Editor's key points

- Pregnant family medicine residents in British Columbia are generally well supported by residency program staff, preceptors, and colleagues, in contrast to the findings of similar studies in the United States.
- The return-to-work transition is the biggest challenge for residents experiencing pregnancy. Family-friendly policies and support for breastfeeding and child care are needed upon returning to work.

Experience of pregnancy during family medicine residency

Qualitative research study

Moa Sugimoto MD MHSc Hamideh Bayrampour PhD MSc

Abstract

Objective To explore the challenges that childbearing family medicine residents encounter during postgraduate training and to understand the available support systems.

Design Descriptive qualitative research study.

Setting British Columbia, Canada.

Participants Nine University of British Columbia family medicine residents who experienced pregnancy during their residencies between 2014 and 2018.

Methods Semistructured telephone interviews with family medicine residents were conducted until data reached saturation. Audiorecorded interviews were transcribed and analyzed using content analysis with an iterative approach to elucidate themes. Member checking and peer debriefing were used to ensure the rigour of the findings.

Main findings The participants reported various unique challenges during pregnancy, maternity leave, and return to work. Residents during pregnancy tended to prioritize work over one's own well-being and reported an increased level of perceived adverse symptoms. During maternity leave, residents reported postpartum depression, anxiety, and conflict between the roles of parent and physician. Upon return to work, participants perceived a decrease in their clinical function and reported feelings of guilt and anxiety because of the shared burden of residency with family. Residents found their programs supportive throughout pregnancy and maternity leave; however, a decrease in support upon return to work was a recurring theme in responses.

Conclusion Pregnancy during family medicine residency has unique challenges, necessitating support from programs, preceptors, and colleagues. Further resources and incentives are needed to facilitate the transition back to work after maternity leave.

Vivre une grossesse durant la résidence en médecine familiale

Étude de recherche qualitative

Moa Sugimoto MD MHSc Hamideh Bayrampour PhD MSc

Résumé

Objectif Explorer les défis auxquels sont face les résidentes en médecine familiale lorsqu'elles sont enceintes durant la formation postdoctorale et comprendre les systèmes de soutien accessibles.

Type d'étude Étude de recherche descriptive et qualitative.

Contexte Colombie-Britannique (Canada).

Participantes Neuf résidentes en médecine familiale qui ont vécu une grossesse durant leur résidence entre 2014 et 2018, en Colombie-Britannique.

Méthodes Des entrevues téléphoniques semi-structurées avec des résidentes en médecine familiale ont été menées jusqu'à l'atteinte d'une saturation des données. Les entrevues enregistrées sur bande sonore ont été transcrites et dépouillées à l'aide d'une analyse de contenu par approche itérative pour cerner les thèmes. Une vérification auprès des membres et une rétroaction par des pairs ont servi à assurer la rigueur des constatations.

Principales constatations Les participantes ont signalé diverses difficultés particulières durant la grossesse, le congé de maternité et le retour au travail. Les résidentes avaient tendance à prioriser le travail plutôt que leur propre bien-être durant la grossesse et ont rapporté avoir perçu un degré accru de symptômes indésirables. Durant le congé de maternité, les résidentes ont mentionné une dépression post-partum, de l'anxiété et des conflits entre leur rôle de parent et celui de médecin. À leur retour au travail, les participantes avaient l'impression d'une diminution de leur fonctionnement clinique, et ont mentionné des sentiments de culpabilité et d'anxiété en raison du partage entre le fardeau de la résidence et celui de la famille. Les résidentes ont trouvé que leur programme avait offert du soutien durant la grossesse et le congé de maternité; toutefois, la baisse du soutien à leur retour au travail était un thème récurrent dans leurs réponses.

Conclusion La grossesse durant la résidence en médecine familiale présente des défis particuliers qui nécessitent du soutien de la part des programmes, des précepteurs et des collègues. Des ressources et des mesures incitatives additionnelles sont requises pour faciliter la transition entre le congé de maternité et le retour au travail.

Points de repère du rédacteur

- En Colombie-Britannique, les résidentes en médecine familiale qui sont enceintes se sentent généralement bien appuyées par le personnel, les précepteurs et les collègues du programme de résidence, contrairement aux constatations d'études semblables aux États-Unis.
- La transition vers le retour au travail représente le plus grand défi pour les résidentes durant leur expérience de la grossesse. Des politiques conviviales envers la famille et du soutien à l'allaitement et aux services de garderie sont nécessaires lors du retour au travail.

Residents experiencing pregnancy during postgraduate family medicine training is becoming more common as the number of female residents increases.[1] A recent large survey in the United States reported that between 17% and 28% of family medicine residents gave birth to a child during residency.[2] However, pregnant and postpartum residents encounter several challenges at this stage of their training, including increased risk of complications associated with pregnancy,[3,4] discrimination regarding residency selection,[3,5] negative attitudes from colleagues,[5,6] insufficient time off for maternity leave,[2,3,7] difficulty functioning as residents when dealing with postpartum sleep deprivation,[8] limited support for child care and breastfeeding,[3,6,8] and a sense of guilt for partner neglect due to the demanding workload in residency.[7] Pregnancy-related stigma during residency has also been reported as one of the biggest challenges for childbearing residents.[9,10] Moreover, pregnancy during residency may impact career development after graduation because of residency extensions and difficulties in preparing for board examinations due to fatigue and multiple responsibilities.[6,8,11]

Evidence specific to family medicine residency in Canada is limited, as most research to date has been conducted on non–family medicine residency programs in the United States.[2,7] Yet, research findings from US studies might not apply to Canadian family medicine residency programs because the working environments and support systems of the residency programs are different. To our knowledge, there have been no Canadian research studies related to pregnancy during residency published in the past decade. Taking into account that residency support for trainees has been improving over the past decade, updated research in Canadian family medicine residency programs is required.

This qualitative research article aims to explore the challenges that childbearing family medicine residents face and to understand the available support systems. The findings of this study can contribute to the body of evidence on resident childbearing experiences, thereby providing a better understanding of the needs of this growing but understudied population to improve both support systems and the quality and experience of education.

Methods

This descriptive qualitative study used a purposeful sampling approach by recruiting female family medicine residents who became pregnant during their residency between 2014 and 2018. During the period from July 31 to September 30, 2018, e-mail invitations were sent out twice from the University of British Columbia (UBC) Postgraduate Medical Education Office in Vancouver to 480 current and former UBC family medicine residents. The goal of this study was explained in the e-mail and written consent was obtained from each participant. We chose a semistructured telephone interview to collect data from residents located in remote sites to minimize the physical burden of participation for residents. Interviews were carried out only once for each participant. One research co-investigator (M.S.) conducted telephone interviews to the point of data saturation from July 30 to September 30, 2018; M.S. was a female UBC family medicine resident and known to some of the participants before study commencement. Interviews took between 30 and 60 minutes. Handwritten notes were used to document the contextual information, themes, and contents arising during the interview (see Appendix 1 for the interview guide, available from **CFPlus***).

Interviews were audiorecorded and transcribed verbatim by 2 co-investigators (M.S. and Z.K.). The research team conducted content analysis with an inductive and deductive approach to identify codes and themes.[12] The initial results were shared with participants to receive feedback and to verify the validity of the findings.[13] The project was funded by the UBC Family Practice Residency Program and the Lloyd Jones Collins Research Award. Ethics approval was granted by the UBC Behavioural Research Ethics Board. This study was reported according to COREQ (consolidated criteria for reporting qualitative research).[14]

Findings

Thirteen residents initially expressed interest in the study; of these, 9 residents from 5 program sites in British Columbia participated. Six participants were from 3 urban program sites, while 3 participants were from 2 rural sites. Participants were at different stages of childbearing at the interview time: 2 were pregnant, 3 were on maternity leave, and 4 had already returned to work. Eight of the 9 respondents were nulliparous when they became pregnant during residency. Eight participants experienced pregnancy during the first internship year of a 2-year residency with many busy rotations. **Table 1** summarizes the demographic information of the participants.

Findings on the experience of residency during and following pregnancy were categorized chronologically into 3 phases: pregnancy, maternity leave, and return to work. **Figure 1** depicts the challenges perceived by the residents and their perspectives on the support systems available through the residency programs.

Pregnancy

Perceived increased adverse symptoms due to workload. Many participants reported increased adverse symptoms during pregnancy, including excessive fatigue, frequent and severe contractions, bleeding, threatened preterm labour, poor weight gain, musculoskeletal pain, and

*The interview guide is available from **https://www.cfp.ca**. Go to the full text of the article online and click on the CFPlus tab.

Table 1. Demographic characteristics of participating residents between 2014 and 2018

CHARACTERISTICS	VALUE
No. of approached sites	19
No. of participating sites	5
No. of total participants	9
No. of participants at residency site	
• Urban	6
• Rural	3
Age, y, mean (SD)	31.8 (3.5)
Parity, mean (SD)	1.1 (0.67)
Maternity leave duration, mo, mean (SD)	9.4 (2.94)
Postpartum mo after childbirth at interview, mean (SD)	10.7 (9.3)

poor sleep quality (**Table 2**). Three participants also experienced miscarriage during residency before successfully delivering term infants in a subsequent pregnancy. The residents attributed these increased adverse symptoms to the heavy workload of clinical duties because these symptoms improved after they took a leave or a rest.

> I had to stop working at 33 or 34 weeks mainly because of the very bad contractions at work; although, I didn't have contractions when I was able to be at home.

General pregnancy symptoms such as nausea, emesis, and fatigue were also reported as challenges.

Prioritizing work over well-being. Residents who worked busy rotations during pregnancy reported external and internal pressures to prioritize work over their well-being. Busy rotations included obstetrics, surgery, and clinical teaching units, while office-based rotations, such as family medicine, were generally perceived as pregnancy-friendly, with less standing time and more predictable working hours. External pressure was created by high workloads, including frequent calls from wards and emergency departments, insufficient support from the preceptors to manage the workload, and requests to take extra night-call shifts.

> I felt so much external pressure from nursing staffs and my preceptors. That's why I didn't even tell anybody I was pregnant because I couldn't have them thinking that I needed anything special .... I needed to just be a workhorse then.

Internal pressure was attributed to the strong motivation to be keen and competitive as residents, which disinclined residents to ask for help and rest.

> I was anxious. I knew that I wasn't taking care of myself properly. My co-residents had to remind me to take time off because I wasn't taking care of myself. Because we are residents, you feel like you always have to prove something. So I didn't want to take time off. I was saying that I was fine even if I wasn't so.

Program requirements to achieve passing grades on short rotations were reported as barriers to requesting sick leave.

Support from the residency program. Participants noted several supports from the residency program: offering emotional support; arranging requested time off; providing an exemption from night calls, especially after 28 weeks' gestation; rearranging rotation schedules; and offering part-time options. In 2017, the UBC Resident Policy was revised to state that pregnant residents would not be required to work shifts longer than 12 hours after 24 weeks' gestation, amended from the previous guideline of 28 weeks.[15] Some sites also offered to use vacation days to accommodate half-day work, without income reduction. Residents regarded these supports as very helpful in both reducing stress from pregnancy-related challenges and maintaining their clinical function.

During maternity leave

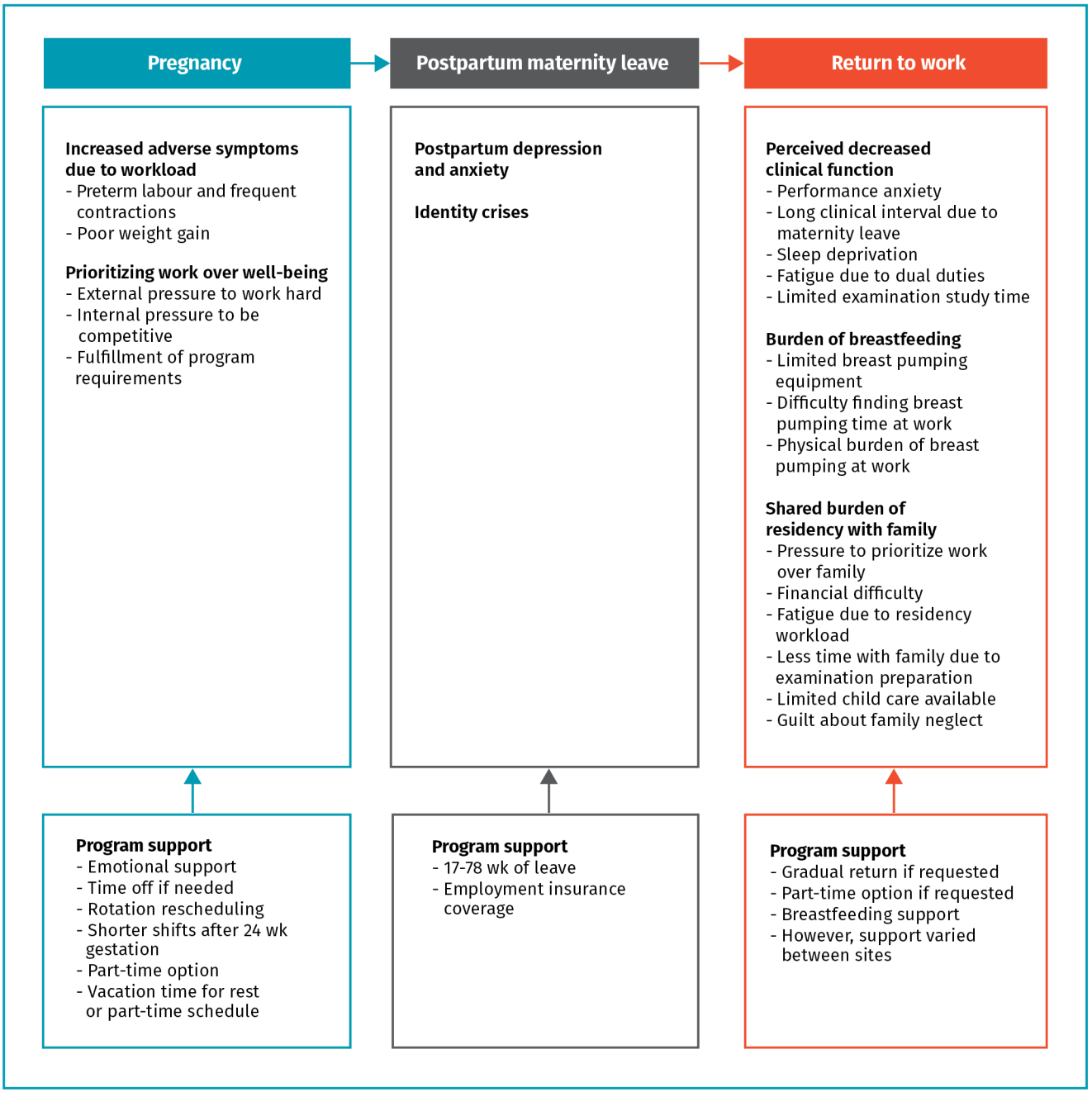
Postpartum depression and anxiety. Three residents reported increased anxiety and depression after childbirth, especially before returning to work.

> I was dealing with a lot of anxiety. I connected with my family physician and eventually a reproductive psychiatrist and ended up on antidepressant medication. But over the entire time, my anxiety was definitely the highest when I got back to work.

Identity crisis. One resident reported feeling helpless by the sudden transition from being a trained provider of evidence-based medicine to being a new, inexperienced parent, which she called having an "identity crisis."

Support from the residency program. Programs supported postpartum residents by offering a requested length of unpaid maternity and parental leave. In December 2017 that became extendable up to 78 weeks.[16] Most participants took maternity leave for 8 to 12 months, and they reported it as being optimal for themselves, except for 1 resident who wished to have longer leave because of their child's health. Residents found the long maternity leave with employment insurance income helpful as it allowed them to spend more time with family and bond with their new children.

Figure 1. Challenges and support requirements for residents experiencing pregnancy



Return to work

Perceived decreased clinical function. All participants who had already returned to work and most of those currently on maternity leave reported challenges and anxiety when transitioning back to work. These challenges included performance anxiety after a long maternity leave, impaired memory due to sleep deprivation, fatigue from dual duties at work and home, limited time to study after work, and increased workload with the addition of breast pumping at work.

> I had a lot of anxiety [about coming] from mat leave. Just anxiety about performance, about lack of knowledge. Also, I felt like my brain was not well cleared with sleep deprivation. That was hard. I felt like I didn't remember things at all.

Residents suffered from feelings of being "rusty" or "inferior" to other colleagues because of their limited time availability, fatigue, and impaired memory. Attending academic curriculum classes before returning to work was reported as helpful in easing the mental

Table 2. Reported adverse symptoms during pregnancy

SYMPTOM	NO. OF ADVERSE EVENTS
Excessive fatigue	5
Miscarriage	3
Increased contractions during work	2
Bleeding	2
Nausea and emesis	2
Threatened preterm labour	1
Poor weight gain	1
Musculoskeletal pain	1
Poor sleep quality	1

transition; networking with new classmates provided another source of support.

Burden of breastfeeding. Breastfeeding was reported as challenging because breaks for pumping, private rooms, and fridges were not available in some rotations. Also, pumping breast milk added time and another task to the residents' workloads. All participants who returned to work breastfed their babies at the time of return, and half of them gave up breastfeeding earlier than they had planned because of the burden of breast pumping at work.

> There's no pumping room in the hospital. When I was in emerge rotation, I pumped in the washroom, which is gross, or in my car. So there's no nursing rooms or any pumping stations. Also, it's hard to get time. People are not understanding when you take a few more breaks for pumping. So basically I had to stop pumping 2 months into residency because I just couldn't physically do it.

Support from the residency program. Some, but not all, sites were supportive of breastfeeding by offering information about resources such as private spaces, fridges, and pumping equipment, and were understanding of the need for breast-pumping breaks.

Shared burden of residency with family. Residents reported sharing the burden of residency with their families. They reported that although they had hoped to spend more time with their babies and partners, they felt the pressure to prioritize work over family because of the unpredictable and lengthy hours of work. Residents were also too exhausted to spend time with their families or felt a need to compromise family time to study for examinations, which brought a sense of guilt about family neglect.

> I felt like I was neglecting my family because of my job and the practice [because of the] unpredictability of the time to work. People [at work] would lose faith with me if they felt I wanted to prioritize my family, but I wanted to be reliable. I just felt helpless because I really couldn't control my schedule.

Limited availability of child care was considered a serious issue, especially for residents at urban sites. Because wait times for day-care spots in urban areas could be as long as 3 years, working residents had to rely on their partners and extended families to take care of their children during work. Unpredictable and long work hours made child care coverage more challenging. If sufficient family support was not available, residents could only work when child care was available. Respondents reported that private nanny services were expensive, which put additional financial pressure on residents if hiring a nanny was their only child care option.

Support from the residency program. Residents reported varying levels of support among the programs after their return to work. Some, but not all, sites were supportive. One resident reported a strong sense of isolation and helplessness.

> I felt I was not part of the program anymore. I literally had to do everything by myself, like consulting my preceptors directly by myself one-to-one to arrange and schedule rotations. A lot of information did not reach me, like [the] licence package. They just said contact them directly. I felt rejected. I felt they told me you should not be here anymore, nothing to continue anymore at all.

A schedule for a gradual return or a part-time option was reported helpful for some residents (ie, in cases of difficulty in securing child care or a child having an unexpected physical condition). Because unpredictable, long working hours were reported as a challenge for returning residents and their families, residents found it helpful to arrange the initial schedule after their leave to begin with shift-based or office-based rotations to have more predictable working hours.

Discussion

Our research findings showed that each of the 3 phases—pregnancy, maternity leave, and return to work—presented residents with unique challenges and support requirements (**Figure 1**). Perceived increased adverse symptoms due to workload and the prioritization of work over well-being were found to be the biggest challenges during pregnancy. Postpartum depression or anxiety and identity crises were challenges during the postpartum maternity leave period, and perceived decreased clinical function and shared burden of residency with family were challenges experienced upon return to work.

Reported available support during pregnancy included emotional support; time off or exemption from

night calls, if required; rotation rescheduling; part-time options; and optimal length of maternity leave with employment insurance coverage, top-ups, and extended health benefits. For residents hoping to start a family, support during residency, including financial benefits during maternity leave and a longer period of leave than is available to independently practising family physicians, can be beneficial. These findings on currently available support can be helpful for future pregnant residents asking for support from program affiliates, although support varies across program sites.

Several challenges upon return to work were similar to those found in previous studies, including difficulty in balancing parenting responsibilities and clinical functioning, difficulty in finding accessible child care, challenges associated with breastfeeding, and a sense of neglecting one's family. Returning to work after childbirth was found to be the biggest challenge for residents in the present study. We found that a perception of decreased clinical function was a source of great stress for returning residents, as was the sharing of the burden of residency with their families. Residents reported support from programs as less available during the return-to-work phase than during pregnancy. More support for breastfeeding, such as providing timely information about available resources in rotation facilities and allowance for breast-pumping breaks, is needed. As working parents have to adapt to day-care and child care hours, it is important to provide advanced notice of hours of work (start and finish times) and on-call schedules to ensure, for example, that a child can be picked up on time from day-care. Developing family-friendly policies, such as having breast-pumping breaks and increasing the number of on-site child care facilities, can smooth the transition back to work after maternity leave.

Our research showed that colleagues, preceptors, and residency program affiliates were generally supportive of pregnant family medicine residents, contrary to the author's (M.S.'s) assumption, as previous studies reported stigma about pregnancy during training and negative attitudes from colleagues and preceptors that led to mental stress.[3,6,9-11] An optimal length of maternity leave was offered to all participants who gave birth during residency, in contrast to experiences of residents in US studies. Despite reporting a perceived increase in adverse symptoms of pregnancy and a perceived pressure to prioritize work over well-being, residents participating in this study also reported managing pregnancy well; support from programs and preceptors helped. Owing to the qualitative nature of the study and the small sample size, we did not examine pregnancy outcomes. However, none of the participants reported preterm delivery, preeclampsia, or intrauterine growth restriction, which have been previously reported as adverse outcomes associated with pregnancy during residency.[3,4]

Limitations

The limitation of this study is the small number of participants from 5 of the 19 UBC family medicine program sites. We were able to recruit 9 participants who experienced pregnancy during residency, which is in line with a previous study that showed that data saturation could be achieved with a sample size as small as 6.[17] It is acknowledged that the rigour of the findings would be increased by data collection from all of the program sites. Also, the interviewer (M.S.) had been trained as a clinical epidemiologist and a physician but had limited experience with qualitative interviewing, which might have affected data collection.

Conclusion

Pregnant family medicine residents in British Columbia experience diverse challenges during pregnancy and the postpartum period that are specific to their training stage. However, they are generally well-supported from residency program staff, preceptors, and colleagues. Transitioning to work after maternity leave was found to be the biggest challenge for childbearing residents. Further research is warranted to explore strategies to fully support this population for successful transitions back to residency after pregnancy.

Dr Moa Sugimoto is a family doctor at Lumby Health Centre in British Columbia. **Dr Hamideh Bayrampour** is Assistant Professor of the Midwifery Program in the Department of Family Practice at the University of British Columbia (UBC) in Vancouver, an affiliate investigator at BC Children's Hospital Research Institute, a member of the Women's Health Research Institute, a full member of Reproductive and Developmental Sciences at UBC, and an associate member of the School of Population and Public Health at UBC.

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Contributors

Dr Moa Sugimoto was in charge of project development, proposal writing, ethics board application, participant recruitment, conducting interviews, transcription of interviews and result analysis, final manuscript writing and editing, and funding applications; this research was done during **Dr Sugimoto's** residency at St Paul's Hospital as part of the University of British Columbia in Vancouver. **Dr Hamideh Bayrampour** is the supervisory co-investigator and was responsible for supervising project development, ethics application, data storage, data collection and analysis, and abstract and manuscript writing.

Competing interests

None declared

Correspondence

Dr Moa Sugimoto; e-mail **moa.sugimoto@ubc.ca**

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