Reconciling relationships with physical activity: A qualitative study of women’s postnatal physical activity decision-making

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Abstract

Background: Challenges with engaging in postnatal physical activity can negatively affect the health of new mothers and their families. This study investigated women’s physical activity decision-making processes and strategies to support their physical activity as part of a healthy postpartum transition.

Methods: Thirty healthy women with infants aged 2.5-12 months completed 3-day activity diaries and an individual interview. Using Glaser and Charmaz’s grounded theory methodology, the core category, reconciling relationships with physical activity, was derived, which explained women’s processes of postnatal physical activity decision-making.

Results: Through reconciling relationships with physical activity, women discerned the types of physical activity they were comfortable pursuing at various points in the postpartum transition. Based on the meaning physical activity held for participants and their views about risks, supports, and resources, women gauged their capacity and the workability of their physical activity desires. Most women were uncertain of their capacity (physical, emotional) to return to physical activity and viewed the achievement of several or all of their desired physical activities as unworkable. Only a third fully pursued the desirable physical activities they viewed as important for their well-being. Women adjusted the strategies they used to achieve physical activity when their expectations of capacity and workability did not align with their experiences. Some women lacked access to resources or supportive messaging about postpartum physical activity and downgraded their physical activity pursuit after
negative physical or childcare experiences.

**Conclusions:** Women can benefit from discussions about physiological birth recovery and navigating community and peer resources to support physical activity access and the safe return to physical activity following birth.

**Keywords:** physical activity, postpartum, mothers, decision-making, grounded theory, exercise
Background

Stress during the year following childbirth (i.e., the postnatal period) can increase mothers’ vulnerability to negative mental health outcomes, decreased relationship quality, disordered eating, and weight gain [1]. Physical activity enhances new mothers’ general well-being, sleep quality, partner relationships, and physical recovery [2, 3]. Mothers who have engaged in exercise interventions have reported fewer depressive symptoms [4]. Maternal depressive symptoms, even if they do not reach clinical levels, have been associated with children’s long-term development of emotional-behavioral difficulties [5]. Thus, maternal physical activity may also support healthy infant development.

Previous findings highlight that childbirth decreases the likelihood that women will achieve physical activity recommendations (30 minutes daily moderate physical activity) [6]. Canadian women with young children exercise seven minutes less per day than women without children [7]. The majority of participants in large descriptive studies measuring new mothers’ amounts of physical activity did not achieve physical activity recommendations [8, 9].

Qualitative descriptive and survey research has illuminated personal, relational, and resource factors (e.g., facilitators, barriers) that women perceived as affecting their postnatal physical activity choices [10-12]. Women have identified lack of time/childcare, fatigue, and social support as significant factors affecting their postnatal physical activity levels [11, 13]. Interventions targeting these factors to support postpartum physical activity have demonstrated mixed success. Gilinsky et al.’s [14] meta-analysis found that postnatal physical activity interventions had a short-term moderate-sized effect on women’s activity frequency but no effect on
overall activity volume. The complex nature of interventions, e.g. eight behavioral change strategies, create difficulties with interpretations of intervention elements contributing to effectiveness [14]. Long-term strategies hold promise; the only study to report sustained increases in new mothers’ physical activity incorporated an intervention occurring over 12 months [15].

A qualitatively-derived theoretical model explaining new mothers’ physical activity decision-making may contribute to identifying effective strategies to support activity, in part, by explaining variation in new mothers’ physical activity choices. Evidence suggests new mothers’ physical activity trajectories vary considerably; the largest percentage of women decrease physical activity but some women maintain previous activity and a small percentage increase their physical activity postpartum [16]. Hamilton and White’s [17] seminal qualitative work describing parents’ diverse rationales for physical activity engagement points to significant complexity in ways women construct their physical activity choices. Some women have described taking cues from their physical body and past exercise experiences to make physical activity decisions prenatally and early postpartum [18]; however, previous work has not explained complexity and variation in women’s physical activity choices at various points in the postpartum period. This qualitative study explains women’s postnatal physical activity decision-making processes. We used constructivist grounded theory design to understand patterns of behavior and conditions that create variability in decision-making [19].

**Methods**

Our research design used Glaser’s [20] approach and incorporated Charmaz’s [19] constructivist grounded theory methodological considerations to account for the relational and constructivist nature of qualitative inquiry.
Participants and procedure

We obtained ethical approval for this study from the University Behavioral Research Ethics Board. Thirty healthy low-risk mothers between 2.5-12 months postpartum were recruited from three mid-sized Canadian cities. We initially purposively recruited women who were most likely to provide rich data [20]. Flyers were posted on social/print media (e.g., Facebook groups, magazines) and in community spaces (e.g., library, physician offices). We sampled theoretically to develop and refine categories and their relationships after seven interviews [20]. For example, to diversify understanding about childcare use and develop the motherhood beliefs category, we posted flyers at fitness centres with childcare.

The average participant age was 33.6 (range 26-43). Infants were between the ages of 2.5-12 months (average 6.3 months). As shown in Table 1, most participants were married and/or had university degrees. Half of the women had one child and/or a combined family income of more than $100,000; 83% were on maternity leave. More than half of the participants self-identified as Caucasian. Of the five women not on maternity leave, four were working part-time, and one mother identified her primary occupation as caring for her children at home.

Table 1

Characteristics as a Percentage of the Sample

| Characteristic                        | Valid % (no.) |
|---------------------------------------|---------------|
| Relationship status                   |               |
| Living with partner                   | 97% (29)      |
| Single                                | 3% (1)        |
| Number of children at home            |               |
| 1                                     | 50% (15)      |
| 2                                     | 30% (9)       |
| 3                                     | 20% (6)       |
| Education                             |               |
| University degree                     | 83% (25)      |
| Some college                          | 10% (3)       |
| High school                           | 7% (2)        |
Income (combined family)\textsuperscript{a}
\begin{itemize}
    \item \$100,000 \hspace{1cm} 57\% (16)
    \item \$80,000-\$100,000 \hspace{1cm} 18\% (5)
    \item \$60,000-\$80,000 \hspace{1cm} 14\% (4)
    \item \$20,000-\$40,000 \hspace{1cm} 11\% (3)
\end{itemize}

Ethnicity\textsuperscript{ab}
\begin{itemize}
    \item Caucasian and/or white \hspace{1cm} 61\% (17)
    \item Other (European or Iranian or Korean or Chinese) \hspace{1cm} 21\% (6)
    \item Mixed or biracial \hspace{1cm} 7\% (2)
    \item Canadian \hspace{1cm} 11\% (3)
\end{itemize}

Occupation
\begin{itemize}
    \item Professional e.g., teacher \hspace{1cm} 57\% (17)
    \item Industry e.g., marketing \hspace{1cm} 30\% (9)
    \item Student \hspace{1cm} 10\% (3)
    \item Caring for child at home \hspace{1cm} 3\% (1)
\end{itemize}

\textsuperscript{a}Two women did not answer. \textsuperscript{b}Women’s self-identified

Women gave informed consent prior to interviews and received a coffee card as thanks for participating. The first author (SL) collected interview and diary data from September 2014 to 2015. Women completed 3-day diaries prior to interviews to promote their reflections about physical activity decision-making and support interview discussions. In their diaries, women listed hourly activities and described activity contexts, e.g., environmental noise levels, and personal experiences of activities e.g., their emotions. Women met with SL for an interview after completing diaries. Interviews were audio-recorded and transcribed verbatim, with identifiers removed. They ranged from 43-75 minutes in length. SL provided two participants who became distressed during their interviews with appropriate resources and follow-up.

Early interviews focused on exploring participants’ perspectives and the meanings they attached to their postnatal physical activity experiences [19]. Women started the conversation by sharing their thoughts about their activity diaries and SL explored ideas the women expressed (e.g., concern about sleep).

Theoretical sensitivity, the ability to draw connections between codes to develop a theory [19], was enhanced because SL was sensitized to concepts (personal,
social, policy, and environmental factors) related to physical activity decision-making [21]. SL asked participants to elaborate about the meaning and significance of such concepts as they spoke about them [20]. Later interviews incorporated theoretical diagrams and more focused discussion to elaborate and develop categories and their relationships to the core category [19]. Data collection ceased at theoretical saturation; new data did not develop category properties or their interrelationships [19]. Participants commented on preliminary findings in 2015.

Data Analysis

Data collection and analysis were concurrent, and constant comparison techniques were used to compare diary and interview data [20]. Data were open coded until the core category was identified (by interview 23); data were selectively coded to delimit them around the core category and theoretically coded to integrate the theory [20]. Reflexive journaling, theoretical diagramming, and extensive memoing continued throughout analysis. SL shared analytical ideas, diagrams, and memos throughout the analytic process with co-authors for feedback. To support reflexivity and relationality, SL used journaling and peer debriefing [19]. Glaserian [20] rigor relies on fit, work, relevance, parsimony, and modifiability. Constant comparison and coding processes supported the development of a core category that fit the data and accounted for maximum variation in behavior; it also focused the theory to support parsimony, the fewest number of categories to provide the greatest level of theoretical explanation [20]. Being reflexive supported the development of a theory that was relevant to and reflective of participants’ perspectives.

Results

On the basis of participants’ explanations of their experiences, we identified their common main concern and a core category that accounted for how they worked to
resolve their concern [20]. Participants described their daily experiences as requiring them to reevaluate their physical capacity and ability to work physical activity into their lives. Reconciling relationships with physical activity (the core category) involved 3 phases (1. Gauging, 2. Engaging, and 3. Adjusting). Through ongoing processes of reconciling, women discerned forms and ways of achieving physical activity they were comfortable pursuing at various points in the postpartum transition. Women defined physical activity as including not only types of activities but also activity qualities, such as intensity (high, low), frequency, environment (e.g., social, independent, outdoors, indoors), and structure (e.g., flexible, spontaneous, scheduled). Physical activity desires reflected activities that women regarded positively, specifically those activities that could meet their needs and support personal well-being. Women differed in associating physical activities with being central to their identity and level of well-being. For example, some women regarded physical activity as integral to their well-being: “After having a baby, you're kind of A: desperate for some time alone and B: something to make you feel like who you were before. For me, activity is one of those things and it is a good mental break” (30). Women varied on their views of desirable physical activity engagement from broad (e.g., a mix of activities, intensities, and environments) to narrow (e.g., walking) or explicit (e.g., high intensity rock climbing) desires. Nearly all women desired at least one form of independent physical activity (activity by themselves) whether outdoor and/or indoor. A small group desired sports-based physical activity.

1. Gauging

The participants gauged their personal capacity, relationships, and resources to determine if pursuing desirable physical activities was workable and the likelihood that pursuit would disrupt their ability to meet their own and others’ needs.
1.1 Personal gauging

Women reported a rollercoaster of emotions and difficulty accomplishing their daily activities in limited time with limited predictability. Everything required a “lot more planning” (8) and flexibility. Over half of the women emphasized their fatigue resulting from infant night waking and two-thirds of the women described experiences of pain (e.g., hip, incisional pain), discomfort (e.g., heavy breasts), or birth/motherhood related injuries (e.g., shoulder injury from lifting their infant). Given such problems, participants gauged how pursuit of physical activities important to them would affect their vulnerability to injury, fatigue, embarrassment, or functional impairment.

Assessing personal vulnerability to negative physical outcomes (e.g., injury, fatigue) was complicated because participants described their lack of knowledge and an absence of care provider advice about returning to physical activity:

At six weeks, my OB said, ‘Yeah, you’re good to go. Everything looks fine.’ But my stitches looking fine does not mean that I’m actually…how does that relate to the rest of my body being able to undertake any sort of physical activity? (11).

Women gauged their physical readiness for physical activity based on their previous level of fitness and/or the intensity of their physical activity desires, which led to some women gauging themselves as physically unable to perform their previous activities. “Physio told me not to do sit-ups and stuff…Which is a big part of a lot of the [fitness] classes that I was doing…I’ll just do other things” (14).

Women described daily activities and infant care as requiring physical work (e.g., lifting strollers). Maintaining physical functionality was important for some women in gauging capacity: “I’m still not ready to engage in those activities that will bring me back more tired…I can’t injure my back, I can’t injure my arms, I have to be able to hold her” (16). Physical activities of long duration and intensity e.g., boot camps, were
forms of physical activity women were most likely to gauge as increasing their vulnerability to further injury or difficulty with daily activity.

Participants recognized that achieving structured or planned physical activity required information-seeking e.g., finding out about recreational programs, and complex planning around childcare and schedules. As such, nearly all of the women indicated that those physical activities were beyond their organizational capacities in the early postpartum period (e.g., < 6 weeks postpartum):

Even getting them out. Let’s go for an hour-long walk. That took me a while. I either needed to sleep so that I would not be crazy on four hours of sleep, or eat something….the basics had to be done first before I could kind of take on that other piece (19).

Two-thirds of participants indicated a desire to engage in some form of social physical activity, although only some described gauging these as emotionally safe.

Some participants who perceived reduced fitness levels gauged physical activity in social settings as increasing their vulnerability to judgment or embarrassment. “I will be hesitant to ski with people that I used to ski with because I will worry about slowing them down” (5). When participants had felt “judged by other mothers” (9) about their infant’s development and mothering practices, they limited their options by avoiding mother-infant classes and activities. Women were willing to engage in mother-infant fitness programs (e.g., shop and stroll, Aquafit), when they regarded groups as non-judgmental and they enjoyed the support and “camaraderie” (16) of “being with other moms” (14).

1.2 Relational and structural workability

The participants gauged the workability of their physical activity desires by considering whether they had sufficient resources to minimize negative effects on themselves and others. The environment and infant age affected participants’ perspectives about the workability of outdoor physical activities. Fewer paths and
connected roadways made suburban environments less workable for walking. Infant safety limitations, (e.g., no sunscreen or jogging strollers before 6 months), older infants (who were more difficult to carry), and uneven roadways or space for strollers reduced the workability of hiking or jogging with infants.

Indoor fitness or recreation centres were unworkable when program offerings or facility policies did not fit with participants’ resources and family context. Regardless of their income levels, participants viewed low-cost or free physical activity options (e.g., shop and stroll) as more workable. Participants described many facility childcare offerings as too restrictive (e.g., costing between $5.00-6.00 a session per child, restricting hours, and limiting infant spots), as well as mother-infant programs that excluded infants once they were crawling and older siblings. Without family-inclusive programming and flexible childcare, women with limited childcare options found recreation centre activities unworkable. “I can’t afford to always hire a babysitter…it’s just not going to happen… A lot of rec centres, the daycares are only available from nine to noon or something, and the program I wanted was at four p.m.” (12).

Several women found accessing information about physical activity options or resources difficult. “They claimed to have a childminding service. I’ve seen signs, like they say that there’s childminding for certain swim times, and I’m like, where, where is this?” (17). Available social support and adequate information enhanced the workability of navigating cost, options, the environment, and childcare to achieve desirable physical activities. Women with a history of fitness program engagement and peer support networks gauged more forms of physical activity as workable:

I’m lucky that I have a bunch of friends who are moms … that I have used as a resource… they’re all really active women. A couple weeks ago I said, ‘okay, so here’s my interview question for today everybody’. ‘How do you fit in exercise, what does that look like? And how do you do it’, so that I could figure out ways that I could do the same thing (30).
Most participants gauged independent activity as unworkable when balancing childcare, relationships, resources, and infants’ needs. Daytime activities tended to be gauged as more workable because evening exercise could interfere with family time and infant routines: “I don’t want to go out every single night to do this [gym class]. I want to spend time with my husband. That’s fostering those relationships, too” (8).

Women gauged independent physical activity as unworkable when they were worried about the quality of their childcare options, potential effects on their infants or others, and selfishness: “I feel guilty towards my daughters for making them babysit while I’m doing something fun or something that, in my mind, I think, it’s not an essential thing” (7). Women also identified childcare provided by others as a relational “commodity” (30). They were worried about “burden[ing] other people” (2) and reciprocity in relationships with individuals who were helping with childcare. They avoided time by themselves, unless they were achieving their most important activities, physical or otherwise. Only women with adequate finances and childcare who believed exercising apart from their infants would be beneficial for everyone regarded independent physical activity as workable. “Her dad’s really good with her…I think it’s nice for her to spend just some time with her dad and I don’t want to have to spend every hour with her” (6).

2. Engaging

Women engaged by using strategies of ‘holding still’, ‘holding back’ or ‘pushing for’ to pursue physical activities they gauged as workable and minimizing their own or others’ vulnerability to negative personal and relational outcomes.

2.1 Holding still

Participants who viewed pursuing most of their desired physical activities as increasing personal and relational vulnerability held still; “I just get to be mommy
pretty much, no gym, nothing concerted” (21). They engaged in physical activities
intrinsic to motherhood (e.g., walking and caring for their baby; family walks or
swims) that were important to them for supporting family relationships and occupying
their time: “The kids make me get out of the house… I just took to walking … just as
something to do with him, just to get him out of the house” (17). Women who viewed
physical activity as less central to their well-being tended to hold still. “I think it’s
probably more, it’s more stuff around the house that is like a bigger priority actually…I
don’t get really antsy if I don’t get any exercise, but I get really antsy if my house is
falling apart” (26). By holding still on pursuing preferred physical activities (e.g.,
kayaking, swimming), women saved time and energy to achieve activities they valued
most (e.g., church, socializing sewing) and were workable. “Music for me, we’ll,
prioritize it and we’ll make it happen…You kind of just overcome the obstacles …with
exercise, it takes a lot more mental energy to make it happen” (23).

2.2 Holding back

Participants held back when desired physical activities exposed them to negative
consequences or were regarded as unworkable; they pursued some forms of physical
activity but with limitations. They believed that holding back was temporary and
expected to engage fully in their desired physical activities after their infants’ care
needs diminished. “It’s something that I’ll put on hold now, and get back into it when I
have more time. That’s not to say that I’m not being active, just not that [type of]
physical activity” (19). Participants generally pursued low-moderate intensity physical
activity during the day to accommodate their infants’ schedules; many preferred
flexible options i.e., drop-in sessions, rather than scheduled activities. Women varied in
their boundaries on physical activity, with some avoiding group-based, indoors,
scheduled and/or cost-based programs. Others predominantly attended scheduled
mother-infant programming. These participants viewed paying for childcare or having others care for their children to engage in physical activity as contributing to infant or relational vulnerability. “The only option…would be in the evening when my husband is not working and my older daughter is at home but then I would feel guilty cause they just came [home] and I’m doing something wrong” (1).

2.3 Pushing for activity

Participants who gauged their physical activities desires as workable, with acceptable levels of personal vulnerability, pushed for activity. They explored levels of fitness, negotiated schedules, and acted opportunistically. To push for desirable activities, these women began with lower intensity physical activities within their abilities and then progressively increased the intensity and duration of physical activities. “I feel much more fit now. I don’t have to stop and catch my breath and feel nauseous or anything. It just took a few months of like every week practice and boot camps” (6). To work out relationally and practically how to achieve desirable independent physical activities, participants explored their physical activity options (e.g., facility schedules), negotiated with others to coordinate childcare (as needed), and worked around infants’ schedules:

We’re still working out how to get the best exercise … Between 6-7…I put her down on his [her husband’s] chest and I go for a run …the next challenge for us is to get her to maybe take it [a bottle] so that I can buy myself a bit of extra time (28).

3. Adjusting

Participants adjusted their strategies when they encountered discrepancies between their gauges and their experiences with physical activity. Their gauges of physical capacity were often at odds with their experiences; they expressed surprise at reduced levels of fitness compared to their pre-pregnancy levels. “I was just like, oh, I’ll just run—like—I can walk a hundred miles. No. Walking around the block and I
was exhausted” (11). Early negative physical activity experiences, such as embarrassment or injury, were particularly likely to prompt adjustment. A woman adjusted to walking only after experiencing injury from pursuing physical activities: “I ended up having an umbilical hernia….I join[ed] activity way too soon, I joined back my baseball team…I was trying to go out and jog, all at 6 weeks postpartum” (13).

Participants predominantly stayed with their engagement strategy in the adjusting phase but shifted the ways they were engaging. When participants pushing for activity found their physical activities were working and achieving positive outcomes they pushed further. Women who felt overwhelmed or experienced persistent difficulties, e.g., childcare negotiations, reoriented their efforts to achieve physical activity. “We’ve stopped relying on my mum for childcare….There’s always these weird strings attached…I come out of the helping with the kids worse off. I’m now full of stress from all the other stuff that came with it” (15).

Women who held back loosened their limits when the workability and compatibility of desirable physical activity with daily activities improved. For example, a woman who gained confidence in managing her children in a variety of situations described ‘braving’ more frequent walks and hikes: “My comfort level’s gained with it. I’m much more able to go and do things …. I’ve been trying to challenge myself with that too…think of scenarios before, to talk myself through that ‘yes I can do this’” (19). When women holding back encountered physical or scheduling difficulties they reduced their physical activity even further, e.g., avoiding certain programs.

Only one woman, who was holding still and experienced increased vulnerability when her husband was away at work, adjusted by ceasing all physical activity. Mothers previously holding still more intentionally pursued their physical activity desires when they viewed physical activity as essential for their well-being. A woman expressed her
thoughts about increasing activity after trying yoga: “I think I should change my mind and put one hour for doing exercise….I mean, mind and my stress, it is good, and my body, both of them” (3).

Outcomes of reconciling

By reconciling their relationships with physical activity, most women were comfortable that their postnatal physical activity choices fit their own and others’ needs and resources. Nonetheless, their comfort included positive feelings and some dissatisfaction about their experiences. A woman described the tension between her positive feelings and the limitations in her physical activity options.

I find [when] I can get some physical activity in with her, she sleeps better…I feel better and I sleep better, and I have more energy and I don’t feel guilty. I wanna do physical activity….We also try to find activities that are also beneficial to the kids, so it’s kind of a compromise, like, would I go and splash around by myself [at the pool], probably not (25).

Women holding back and holding still remained hopeful that they could better align physical activity patterns with their desires but believed that having a child (or children) affected opportunities for physical activity. For example, women holding back described the need to “let go” (19), live their “new normal” (16), and be “satisfied with less” (5); “It’s just finding a different activity that fits … I think it’s just acknowledging that it’s going to be different things than what it was before” (11).

Most participants described maintaining the same strategy of postpartum engagement. Two women who were pushing for activity adjusted to holding back when they experienced emotional satisfaction with motherhood that was beyond the benefits physical activity could provide for their well-being “Interviewer: And what makes it okay that you can’t get the physical activity you want; Participant: The fact that I’m so in love with my daughter” (16). Two other participants who were pushing for activity expressed anger and frustration from feeling they had adjust to holding still
and sacrifice their emotional health and feelings of accomplishment because of injury and difficulties with childcare: “I miss going to the gym, I enjoy doing that. I enjoy going for runs…Landlocked, that’s it….I feel more unhappy now because it sucks. I don’t look as good or feel as good as I used to” (13).

**Discussion**

The current study provides an original integration of how new mothers perceive diverse personal, relational, and environmental factors affecting their physical activity choices. Regardless of their previous experiences and number of children, the postpartum transition required study participants to revisit their capacities for desirable physical activities and their workability. Similarly, English women have described social pressure and physical and psychological pregnancy changes affecting their thoughts about how to retain ownership of their bodies in making physical activity decisions, with limited trustworthy information [18]. In the current study, the processes involved in reconciling relationships with physical activity explained women’s postpartum reconfigurations of physical activity on personal, relational, and pragmatic levels. Lloyd et al. [22] presented the postpartum period as a critical juncture where women navigate the subjectivities of their embodied relations to self and the meaning of physical activity.

Reconciling relationships with physical activity highlights how physical strengths and limitations intersect with postpartum physical activity decision-making. All participants’ choices were, to some extent, influenced by their perceptions about their capacity for physical activity e.g., pain, injury, fatigue, energy, physicality of infant care, and perceived fitness. Two-thirds of participants described ongoing pain, fatigue, or injury that affected their physical activity engagement. These findings suggest that new mothers may encounter major
physical impediments to engaging in physical activity. Physical considerations are consistent with other postpartum literature; women have expressed difficulty and disappointment regaining pre-pregnancy fitness levels, with up to 70% of women in the year following birth reporting at least 1 physical symptom (e.g., back, hip, and pelvic pain), and 45% linking symptom(s) with moderate or severe functional impairment [23, 24]. Consistent with built environment and sociological physical activity literature [21] study participants highlighted structural features (e.g., physical environment, recreation program availability) and resources (e.g., childcare, finances) in their decision-making about physical activity. New mothers in previous studies [12, 13] have also reported a number of environmental barriers to physical activity, including lack of information about programming, which current study participants described. The current study extends the literature because participants described unique postpartum environmental challenges, such as the safety of navigating the outdoor terrain with strollers, the lack of recreation centre family-inclusive programming, and need for flexibility in program delivery and childcare options. Women in the current study had varied interpretations about physical activity options, suggesting the postpartum physical activity barriers identified in the literature (e.g., lack of time, childcare) are not equally relevant for all women. Participants who regarded physical activity as central to their well-being and identities engaged by pushing for physical activity. Our findings fit with leisure science that positions constraints as relative to peoples’ interpretations; with higher motivation, people will engage more with personal, relational, and structural constraints and strategize how to access their desired leisure [25]. In the current study, women with childcare options described negotiating with others for childcare for high priority activities they viewed
as workable and low-risk. Only participants who emphasized the importance of
independent physical activity as both integral to their well-being and low risk to others
were comfortable pursuing it.

Study participants’ varying interpretations of workable physical activity and
their capacities suggest that postpartum physical activity interventions designed to
address generalized barriers (e.g., free mother-infant classes) and facilitators (planned
outdoor activities) have limited capacity to contribute to increased physical activity
participation. Pursuing mother-infant fitness programming has been recommended to
facilitate new mothers’ physical activity [12]; however, nearly a third of study
participants gauged themselves as emotionally vulnerable in such environments.
Moreover, study participants adjusted their physical activities over time. Tailored and
extended physical activity support that encourages new mothers to identify and
strategize to achieve desirable physical activities has more successfully supported
sustained increased in physical activity than generalized support [26].

Concerns have been raised about the resource-intensiveness of implementing
long-term tailored postpartum physical activity support [27]. Future studies should
explore whether specialized exercise health care professionals (e.g., exercise
counsellors) encourage new mothers’ physical activity and their cost-effectiveness. For
example, in British Columbia, Canada, exercise physiologists are available by
telephone free of charge to the public for exercise prescription and counselling.
Because women expressed tension about their physical activity choices, studies
exploring relationships between patterns of reconciling and women’s well-being could
describe pathways linking physical activity decision-making, mental health, and well-
being across the postpartum transition.

Practice implications
The study findings emphasize the need to attend to women’s safe return to desirable physical activity following birth. The study participants described gauging their capacity and workability without health provider advice and with a lack of knowledge about the processes of returning to physical activity following birth. Other mothers have criticized health care providers for inadequate support to promote their recovery from birth and return to physical activity [28], with many receiving vague postpartum physical activity information [29]. Some current study participants reported negative early experiences (e.g., experiencing injury or feeling overwhelmed with the planning to achieve physical activity), which usually resulted in downgrading their physical activity pursuits. Participants would have benefited from discussions about physiological birth recovery and their physical activity desires to support their development of realistic physical activity expectations following birth.

Health care providers have indicated lack of time and knowledge limits their efforts to provide in-depth physical activity support [30], but they could support new mothers’ abilities to find information and community support. Study participants were less likely to pursue physical activity when they lacked confidence to navigate recreational programming information or access to social networks of people who could support their strategizing. Healthcare providers, such as public health nurses offering postpartum drop-ins, could support new mothers’ perceptions of capacity to pursue physical activity through acting as informational brokers of recreation and outdoor options and on/offline community and peer networks [31].

**Limitations**

Participants were English speaking, and most, highly educated with incomes >$80,000 (similar to local median incomes between $76,000-93,000) [32]. Environmental safety has been linked with physical activity choices [21], but these
study participants did not report safety considerations (e.g., crime). Incontinence may affect physical activity choices and is common for new mothers [33], but the study participants did not disclose this.

**Conclusion**

Reconciling relationships with physical activity is an original theoretical representation that helps explain new mothers’ physical activity decision-making processes. Study participants were continually reconciling diverse considerations to discern the extent to which they were comfortable pursuing desirable physical activity. They tended to downgrade their aspirations when encountering challenges, particularly after experiencing injury or extensive navigating to find childcare. Without support to return to physical activity during the postpartum period, only a handful of new mothers may sustain sufficient motivation and perceptions of their capacity to pursue physical activities that they identify as supporting their own and families’ health.

**Declarations**

**Ethics approval and consent to participate:** Ethical approval was gained from the University of British Columbia Research Ethics committee (ID number H14-01688) Written informed consent was obtained before the interview and confirmed verbally at the beginning of each interview.

**Consent for publication:** Not applicable

**Availability of data and materials:** The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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