faced throughout pregnancy and the postpartum period are highlighted in this study's findings. Our study explored these experiences to inform the creation of a tool centered around their needs. The results demonstrated that Black women struggled to have their concerns resolved by healthcare professionals, to receive support during the COVID-19 pandemic, and to gain awareness about the postpartum period. Joyuus™ is a digital health program dedicated to creating accessible well-being resources for women and those who care about them during the 12 months postpartum. In this study, Joyuus demonstrated that a program which provides postpartum self-care centered on the values and insights of birthing women has the potential to impact the negative health outcomes associated with the postpartum period (Bryant et al., 2023). Additional research is underway to broaden the exploration of this work and further develop a tool that effectively delivers self-care among postpartum women.

Author Contributions JC, LM, and KM contributed to the design of the study. MR and AP participated in data collection. MR performed the analysis and drafted the manuscript. AP, JC, AB, KM, and LM reviewed and provided critical feedback to the paper. All authors approved of the final draft.

Funding The project was funded by a Small Business Innovative Research grant from the National Institutes of Health, National Institute on Minority Health and Health Disparities (Grant #: R43MD014923).

Data Availability Not applicable.

Code Availability Not applicable.

Declarations

Conflict of interest The authors detect no potential conflict of interest.

Ethics approval All research activities were reviewed by the New England Research Institutes Institutional Review Board and an independent Safety Monitoring Committee.

Consent to participate All women were required to provide informed consent prior to participating in focus groups.

Consent for publication N/A.

References

- ACOG Committee Opinion. (2018). Optimizing Postpartum Care. *Obstetrics and gynecology*, 131(5), e140–e150. <https://doi.org/10.1097/AOG.0000000000002633>. No. 736.
- Alhusen, J. L., Bower, K. M., Epstein, E., & Sharps, P. (2016). Racial discrimination and adverse birth outcomes: An integrative review. *J Midwifery Womens Health*, 61(6), 707–720. <https://doi.org/10.1111/jmwh.12490>
- Altman, M. R., Oseguera, T., McLemore, M. R., Kantrowitz-Gordon, I., Franck, L. S., & Lyndon, A. (2019). Information and power: Women of color's experiences interacting with health care providers in pregnancy and birth. *Social Science And Medicine*, 238, 112491. <https://doi.org/10.1016/j.socscimed.2019.112491>
- Avilla, J. C., Giugliani, C., Bizon, A., Martins, A. C. M., Senna, A. F. K., & Giugliani, E. R. J. (2020). Association between maternal satisfaction with breastfeeding and postpartum depression symptoms. *PLoS One*, 15(11), e0242333. <https://doi.org/10.1371/journal.pone.0242333>
- Baldwin, M. K., Hart, K. D., & Rodriguez, M. I. (2018). Predictors for follow-up among postpartum patients enrolled in a clinical trial. *Contraception*, 98(3), 228–231. <https://doi.org/10.1016/j.contraception.2018.04.016>
- Barbosa-Leiker, C., Smith, C. L., Crespi, E. J., Brooks, O., Burduli, E., Ranjo, S., Carty, C. L., Hebert, L. E., Waters, S. F., & Gartstein, M. A. (2021). Stressors, coping, and resources needed during the COVID-19 pandemic in a sample of perinatal women. *BMC pregnancy and childbirth*, 21(1), 171–171. <https://doi.org/10.1186/s12884-021-03665-0>
- Bryant, A. S., Coleman, J., Shi, X., Rodriguez, M., Papadopoulos, A. S., Merz, K., Leonard, J., Samia, N., & Marceau, L. (2023). The power and promise of postpartum self care: Evaluation of a web-based tool for underserved women. *Maternal and Child Health Journal*, 27(3), 548–555. <https://doi.org/10.1007/s10995-023-03605-8>
- Breman, R. B., Neerland, C., Bradley, D., Burgess, A., Barr, E., & Burcher, P. (2021). Giving birth during the COVID-19 pandemic, perspectives from a sample of the United States birthing persons during the first wave: March-June 2020. *Birth*, 48(4), 524–533. <https://doi.org/10.1111/birt.12559>
- Chauhan, G., & Tadi, P. (2022). Physiology, Postpartum Changes. In StatPearls. <https://www.ncbi.nlm.nih.gov/pubmed/32310364>
- de Thiel, H., Braughton, M., Bradsberry, M., Howell, M., Logan, J., & Schwarz, E. B. (2017). Racial and ethnic disparities in postpartum care and contraception in California's Medicaid program. *American Journal of Obstetrics and Gynecology*, 217(1), 47.e41–47.e47.
- DeYoung, S. E., & Mangum, M. (2021). Pregnancy, birthing, and Postpartum Experiences during COVID-19 in the United States. *Frontiers in sociology*, 6, 611212–611212. <https://doi.org/10.3389/fsoc.2021.611212>
- DiBari, J. N., Yu, S. M., Chao, S. M., & Lu, M. C. (2014). Use of postpartum care: predictors and barriers. *Journal of pregnancy*, 2014, 530769–530769. <https://doi.org/10.1155/2014/530769>
- Feenstra, M. M., Jørgine Kirkeby, M., Thygesen, M., Danbjørg, D. B., & Kronborg, H. (2018). Early breastfeeding problems: A mixed method study of mothers' experiences. *Sexual & Reproductive Healthcare : Official Journal Of The Swedish Association Of Midwives*, 16, 167–174. <https://doi.org/10.1016/j.srhc.2018.04.003>
- Gianni, M. L., Bettinelli, M. E., Manfra, P., Sorrentino, G., Bezze, E., Plevani, L., Cavallaro, G., Raffaelli, G., Crippa, B. L., Colombo, L., Morniroli, D., Liotto, N., Roggero, P., Villamor, E., Marchisio, P., & Mosca, F. (2019). Breastfeeding Difficulties and Risk for Early Breastfeeding Cessation. *Nutrients*, 11(10), <https://doi.org/10.3390/nu11102266>

- Giurgescu, C., McFarlin, B. L., Lomax, J., Craddock, C., & Albrecht, A. (2011). Racial discrimination and the black-white gap in adverse birth outcomes: A review. *J Midwifery Womens Health*, 56(4), 362–370. <https://doi.org/10.1111/j.1542-2011.2011.00034.x>
- Holeman, I., & Kane, D. (2020). Human-centered design for global health equity. *Information Technology for Development*, 26(3), 477–505. <https://doi.org/10.1080/02681102.2019.1667289>
- Kozhimannil, K. B., Trinacty, C. M., Busch, A. B., Huskamp, H. A., & Adams, A. S. (2011). Racial and ethnic disparities in postpartum depression care among low-income women. *Psychiatric Services (Washington, D. C.)*, 62(6), 619–625. https://doi.org/10.1176/ps.62.6.pss6206_0619
- Martin, A., Horowitz, C., Balbierz, A., & Howell, E. A. (2014). Views of women and clinicians on postpartum preparation and recovery. *Maternal And Child Health Journal*, 18(3), 707–713. <https://doi.org/10.1007/s10995-013-1297-7>
- Okoro, O. N., Hillman, L. A., & Cernasev, A. (2020). We get double slammed!": Healthcare experiences of perceived discrimination among low-income african-american women. *Womens Health (Lond)*, 16, 1745506520953348. <https://doi.org/10.1177/1745506520953348>
- Oribhabor, G. I., Nelson, M. L., Buchanan-Pearl, K. R., & Cancarevic, I. (2020). A Mother's Cry: A race to eliminate the influence of racial disparities on maternal morbidity and mortality rates among Black Women in America. *Cureus*, 12(7), e9207. <https://doi.org/10.7759/cureus.9207>
- Parekh, N., Jarlenski, M., & Kelley, D. (2018). Prenatal and Postpartum Care Disparities in a large Medicaid Program. *Maternal and Child Health Journal*, 22(3), 429–437. <https://doi.org/10.1007/s10995-017-2410-0>
- Petersen, E. E., Davis, N. L., Goodman, D., Cox, S., Syverson, C., Seed, K., Shapiro-Mendoza, C., Callaghan, W. M., & Barfield, W. (2019). Racial/ethnic disparities in pregnancy-related deaths - United States, 2007–2016. *MMWR. Morbidity and Mortality Weekly Report*, 68(35), 762–765. <https://doi.org/10.15585/mmwr.mm6835a>
- Rai, S., Pathak, A., & Sharma, I. (2015). Postpartum psychiatric disorders: Early diagnosis and management. *Indian journal of psychiatry*, 57(Suppl 2), S216–S221. <https://doi.org/10.4103/0019-5545.161481>
- Romano, M., Cacciatore, A., Giordano, R., & La Rosa, B. (2010). Postpartum period: Three distinct but continuous phases. *J Prenat Med*, 4(2), 22–25.
- Salm Ward, T. C., Mazul, M., Ngui, E. M., Bridgewater, F. D., & Harley, A. E. (2013). You learn to go last": Perceptions of prenatal care experiences among african-american women with limited incomes. *Maternal And Child Health Journal*, 17(10), 1753–1759. <https://doi.org/10.1007/s10995-012-1194-5>
- Slomian, J., Honvo, G., Emonts, P., Reginster, J. Y., & Bruyère, O. (2019). Consequences of maternal postpartum depression: A systematic review of maternal and infant outcomes. *Womens Health (Lond)*, 15, 1745506519844044. <https://doi.org/10.1177/1745506519844044>
- Spatz, D. L., & Froh, E. B. (2021). Birth and breastfeeding in the hospital setting during the COVID-19 pandemic. *Mcn; American Journal Of Maternal Child Nursing*, 46(1), 30–35. <https://doi.org/10.1097/nmc.0000000000000672>
- Stenfors, T., Kajamaa, A., & Bennett, D. (2020). How to ... assess the quality of qualitative research. *The Clinical Teacher*, 17(6), 596–599. <https://doi.org/10.1111/tct.13242>
- Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International journal for quality in health care: journal of the International Society for Quality in Health Care*, 19(6), 349–357. <https://doi.org/10.1093/intqhc/mzm042>
- Xiao, R. S., Kroll-Desrosiers, A. R., Goldberg, R. J., Pagoto, S. L., Person, S. D., & Waring, M. E. (2014). The impact of sleep, stress, and depression on postpartum weight retention: A systematic review. *Journal of psychosomatic research*, 77(5), 351–358. <https://doi.org/10.1016/j.jpsychores.2014.09.016>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.