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"I am a Runner": A qualitative analysis of women-runners' pregnancy experiences

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Abstract

Background

Women runners are a group with potential for health maintenance and health promotion in pregnancy. When providers counsel women to discontinue or cut back on running without cause, an opportunity for health benefits to both woman and baby may be lost.

Aim

This study aims to explicate the experience women runners have in pregnancy to further providers' understanding of this population's unique needs.

Methods

An online, qualitative inquiry was employed to explore the experiences of an online community of women runners in pregnancy (N = 22). The Doing Pregnancy framework provided guidance for final stages of the analysis.

Findings

Four themes emerged, explicating a process for "Doing Pregnancy" as a woman-runner: (1) I am a runner; (2) running tunes me into my pregnant body; (3) adjusting to pregnancy's changes; and (4) trusting my instincts & knowledge vs. listening to others.

Discussion

Women's sense of embodiment caused them to feel strongly tuned into the needs of their maternal-fetal dyad and to trust that they knew what was healthy regarding running during pregnancy. When provider advice was conflicting or was not evidence-based, women lost trust in their providers.

Conclusion

Providers caring for women runners should recognize running as a key piece of their identities and enter into shared partnership as women navigate changes in pregnancy. Women have a strong sense of embodiment and are tuned into the needs of their body as well as the needs of their baby.

Keywords

Women runners, Embodiment, Pregnancy, Physical activity

1. Introduction

The numbers of women who participate in running are on the rise. The 9.1 million women who completed a formal race event represent approximately 57% of all runners who crossed a finish line in a race between 2013 and 2016.[1] Many women runners of childbearing age will become pregnant and will have to make decisions regarding their running during pregnancy. Little of the research on exercise during pregnancy has focused specifically on running—except for studies that have examined professional runners who were pregnant.[2], [3] No specific study has examined the experiences of how non-professional women runners experience pregnancy and the postnatal period.

Running is an effective strategy for promoting physical and mental health among women. Women who run regularly experience physiological benefits such as stronger pelvic floor muscles, lower resting heart rate, improved triglycerides, increased high density lipoprotein (HDL), and increased oxygen uptake (VO_{2max}).[4], [5], [6] Continuing previous running habits during pregnancy may limit excessive weight gain and hasten return to a healthy weight after birth. Women who engage in physical activity during pregnancy maximize the likelihood of weight gain within the range recommended by the Institute of Medicine[7] while building or

preserving lean muscle mass.[8] Women runners have also reported emotional, social, and spiritual benefits from their running.[5], [9], [10]

In the past, practice guidelines led providers to recommend activity heart rate restrictions for pregnant women.[11] Current evidence supports promoting previously active women to maintain pre-pregnancy levels of physical activity as long as they are comfortable doing so and as long as they do not develop complications that make physical activity unsafe. The most updated practice guidelines reflect this evidence.[12], [13], [14]

Despite these updated guidelines, many providers encourage women to engage only in low-impact exercise such as walking; to discontinue or reduce running if they were running before pregnancy; and some do not address physical activity during prenatal visits.[15], [16], [17], [18] Women report that they do not follow their providers' advice to reduce physical activity when it conflicts with what they feel is healthy.[16] Many women transitioning to motherhood find support in online communities to augment the guidance of their providers or their key social contacts when they perceive their providers or other support people as having rigid or outdated ideologies of what will promote health for the mother-child dyad during pregnancy.[19]

1.1. Doing Pregnancy as a runner

The awareness of physical changes to the body and physical sensations both signal to women that they are becoming different—these changes are apparent to women before those around them, and thus women have a subjective embodied experience of the pregnancy that is their own.[20] This experience, coupled with their awareness of the baby's presence through movement, is one where many women recognize that they have a personal relationship with the body growing within them. Women often identify this as an empowering circumstance, where they experience their body as uniquely capable of caring for the needs of the maternal-child dyad; however, this occurs in contrast to the assessment of outside world and the healthcare system that a pregnant woman is vulnerable and in need of care.[20], [21]

Once women are visibly pregnant, their experience of living in their body is one of being scrutinized for the risk their behaviors may bring to the fetus they are carrying.[21], [22], [23] Women develop processes for caring for themselves and their fetus within the ambiguous state in which they are both separate from and one with their fetus.[20], [21] All the while, pregnant women are aware of the fact that notions of what is healthy are being defined by social norms and the expectations of formal healthcare providers.[20], [23], [24] In this context, the woman is seen as the sole protector of her fetus's health, and is expected to prioritize risk reduction for her fetus over her own health needs.[23], [25] Recognizing that women have agency to balance their needs with the needs of their fetus can lead to a more egalitarian partnership between women and providers.[20], [26]

The seminal work on transition to motherhood done by Rubin[27] has been the prevailing theory guiding perinatal healthcare providers. This theory has been criticized more recently as being too focused on how the mother prepares to meet the needs of the fetus and the infant, and for being a theory that supports a top-down approach between a provider and a woman.[26] The embodiment paradigm is more reflective of the way women describe their subjective experience,[20] recognizing the way that women negotiate a performative identity in pregnancy within the social norms and expectations placed on women and their choices to identify women's intrinsic processes for 'Doing Pregnancy'.[28]

Neiterman's embodiment framework, "Doing Pregnancy"[28] has emerged from an interactionist paradigm. Doing Pregnancy provides a process and context in which to explore and understand dissonance between providers' recommendations for physical activity and women's understanding of their health and the dyadic relationship between themselves and their fetuses. The Doing Pregnancy framework posits that each pregnant woman negotiates changes in her body during pregnancy and through her transition to motherhood within the ambient social and cultural norms. The Doing Pregnancy framework recognizes that women's choices in pregnancy are

judged as ‘right’ or ‘wrong’ by those around her, all while she is adjusting behavior daily due to new bodily sensations and physical changes.

The Doing Pregnancy framework has 3 processes women employ—sometimes simultaneously, sometimes sequentially—throughout pregnancy.[28] In *learning to do pregnancy*, women engage in constant comparison of their pre-pregnant body to the pregnant body as it develops and engage in self-monitoring for changing sensations. Women take in advice from others about how their actions are ‘safe’ or ‘not safe’ during pregnancy. In *adapting to Doing Pregnancy*, women choose how to do what a ‘good mother’ would do as their babies develop; and choose how to respond to the advice they receive from others. They may follow, ignore, or challenge advice based on their own sense of healthy behaviors. In *performing to audiences*, women engage in adapting their behavior to shore up support of audiences that are supportive and to avoid the scrutiny of those not supportive of their choices.

Providers can play into this scrutiny when they employ a risk-averse, fetus-centric approach to counseling women regarding health behaviors.[23, 25, 26, 28] When providers emphasize control and regulation of women’s choices to achieve lower fetal risk, women experience a forced dualism between their own embodied needs and those of their fetus; and between the providers’ recommendations and their own intrinsic sense of what is healthy.[23, 29] When there is evidence that a behavior is objectively risky, or when there is a specific contraindication to a behavior, a level of provider insistence may be necessary and important. In the absence of such evidence, the contrast can break down women’s trust in their provider.[29]

The voices and perspectives of women who run in pregnancy are not well-represented in the literature. Their views may be marginalized because running during pregnancy is viewed as potentially risky and not to be promoted. The purpose of this study was to explicate the experience women runners have during pregnancy. This study was designed with a pluralistic view of embodiment in pregnancy; the social norms and expectations placed on women and their pregnancy choices were examined more fully to identify ways to recognize that women runners have intrinsic processes for “Doing Pregnancy” that balance the need of the woman-fetus dyad[28] and that support more egalitarian partnerships between woman and providers.[26]

2. Methods

This study used an online qualitative inquiry[30, 32, 33, 34] to explicate women runners’ experiences with pregnancy. Online communities have become a source of information-gathering and social support for women seeking others with common experiences. These communities also provide women a place where they can transcend geographic boundaries, avoid judgement, and find support as they formalize their identities as mothers.[19] The online space allows women who feel they are ‘different’ from other mothers to find like-minded women who understand their unique transitions to motherhood.[19, 34]

Another Mother Runner [AMR] is an online community of mother-runners, which reaches approximately 320,000 women per month across multiple media platforms.[35] AMR consists of a website and blogs, an online training club, and a weekly podcast that discusses issues related to running during motherhood, during childbearing, and beyond.[36] This online inquiry allowed for purposive sampling of women runners who had created a community of support and were comfortable utilizing electronic communication.[31, 32, 34] Additionally, recruiting through this online community made it more likely that a geographically diverse population would be sampled.[36] In order to preserve the anonymity of the women who participated, we did not ask respondents to identify their state or country outside of the United States, but the AMR community does reach women from most states in the US and multiple countries.

2.1. Protection of human subjects

This study was approved by the University's institutional review board. The principal investigator (PI) is a past participant in the AMR training community and reached out to the AMR directors via email to request promotion of the study. The directors of the AMR community sent a recruitment email to subscribers of their website and blog and posted recruitment on their Facebook page. This email and post included a brief description of the study, and a link to confidential survey site. Women who were interested in participating followed the link, which brought them to the confidential survey site. Surveys were conducted anonymously, with email addresses as the only identifying information collected so the first and second interviews could be linked and so that women could receive the study stipend. Participants were instructed to use an anonymized email address if they desired confidentiality. The PI removed all identifiers prior to analysis by the research team.

The front page of the survey site contained an information sheet that outlined the nature of the study, the risks and benefits, the expected time commitment, and contact information for the primary investigator. Participants clicked a button to indicate their agreement before they could participate in the study.

2.2. Data collection

After indicating consent, participants completed a brief demographic questionnaire. They were then invited to respond to this prompt: "Please share as much about your personal story of running, how pregnancy affected your running, and your postpartum return to running. If you have had more than one pregnancy, please share as many experiences as you would like. If you're interrupted, you can save your story and come back before submitting. Please take as much time as you need to share all you want us to know." Respondents typed directly into a response box on the survey site. There was no word or character limit. Participants could not upload responses such as word files or pdfs. After submitting their response, participants were invited to share an email address to receive a $20 Amazon electronic gift code as a thank-you and to receive a set of follow-up questions in the future. All women agreed.

2.3. Participants

Twenty-two women completed the initial online open-ended survey in fall of 2016; 16 of those women completed the set of follow-up, open-ended questions the following spring. Participants all identified as White, middle-class and had at least a partial college education (see Table 1). This sample demographic is aligned with the population of women in the recreational running community, where women of color and low-income women are under-represented.[37] The pre-pregnancy running status of women in the sample ranged from women who had been running a few miles per week to women who consistently ran long races like marathons.

Table 1. Sample characteristics.

	N	Percentage
Years running at first pregnancy		
1–5	4	18.2
6–10	7	31.8

11–15	3	13.6
15	8	36.4
Standard of living		
Getting by	4	16.7
Living comfortably	20	83.3
Relationship status		
Married/partnered	23	95.8
Divorced	1	4.2
Type of living community		
City/urban	8	33.3
Suburban	10	41.7
Rural	6	25.0
	Mean	Range
Age during pregnancy	36.36	29–49
Age at 1st pregnancy	29.5	20–37
Age at 2nd pregnancy	31.8	21–40

2.4. Data analysis

A qualitative, thematic approach, as described by Nowell et al. and Fereday and Muir-Cochrane[38, 39] guided the team in data analysis. The research team included (1) the PI, who is a nurse-researcher with 12 years' experience working in inpatient labor and delivery who also is a runner and has connected with this and other women's running communities; and (2) two graduate nurse-midwifery students who have experience in working in labor and delivery and perinatal case management. One of the graduate students has also been a runner for over 10 years and has worked as a doula. Prior to data analysis, the team met to discuss potential biases; and notes were kept throughout the coding process to facilitate a reflexive process and an audit trail. The PI for the study was a junior faculty member. She provided leadership for the entire study and consulted with experienced qualitative researchers regarding the data analysis and presentation of findings.

Transcripts were created by downloading the respondents' verbatim typed responses from the confidential survey site. Research team members individually reviewed these initial responses to identify initial overarching themes and to generate follow-up questions for participants to clarify and provide more details about their experience. Follow-up questions included: (1) "Were there any people who influenced your decision to run or not to run at any time during your pregnancy? Please share your recollection of those people and what they said or did to influence you;" (2) "Please share your memory of any emotions you had in relation to running or not running during pregnancy;" and (3) "Please share anything else that would be important for us to know about your experience of pregnancy as a runner."

The two sets of responses resulted in a data set of 37 transcripts. Responses ranged from 177 words to 1508 words, with a mean word count of 638 words. Team members individually generated codes and coded the entire dataset. The team met to discuss the data, coding labels including the words and meanings, and how codes were applied to the data. Discussion ensued to collapse and rename codes until a hierarchical coding schema was developed with 4 thematic labels and 13 subordinate coding labels. Throughout this process, the team participated in a reflexive process of peer debriefing, using field notes and reflexive discussion to critically appraise the analyses for bias and to ensure credibility of findings.

In order to establish confirmability of the findings, two researchers then used the complete coding schema to recode the data set. The team discussed the recoded data to refine themes, specify language and identify representative quotations. At this point, the team identified alignment between 3 of the main themes and the

Doing Pregnancy Framework from the embodiment literature.[28] Aligning the Doing Pregnancy Framework with the identified themes made the main themes and subordinate coding labels emerge more clearly and helped with the final naming of themes and sub-themes. After reading 14 interviews, no new codes or sub-codes emerged, and each interview contained at least 2 of the 4 main themes. Review of the entire set of interviews and then re-applying the coding scheme to the themes confirmed that meaning saturation had been reached.[40]

3. Results

Four themes emerged from the iterative data analysis, which provide a process framework for 'Doing Pregnancy' as a woman-runner: (1) I am a runner; (2) running tunes me into my pregnant body; (3) adjusting to pregnancy's changes; and (4) trusting my instincts & knowledge vs. listening to others (see Table 2). The women runners in this study identified the interrelated processes they had for 'Doing Pregnancy' that flowed from the foundational consideration that their identity was partly defined by their running.

Table 2. Theoretical linkages between Doing Pregnancy[20] and study themes.

Major themes from interview data		Sub-themes	Embodiment construct—Doing Pregnancy
I am a runner		Running is part of my identity	
		Running is a source of empowerment	
		Running makes me a better mother	
Running tunes me in to my pregnant body		Running has physical benefits	Adapting to Doing Pregnancy
		Running has mental health benefits	
		Aware of changing physical sensations	
		Running has made me more alert to signs of risk to my baby	
Adjusting to pregnancy's changes		Making accommodations to stay active	Learning to do pregnancy
		Returning to running postpartum	
Trusting instincts & knowledge vs. listening to others		Reasoning through mixed messages	Performing to audiences
		Withholding information to avoid scrutiny	

3.1. I am a runner

For women who were runners prior to becoming pregnant, their running meant much more to them beyond physical activity. They expressed that running was a crucial part of their lives, and of their role as mother. They saw being a runner as part of their identities. One woman wrote,

During my first pregnancy, I didn't run at all. I was not a runner. I got into running when I struggled to lose the weight I had gained from the first pregnancy and the postpartum depression that followed. Running quickly became part of me. It was an aspect of my life that had been missing [before she was a runner], as it gave me a sense of ownership over my time, my efforts and my body…Running is something I get to take with me. It's good for my mind, body and soul. It's part of me.

Further, running was an activity that allowed women to set goals and meet them. They expressed that it made them aware of what they were capable of in a way that prepared them for the challenges of labor and of motherhood. Running was empowering. One woman wrote,

Running during pregnancy made me feel like I could accomplish anything I put my mind to…I also feel much stronger as a runner now that I ran through pregnancy…I just took one day at a time and told myself I wanted to

run as long as my body would allow me. Overall, it just made me feel so much better about myself and the journey of pregnancy.

Another woman's response expressed how being a runner helped her get through labor.

> I used my marathon experience as a mantra for labor. When in doubt, I'd remind myself that I had run 26 miles—twice…and that helped me remember how powerful and capable I am.

Another woman wrote about how being a runner conferred benefits to her that made her a better mother. She wrote,

> I feel like running through this pregnancy and so soon after having my child has really helped my mood…I feel like my activity level helps me feel more calm, and definitely more energetic. Going for a daily run gives me the "me" time that I really need. It is my chance to re-charge so I can be there for my kids.

Finally, one mother identified the dyadic benefits of running for her and her baby. She wrote,

> I was mainly happy and grateful to be able to run for as long during my pregnancies as I did. It was something special I felt I shared with my kids before they were born."

3.2. Running makes me tuned-in to my body

Women shared how much they felt they'd always been tuned into their bodies because of running; and how their running made them particularly aware of changing sensations in their pregnant bodies. Being tuned in to their bodies was expressed in a desire to be mentally and physically healthy. They further expressed ways that running was helpful in coping with pregnancy changes. One woman wrote about the physical benefits of running throughout her childbearing experience:

Running helped my sleep and, I believe, made my labor and delivery go fast. My recovery was also fast, and I attest that to my running.

Other women identified mental health benefits of being a runner. One woman wrote,

> While I am not a serious runner by any means, I do enjoy my time on the road. It helps me clear my head, critically think about some problems, gives me energy, and boost my mood!

Several women shared how being a runner made them tuned into the changes happening in their pregnant body and oriented them toward attending to the needs of their changing pregnant bodies and the needs of their babies. One woman shared how she stayed tuned in as she made decisions about whether to continue running:

> Every run during that pregnancy felt right. I never ran when I was feeling "off." That's not to say doubts never crept in. Sometimes I felt guilty. Worried…I was reassured by reminding myself that I was listening closely to my body. That I should trust myself. And I did.

3.3. Adjusting to pregnancy's changes

Many women made adjustments to their running or stopped altogether if they perceived that their changing sensations indicated that running was not safe. One woman shared,

> I continued to run until I was 27 or 28 weeks… I quit on my own because I was starting to feel pelvic pressure when I ran-like the baby was going to fall out. [delivered full-term]

Other women, in response to their changing sensations, made accommodations to their activity level. Sometimes, these accommodations were due to discomfort; sometimes they were due to perceived risk of the physical activity. One woman shared this experience of accommodating physical sensation changes:

> …when I woke up on Friday, I felt something had fundamentally shifted (literally!) in my body. I switched to swimming and exercise machines at the gym for the remainder of my pregnancy

Another woman wrote this about stopping her running when she perceived risk to her baby:

> My second pregnancy was with twins, conceived through IVF. .I intended to run for as long as I could during the pregnancy. At 7 weeks, however, I had slight spotting after a run. It scared me so badly! Nurse at fertility clinic was sympathetic, but she gently nudged me toward giving up running, saying "You've gone through a lot to get pregnant; you don't want to jeopardize it."

Many women also shared their experience with being tuned into their bodies as they transitioned to the postnatal experience. They described a strong desire to return to running, whether they had run during pregnancy or not. Women who returned to running early in their postnatal transition described how important it was to listen to their body as they returned to running. One woman wrote,

> As soon as I had my daughter I wanted to run. I actually tried at about a week but had too much pain and tried again after two. By three weeks post-partum I was running (jogging) some and ignoring all pain and bleeding. I was just so anxious after almost a year off that I was being stupid and not listening to my body. Eventually I settled in and felt better…despite nursing, I found that I actually felt stronger and more motivated…not sure if that is from running being "taken away" from me…or from pushing a running stroller!

Another woman shared the balance of meeting the strong desire to return to running after her baby's birth with the physical discomfort that accompanied that return:

> Getting back into running postpartum is the best and worst thing about running. It was like being reunited with a favorite old friend…who proceeded to kick the stitches in my vagina!

3.4. Trusting my instincts and knowledge vs. listening to others

The women felt as though they were capable of doing their own research about what was safe and healthy in pregnancy; but they also desired and sought the guidance of their providers. Women also described looking to peers, including their online community and seeking role models outside their own social circles. When the messages received from others were inconsistent or did not align with what the women knew to be safe from their research, respondents often followed their trust that they were aware enough of their bodies to know if something was wrong, and the information they'd found.

Several women further reported feeling a distrust of professionals – even feeling that they had to hide their running from their providers – when the advice given did not align with the most current evidence available. One woman shared this experience of the process she engaged in to reason through mixed messages she received from her healthcare providers:

> I was concerned about high and moderate intensity workouts during pregnancy and asked my OB about it at my first appointment. She told me it was completely safe to continue any exercise I was already comfortable with for as long as it felt comfortable. At my next appointment with another provider from the same practice, I was instructed to wear a heartrate monitor and not let my heart rate exceed 140 bpm. I did this twice and realized I could barely get in a fast-paced walk if I followed that advice! I did a little research and learned that this advice was considered old-school, but still adhered to by many providers and patients. I apparently was in a new-school camp. I decided to weigh evidence-based

> recommendations with what felt comfortable to me. I continued running, listening closely to the cues my body gave me. I hydrated more, I cut my runs short or cut them out all together when I wasn't feeling well.

This woman's account represented the phenomenon shared by several women, who felt they had to withhold information from healthcare providers to avoid scrutiny:

> …Training for and running that marathon [while pregnant] are the fondest memories of my pregnancy. I talked to my baby, I gave my abdomen loving pats, I dreamed of one day running alongside my baby. As much as I loved this running and as good and strong as it made me feel, I never did cop to running that marathon to my midwife. I feared judgement. I feared being told I had put my baby at risk. That I was selfish and foolish and lucky my baby was okay. Even though I had never seen evidence of these risks I feared, I kept my running to myself…I feel like if more medical providers understood the importance of running to many of their patients there would be a more open dialogue rather than the rote advice given without thought.

Several other women shared accounts of shared decision-making with their healthcare providers, as well as having support from those in their social circles. One woman wrote,

> My midwives were completely supportive of my decision to continue running, and this was extremely helpful to me…and that if running made me feel better and helped me cope with my emotions, I should absolutely keep doing it. My husband was fully supportive too, and that made all the difference in the world.

Several women identified that they received positive feedback from others at races or at the gym. One of the mothers shared an example of the combination of positive and negative public scrutiny many women encountered when they ran while visibly pregnant:

> I ran a bit the day I went into labor, at 41 weeks. I also continued to bike and swim…I really loved running while pregnant. I enjoyed the feeling like my body was strong, healthy, and capable. It was also amusing to me to see other people react to me running so obviously pregnant. I had mostly positive reactions, but occasionally would notice someone scowl at me, like I was doing something dangerous.

This woman's account highlights the importance of role modeling of other healthy pregnant women as a support to her decision to run during pregnancy:

> I had a few friends who had run during part of their pregnancies…I knew that professional runners such as Kara Goucher and Paula Radcliffe had run during pregnancy…I don't think it was one person in particular that influenced my decision to run during pregnancy but the overall consensus that it was safe for a uncomplicated pregnancy plus the examples of so many women I knew doing it successfully.

4. Discussion

The results of this study highlight an opportunity for health care providers to partner with pregnant women runners and support their self-awareness and identities as healthy and active. These women runners identified the process they engage in to navigate pregnancy changes and to make choices regarding their running during their pregnancies. If providers are able to put risk in its proper context and support these women to stay physically active as long as it is comfortable and in the absence of true contraindications, both women and their babies are likely to be healthier.

The women in this study valued and sought the advice of providers, but they had an internalized sense of what was healthy that was primary in their decision-making during their pregnancy. This sense of their embodied needs for physical activity to promote mental and physical health extended into the postnatal period, where women described a need to return to their running to be a 'healthy mother.' These women identified that, as part of their strong identities as 'runners,' they were tuned into changing sensations and adjusted their exertion levels when necessary to preserve the health of the mother-baby dyad. When providers employ outdated recommendations to reduce physical activity without need, the message is that we do not trust the woman to have a sense of what is healthy and disregard her needs.[29]

Several women in this study wrote that they had withheld information about their running from their providers in order to avoid scrutiny. This should serve as a wakeup call to providers to remember that, if empowered women perceive our advice as outdated or wrong, we may lose the opportunity to guide their care when there is real risk. The women runners in this sample clearly expressed their desire to have a partnership with their providers; and their willingness to self-manage their health when that partnership was not in line with what they knew to be healthy.

The women in this study, and other pregnant women, have often turned to online media for guidance and social support.[19, 31] Online platforms are now used to extend the influence and relationship between providers and women beyond the walls of the healthcare institution.[33] Online social media sites have become more than a source of health information; they have become a platform for developing networks of like-minded, health-oriented people with which to interact and a place where many people develop their identities.[41] As such, providers must develop a new skillset. While there are still disparities in access to online and digital tools,[41] many women who do have access are empowered to trust self and to seek information in this way. Providers must become knowledgeable about reputable online materials that can be recommended to extend care between pregnancy care visits.[33] It will further extend providers' legitimacy to ask women about online communities to which they belong, so we can understand the support they are getting and tailor our advice to this context. The relationships between women and providers may be less effective when women perceive that their providers do not value online support communities or other sources of information that women share with providers, and when providers do not provide high-quality online information.[19, 33]

Perhaps the key finding in this study is identifying the fact that women who were runners prior to pregnancy felt that running was a key part of their identities. This is in line with previous work by McGannon et al.[42] who performed a discursive analysis of online postings of the *Another Mother Runner* community to explicate the identity of the 'mother-runner'. As part of their construction of the mother-runner identity, pregnancy was one example of a disruption in the women's running that required resolution to establish the position of 'resilient mother-runner.'

This finding of the runner identity as central to pregnant women runners also resonates with work done to explicate the nature of the identity of other adult recreational and fitness runners. In the general population of adult runners, one key aspect of the runner identity is the fit and healthy body—both physically and mentally.[43, 44] Injuries or other things that cause interruptions in running truly challenge these runners' sense of their own selves, placing their mental health in jeopardy.[43, 45, 46] It has become apparent that there is a need to develop targeted identity interventions to help injured runners through periods of injury-related inactivity if they are to maintain positive mental health.[45, 47] It could be argued that, for pregnant runners, when they must make running accommodations during pregnancy or postpartum, they experience this same challenge to their personal identity, and require targeted intervention to navigate this transition.

Among non-pregnant women runners, the key aspect of runner identity that has emerged as salient was the way that participating in running as a leisure or fitness activity communicates aspects of a performative identity to

others—that a woman who runs is a modern woman of sufficient means to have the time and resources necessary to run.[46] Being a woman runner also signals to others a health orientation and empowerment to achieve self-improvement by reaching running- and weight-related goals.46, 48 These social signals make up the nature of the pre-pregnancy runner identity that women carry into early pregnancy, with implications for the woman who slows down or discontinues running while pregnant due to bodily sensations or diagnosed complications. These women may not only miss the physical and mental health benefits from running; they may struggle to know how to 'do pregnancy' without the positive judgments from others that their pre-pregnancy running brought to them. Further, because social norms place a high value on those who choose to participate in this or other physical activity to self-improve,[48] withdrawal from running may carry a moral weight.

While the role of identity among non-professional pregnant runners has not been examined before, there has been work done to study the nature of the running identity and the challenges of pregnancy and motherhood among elite, professional women runners. As elite women runners make choices about training level during pregnancy and upon postnatal return to high-level training, these women feel that they are constantly navigating the continuum of two identities juxtaposed: the false dualism of 'good mother' vs. 'bad mother' and 'good athlete' vs. 'bad athlete.'49, 50 Among these professional women runners, it was key to have a network of people around them who provided emotional support as they made decisions and transactional support, such as caring for their baby so they could train without guilt.[49] When this support was present, the women stated that they were able to continue the training that supported fulfillment of both a runner identity and a mother identity.

If we are to support the woman runner in her experience of a healthful pregnancy, we must develop strategies to support women as they navigate a shift in identity. Women who experience low-risk pregnancies and who have supportive providers and social circles are likely to shift seamlessly from "woman runner" to "pregnant runner" and finally to "mother runner." Women who choose to or who are counseled to discontinue running may experience a period of disorganization that they did not anticipate and may benefit from support to find an identity that allows them to maintain positive mental health throughout the perinatal period.

The women runners in this study told stories that confirmed this sense of runner as core to identity. When women in this sample were counseled to cut back or eliminate running without clear indication, they felt that their providers were asking them to put aside an important part of themselves. Providers must consider the full weight of their recommendations when working with women whose identities are tied to their physical activity.

4.1. Limitations

While online interviewing offers many advantages, particularly to the understanding of participants who are part of online communities, there are limitations that must be acknowledged. Online interviewing does not allow for the in-real-time probing and clarification that is done in traditional face-to-face interviews. Nor does online interviewing allow for observation of nonverbal behaviors of the interviewee.[32] Most of the women typed rich, detailed accounts, but it is not known what would have been shared if each woman had been prompted in the moment to share more. Because others have found that online interviewing can increase honesty and candor due to the anonymity and the opportunity to think about words shared before hitting send,[32] the concern about lack of probing is balanced by a more thought-out response by each participant. The same signals interviewers pick up through nonverbals were observed in a different sense when women used distinct punctuation or common online signals like all capital letters to indicate emphasis.[32] Women also put some parts of their messages in parentheses to indicate that they were clarifying in-text what they wanted to say.

There is always a potential for a sample that is biased in some way, and online recruiting is subject to that sampling bias.31, 32 It is possible that the results in this study are biased because women who were more empowered or who felt more that running was part of their identity were the women more likely to join the

study. The online interview format also meant that bias may have been present in who chose to answer the follow-up questions.

5. Conclusion

The responses from the women in this study aligned with the Doing Pregnancy framework[28] and added an additional concept that women runners consider running an essential part of their identities. Women runners engage in processes to maximize the health of the mother-baby dyads throughout pregnancy via being tuned into changing sensations and making accommodations when necessary.

Providers who care for women who run should enter into a shared partnership with these women to promote holistic health. Women runners have a strong sense of embodiment that leads them to balance their needs with those of their babies and can be guided by providers in partnership to make healthy decisions. Midwives, nurses and physicians must understand the holistic experience of pregnancy and the sense of running as an identity for women runners to promote self-management of health in this population.

References

Running USA. *National Runner Survey*. Retrieved from: http://www.runningusa.org/statistics. 25 July 2017.

K.R. McGannon, K. Curtin, R.J. Schinke, A.N. Schweinbenz **(De)constructing Paula Radcliffe: exploring media representations of elite running, pregnancy and motherhood through cultural sport psychology** Psychol Sport Exerc, 13 (6) (2012), pp. 820-829, 10.1016/j.psychsport.2012.06.005

K.R. McGannon, C.A. Gonsalves, R. Schinke, R. Busanich **Negotiating motherhood and athletic identity: a qualitative analysis of Olympic athlete mother representations in media narratives** Psychol Sport Exerc, 20 (2015), pp. 51-59, 10.1016/j.psychsport.2015.04.010

L.C. Hespanhol Jr., J.D. Pillay, W. van Mechelen, E. Verhagen **Meta-analyses of the effects of habitual running on indices of health in physically inactive adults** Sports Med., 45 (2015), pp. 1455-1468, 10.1007/s40279-015-0359-y

Paul T. Williams **Greater weight loss from running than walking during a 6.2-year prospective follow-up** Med Sci Sports Exerc, 45 (4) (2013), pp. 706-713, 10.1249/MSS.0b013e31827b0d0a

K. Bø, G. Ellstrøm Engh, G. Hilde **Regular exercisers have stronger pelvic floor muscles than non-regular exercisers at midpregnancy** Am J Obstet Gynecol, 218 (4) (2018), 10.1016/j.ajog.2017.12.220 427.e1–427.e5

Institute of Medicine **Weight gain during pregnancy: reexamining the guidelines** (2009) Retrieved from http://www.iom.edu/en/Reports/2009/Weight-Gain-During-Pregnancy-Reexamining-the-Guidelines.aspx

B. Muktabhant, T.A. Lawrie, M. Laopaiboon **Diet or exercise, or both, for preventing excessive weight gain in pregnancy** Cochrane Database Syst Rev, 6 (2015), 10.1002/14651858.CD007145.pub3

K.R. McGannon, J. McMahon, C.A. Gonsalves **Mother runners in the blogosphere: a discursive psychological analysis of online recreational athlete identities** Psychol Sport Exerc, 28 (2017), pp. 125-135, 10.1016/j.psychsport.2016.11.002

K. Whipple, S. Combs, D. Dowd, S. Elliot **Using the dimensions of health to assess motivation among running moms** Health Care Women Int, 32 (5) (2011), pp. 384-401, 10.1080/07399332.2010.508132

D.S. Downs, L. Chasan-Taber, K.R. Evenson, J. Leiferman, S. Yeo **Physical activity and pregnancy: past and present evidence and future recommendations** Res Q Exerc Sport, 83 (4) (2012), pp. 485-502

G.A.L. Davies, L.A. Wolfe, M.F. Mottola, C. MacKinnon **ACOG Committee No. Opinion 650: physical activity and exercise during pregnancy and the postpartum period** Obstet Gynecol, 126 (2015), Article e135 Reaffirmed 2017. https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Physical-Activity-and-Exercise-During-Pregnancy-and-the-Postpartum-Period

G.A.L. Davies, L.A. Wolfe, M.F. Mottola, C. MacKinnon **Joint SOCG/CSEP Clinical Practice Guideline. Exercise in pregnancy and the postpartum period** J Obstet Gynecol Canada (2003), p. 129

K.R. Evenson, R. Barakat, W.J. Brown, *et al.* **Guidelines for physical activity during pregnancy: comparisons from around the world** Am J Lifestyle Med, 8 (2014), p. 102

R. Baron, L. Martin, J.T. Gitsels-van der Wal, J. Noordman, M.W. Heymans, E.R. Spelten, *et al.* **Health behaviour information provided to clients during midwife-led prenatal booking visits: findings from video analyses** Midwifery, 54 (2017), pp. 7-17, 10.1016/j.midw.2017.07.007

R.M. Ferran, A.M. Siega-Riz, K.R. Evenson, M.-K. Moos, K. Carrier **A qualitative study of women's perceptions of provider advice about diet and physical activity during pregnancy** Patient Educ Couns, 91 (3) (2013), pp. 372-377, 10.1016/j.pec.2013.01.011

M.R. Stengel, J.L. Kraschnewski, S.W. Hwang, K.H. Kjerulff, C.H. Chuang**" What my doctor didn't tell me": examining health care provider advice to overweight and obese pregnant women on gestational weight gain and physical activity** Womens Health Issues, 22 (6) (2012), pp. e535-e540, 10.1016/j.whi.2012.09.004

J.M. Ohlendorf **Postpartum weight self-management: A concept analysis** Research and Theory for Nursing Practice, 27 (1) (2013), pp. 35-52, 10.1891/1541-5677.27.1.35

S.A. Johnson **'Intimate mothering publics': comparing face-to-face support groups and internet use for women seeking information and advice in the transition to first-time motherhood** Cult Health Sex, 17 (2) (2015), pp. 237-251, 10.1080/13691058.2014.968807

I.M. Young **Pregnant embodiment: subjectivity and alienation**

I.M. Young (Ed.), Throwing like a girl: essays in feminist philosophy and social theory, Indiana University Press, Bloomington, IN (1990), pp. 160-174

D. Lupton **Configuring maternal, preborn and infant embodiment** Sydney Health Society Group (2012) Working Paper No. 2

V. Schmied, D. Lupton **The externality of the inside: body images of pregnancy** Nurs Inq, 8 (1) (2001), pp. 32-40

D. Lupton **Risk and the ontology of pregnant embodiment** D. Lupton (Ed.), Risk and sociocultural theory, Cambridge University Press, Cambridge (UK) (1999), pp. 59-85

D. Lupton, V. Schmied **Splitting bodies/selves: women's concepts of embodiment at the moment of birth** Sociol Health Illn, 35 (6) (2013), pp. 828-841, 10.1111/j.1467-9566.2012.01532.x

D. Lupton **'Precious cargo': foetal subjects, risk and reproductive citizenship** Crit Public Health, 22 (3) (2012), pp. 329-340, 10.1080/09581596.2012.657612

J.A. Parratt, K.M. Fahy **A feminist critique of foundational nursing research and theory on transition to motherhood** Midwifery, 27 (2017), pp. 445-451, 10.1016/j.midw.2010.02.012

R. Rubin **Maternal identity and maternal tasks** R. Rubin (Ed.), Maternal identity and the maternal experience, Springer Publishing Company, New York (1984), pp. 38-69

E. Neiterman **Doing Pregnancy: pregnant embodiment as performance** Womens Stud Int Forum, 35 (2012), pp. 372-383, 10.1016/j.wsif.2012.07.004

C. Meurk, A. Broom, J. Adams **Relative bodies of knowledge: therapeutic dualism and maternal-foetal individuation** Soc Theory Health, 12 (2014), pp. 159-178, 10.1057/sth.2013.26

R.J. Hamilton, B.J. Bowers **Internet recruitment and e-mail interviews in qualitative studies** Qual Health Res, 16 (6) (2006), pp. 821-835, 10.1177/1049732306287599

D.N. Narasimhulu, S. Karakash, J. Weedon, H. Minkoff **Patterns of internet use by pregnant women, and reliability of internet searches** Matern Child Health J, 20 (2016), pp. 2502-2509, 10.1007/s10995-016-2075-0

L.I. Meho **E-mail interviewing in qualitative research: a methodological discussion** J Am Soc Inf Sci Technol, 57 (10) (2006), pp. 1284-1294, 10.1002/asi.20416

R. McCarthy, L. Choucri, P. Ormandy, A. Brettle **Midwifery continuity: the use of social media** Midwifery, 52 (2017), pp. 34-41, 10.1016/j.midw.2017.05.012

S. Neville, J. Adams, C. Cook **Qualitative data from vulnerable groups: reflections from the field** Contemp Nurs, 52 (6) (2015), pp. 657-668, 10.1080/10376178.2015.1095056

Shea, SB. *Another Mother Runner: the podcast [audio podcast]*. A. Ward, Producer; 26 January 2018. Retrieved from: https://anothermotherrunner.com/another-mother-runner-podcast/.
Shea, SB, McDowell, D. *Another Mother Runner*; n.d. Retrieved from: https://anothermotherrunner.com/
Running USA. *State of the sport—part I "core runner" profiles*; 2013. Retrieved from: http://www.runningusa.org/index.cfm?fuseaction=news.details&ArticleId=1539. 29 July 2017.
L.S. Nowell, J.M. Norris, D.E. White, N.J. Moules **Thematic analysis: striving to meet the trustworthiness criteria** Int J Qual Methods, 16 (2017), pp. 1-13, 10.1177/1609406917733847
J. Fereday, E. Muir-Cochrane **Demonstrating rigor using thematic analysis: a hybrid approach of inductive and deductive coding and theme development** Int J Qual Methods, 5 (1) (2006), pp. 80-92, 10.1177/160940690600500107
M.M. Hennink, B.N. Kaiser, V.C. Marconi **Code saturation versus meaning saturation: how many interviews are enough?** Qual Health Res, 27 (4) (2016), pp. 591-608, 10.1177/1049732316665344
D. Lupton **The digitally engaged patient: self-monitoring and self-care in the digital health era** Soc Theory Health, 11 (3) (2013), pp. 256-270, 10.1057/sth.2013.10
K.R. McGannon, J. McMahon, C.A. Gonsalves **Mother runners in the blogosphere: a discursive psychological analysis of online recreational athlete identities** Psychol Sport Exerc, 28 (2017), pp. 125-135, 10.1016/j.psychsport.2016.11.002
J. Frisette **The marathon journey of my body-self and performing identity** Sociol Sport J, 32 (1) (2015), pp. 68-88, 10.1123/ssj.2014-0015
R. Shipway, I. Holloway **Health and the running body: notes from an ethnography** Int Rev Sociol Sport, 52 (1) (2016), pp. 78-96, 10.1177/1012690213509807
J. Hockey **Injured distance runners: a case of identify work as self-help** Soc Sport J, 21 (2016), pp. 38-58, 10.1123/ssj.22.1.38
N.J. Ronkainen, A. Shuman, T. Ding, S.L. You, L. Xy **'Running fever': understanding runner identities in Shanghai through turning point narratives** Leis Stud, 37 (2) (2018), pp. 211-222, 10.1080/02614367.2017.1324513
J.A. Collinson, J. Hockey **'Working out' identity: distance runners and the management of disrupted identity** Leis Stud, 26 (4) (2007), pp. 381-398, 10.1080/02614360601053384
M. Griffin **Setting the scene: hailing women into a running identity** Qual Res Sport Exerc Health, 2 (2) (2010), pp. 153-174, 10.1080/13573322.2015.1066770
F. Darroch, H. Hillsburg **Keeping pace: mother versus athlete identity among elite long distance runners** Womens Stud Int Forum, 62 (2017), pp. 61-68
N.J. Ronkainen, A. Kavoura, T.V. Ryba **Narrative and discursive perspectives on athletic identity: past, present, and future** Psychol Sport Exerc, 27 (2016), pp. 128-137, 10.1016/j.psychsport.2016.08.010