
Freezing the Biological Clock: The Experience of Undergoing Social Egg Freezing to Delay Child-Bearing Congélation de l'horloge biologique : l'expérience sociale de la congélation des ovules en vue de reporter la grossesse

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ABSTRACT

In 2012, egg freezing was made available as an elective procedure for healthy reproductive-age women to attempt to preserve their fertility. To date, limited research has examined the experiences of women who have undergone this procedure or the meanings they attribute to this phenomenon. This study was designed to address this gap in the literature, using a hermeneutic phenomenological methodology. The research question that guided this inquiry was: “What is the meaning and experience of undergoing social egg freezing for the purpose of delaying child-bearing?” In-depth qualitative research interviews were conducted with six women between the ages of 28 and 41. Interviews were transcribed verbatim and a thematic analysis was performed. Six common themes emerged from the women’s stories: (a) the sense of reducing the pressure to have a child, (b) the sense of taking control and reproductive agency, (c) the sense of personal empowerment and acceptance, (d) the sense of feeling fortunate, (e) the sense of keeping reproductive and parenting options open, and (f) openness and support. The findings highlight the challenges and the perceived benefits of egg freezing to delay child-bearing and present important implications for counselling practice.

RÉSUMÉ

En 2012, la congélation des ovules est devenue une procédure élective offerte aux femmes en santé et en âge de procréer afin de préserver leur fertilité. À ce jour, très peu d'études ont été menées sur les expériences de femmes ayant suivi cette procédure ou sur le sens qu'elles ont attribué à cette démarche. La présente étude a été conçue pour combler cette lacune dans la littérature, en ayant recours à une approche herméneutique phénoménologique. Voici la question qui a servi de guide pour cette enquête : « Quel sens attribuez-vous à la démarche sociale de congélation d'ovules en vue de reporter la grossesse et comment avez-vous vécu cette expérience? » Des entrevues de recherche qualitatives et approfondies furent menées auprès de six femmes âgées de 28 à 41 ans. Les entrevues furent transcrites textuellement et on mena une analyse thématique des contenus. Six grandes thématiques se sont dégagées des récits des

femmes : (a) le sentiment d'une moindre pression sociale pour donner naissance à un enfant, (b) le sentiment de prise en main et de contrôle de la procréation, (c) le sentiment d'autonomisation et d'acceptation personnelles, (d) le sentiment d'être privilégié, (e) le sentiment de conserver des choix possibles en matière de procréation et de parentalité, et (f) l'ouverture et le soutien. Les résultats soulignent les difficultés et les avantages perçus de la congélation des ovules en vue de reporter la grossesse et comportent des implications importantes pour la pratique du counseling.

There is a growing worldwide trend toward delayed child-bearing in most developed countries (Nicoletti & Tanturri, 2008; Statistics Canada, 2014). The decision to pursue or to delay child-bearing is rarely clear-cut. Often it is based on a complex interaction of factors, many of which are beyond a woman's sense of control, including financial security, health, diminishing fertility, and being in a stable relationship with a partner who has a mutual desire to have children (Cooke et al., 2012; Daniluk & Koert, 2017; Olafsdottir et al., 2011; Tough et al., 2007). Until recently, women who elected to delay child-bearing due to personal or relational circumstances had no way to address the realities of their "biological clock." However, recent advances in assisted reproductive technology (ART) have provided women who are faced with delaying child-bearing the possibility of exercising some control over their fertility by freezing their eggs—also known as *oocyte cryopreservation*.

Oocyte cryopreservation involves a process in which a woman's ovaries are hormonally stimulated and her eggs are removed surgically, frozen, and stored for later use (Petropanagos et al., 2015). When a woman is ready to use her frozen eggs, she has the option of going through in vitro fertilization (IVF) with either her partner's sperm or donor sperm, followed by an embryo transfer.

Egg freezing was first developed to help women preserve their fertility when undergoing medical treatments that might cause infertility. In 2012, egg freezing was removed from the list of experimental treatments so that women who are not ready to have children due to non-medical reasons but want to preserve their fertility and maintain the option of having a genetically related child in the future can choose to freeze their eggs (American Society for Reproductive Medicine, 2013; ESHRE et al., 2012). This elective procedure is commonly referred to as *social egg freezing*.

Announcements by Facebook and by Apple that they would cover the costs of social egg freezing for their female employees have propelled social egg freezing into the media spotlight, and an increasing number of women are considering this fertility preservation option (Petropanagos et al., 2015). Given the current social and economic conditions that make it difficult for women to pursue parenthood when faced with professional, educational, financial, and relationship pressures, social egg freezing has become one option for women who are not ready to have a child but who would like to attempt to preserve their fertility for the future.

Unsurprisingly, the success rate of oocyte cryopreservation is strongly age-dependent. One study found that pregnancy rates for women who freeze their eggs in their late 30s or early 40s are not as high as women who freeze their eggs in their 20s or early 30s. Consequently, the American Society for Reproductive Medicine (2014) recommended that women freeze their eggs before the age of 38 to increase the success rates of frozen eggs resulting in a live birth. Likewise, another study found that the live birth rate per fertility clinic patient was 50% for women under 36 years and 23% for women age 36 and older (Cobo et al., 2016).

The demographic profile of women who freeze their eggs is of interest. Research suggests that women who have undergone social egg freezing are typically in their mid- to late 30s, single, heterosexual, well educated, socio-economically advantaged, and professionally employed (Baldwin et al., 2019; Carroll & Kroløkke, 2018; Pritchard et al., 2017). Unfortunately, most women who pursue social egg freezing wait to do so beyond the time when their chances of success are highest. Also, it appears that women who are seeking social egg freezing do not always receive clear and precise information on success rates that would support their decision-making adequately (American Society for Reproductive Medicine, 2014; Daniluk & Koert, 2016; Hodes-Wertz et al., 2013).

Given that social egg freezing is a relatively new reproductive option, very little is known about women's motivations for and experiences of it. In terms of motivations, research suggests that age, relationship status, and parental status are important factors for women who are considering or waiting to pursue social egg freezing (de Groot et al., 2016; Stoop et al., 2011; Vallejo et al., 2013). Primary motivating factors include the lack of an appropriate partner with whom to parent, fear of running out of time to find a partner with whom to conceive naturally, and wanting to minimize the possibility of future infertility and regret (Baldwin et al., 2019; Carroll & Kroløkke, 2018; Pritchard et al., 2017). Potential barriers to pursuing egg freezing that have been discussed in the literature include the high costs of the procedure, concern about the effects on fertility, and potential impacts on children born from frozen oocytes. Nevertheless, women considering undergoing or waiting to undergo egg freezing appear to be undeterred by these barriers (de Groot et al., 2016; Stoop et al., 2011).

Previous research suggests that egg freezing is used by women to reconcile conflicting timelines in their lives—it is viewed as a way of “banking time” (Waldby, 2015, p. 470), allowing women to attempt to synchronize their biological clocks with the need to find a long-term partner and to establish a stable household as well as to mitigate against the risk of future infertility (Carroll & Kroløkke, 2018). Some women also consider social egg freezing as a backup plan if natural conception does not occur, with most women who have undergone the procedure preferring to conceive naturally rather than having to use their cryopreserved eggs (Baldwin et al., 2015; Carroll & Kroløkke, 2018; Stoop et al., 2015).

Assisted reproduction is a multi-faceted and complex experience that can have significant emotional, psychological, and financial consequences (Daniluk, 2001). As a result, many women and couples seek the support of experienced counsellors as they make fertility-related decisions, face reproductive challenges, and navigate the complex arena of assisted reproduction. Fertility is an important and very personal issue for many women of reproductive age, and difficulties related to fertility can have significant short- and long-term consequences on the lives of women and their partners. It has also been shown that there is a significant need to increase knowledge of fertility issues, fertility preservation, and reproductive options available to women (Daniluk & Koert, 2016; Daniluk et al., 2012). As new reproductive technologies become available, it is important to learn about the health implications as well as the social, emotional, and psychological impacts of these options. Such increased knowledge may assist counsellors to support better the psychological and emotional needs of women seeking help regarding their reproductive health.

With increasing numbers of women being faced with the need to delay child-bearing for personal, social, and structural reasons, social egg freezing is one of the few options available that might provide the opportunity to pursue a pregnancy in the future when the circumstances of their lives are better suited to parenting a child. However, given that egg freezing has been removed from the list of experimental procedures in North America and Europe only recently, relatively little is known about women's decision-making and experience concerning this procedure. This study was an attempt to add to our understanding of this phenomenon. It was guided by the following research question: "What is the meaning and experience of undergoing social egg freezing for the purpose of delaying child-bearing?"

Method

Design and Procedure

Given that the research question sought to understand the meaning and experience of undergoing social egg freezing, it was determined that hermeneutic phenomenology would be the most appropriate methodology for the study. This qualitative approach is appropriate when aiming to understand the lived experience of a phenomenon about which little is known, and it allowed us to develop a rich and detailed understanding of the experience of undergoing social egg freezing by those who had lived it (Finlay, 2008; Smith, 2004; van Manen, 1997).

Hermeneutic phenomenology calls upon researchers to situate themselves and their presuppositions within the context of the study. The first author identifies as a feminist researcher and a parent who has had to negotiate the kinds of timelines as the women in this study and to organize her life around the demands of career,

education, and the desire for parenthood. This study was approached with the presupposition that such timelines and demands can be a challenge for women to face, and it can be difficult to negotiate the limited reproductive options available.

Participants

After this study received approval from the Behavioural Research Ethics Board at the University of British Columbia, participants were recruited through a convenience sampling method. Notices were posted on bulletin boards throughout a large, urban Canadian city and advertised through word of mouth, on social media, on an online forum for women undergoing ART, at local fertility clinics, and through professional women's business networks. Counsellors who specialize in reproductive health were also informed about the study.

The inclusion criteria for participation consisted of women of reproductive age between 20 and 45 years who had undergone social egg freezing to delay child-bearing, were childless at the time of the procedure, were fluent in English, and were willing to commit 3 hours for the entire interview process. To ensure they had enough time to reflect on their experiences, the women had to have completed the procedure at least 6 months before their participation. Six women between the ages of 28 and 41 participated in the study. Four of the women had frozen their eggs in their mid-30s (ages 36–37), one at 28, and one at 40. Consistent with the demographic profiles reported in the literature of women who choose to freeze their eggs, the women were heterosexual, middle class, and well educated, with all six having attained undergraduate degrees and three of the six also having attained graduate degrees. Four of the participants identified as white and two identified as multiracial. All the participants in this study had undergone only one egg freezing procedure.

Data Collection

Telephone screening interviews were conducted to ensure interested participants met the inclusion criteria and to answer any questions about the study. After written consent was obtained, open-ended, in-depth audio-recorded interviews were conducted with each participant by the lead author. Given that three of the participants were living in different North American cities, interviews with them were conducted remotely, while those who were living in proximity to the researcher were interviewed in person at a private location of each participant's choosing.

Consistent with a hermeneutic phenomenological approach to interviewing, a statement was read at the outset of the data collection interview to orient participants to the purpose of the study and to encourage each participant to reflect upon and share her experience of freezing her eggs to delay child-bearing. Open-ended questions encompassing nuanced aspects of the women's decision-making and experiences of the egg freezing process were used to explore issues

further only when raised by participants during the interviews (e.g., “How do you understand and make sense of your experience of egg freezing?” “If you had it to do over again, would you still make the same decision to freeze your eggs and would you do anything differently?”). The interviews ranged from 1.5 to 2 hours and concluded when each participant felt she had communicated the story of her egg freezing experience fully.

Data Analysis

Each data collection interview was transcribed verbatim, with marginal notes identifying emotional reactions, pauses, and tonal inflections. Data were analyzed by way of both macro- and micro-thematic reflection processes (i.e., wholistic/sententious, selective/highlighting, detailed line-by-line approach [van Manen, 1997]). Ultimately, essential (versus incidental) qualities of the phenomenon of egg freezing to delay child-bearing for the women were identified. After each transcript was analyzed individually and coded for emerging themes, an across-participant analysis was undertaken to identify themes that were common to all participants. During member check/validation interviews, these final themes were validated by each of the women who participated in this study, all of whom confirmed that the findings were highly resonant for them and captured their experiences accurately.

Findings

Six common themes and their associated sub-themes, as listed in Table 1, emerged from the analysis, describing the “essence” of the lived experience of egg freezing for the purpose of delaying child-bearing. A brief description of each of these themes follows.

Reducing the Pressure to Have a Child

The participants spoke about the perceived pressures of the biological clock as a primary motivator in attempting to preserve their fertility through egg freezing and about the dramatic reduction in this pressure after they froze their eggs. The women spoke about how undergoing egg freezing reduced their sense of pressure to *find the right partner* with whom to start a family and reported they could now enjoy dating without their primary criteria being finding a father for their child. The participants reflected on how, as a result of going through the egg freezing procedure, they were now *able to get on with their lives* rather than having to focus solely on finding a partner who was ready and willing to have a child with them. They also commented on a *reduced sense of time pressure*, including biological pressure, to have a child before the circumstances of their lives were in place to become a parent and take on the responsibility of raising a child. The words of one participant capture these sentiments:

Table 1
Common Themes and Sub-themes

Common theme	Sub-theme
Sense of reducing the pressure to have a child	Finding the right partner Able to get on with life Reduced sense of time pressure
Sense of taking control and reproductive agency	Best possible decision No regrets Active agent
Sense of personal empowerment and acceptance	Being well-informed Sense of acceptance Gift to herself
Sense of feeling fortunate	Easier than expected Sense of feeling lucky Sense of gratitude
Sense of keeping their reproductive and parenting options open	Sense of increasing options Backup plan Sense of fluid age boundaries
Openness and support	Feeling supported in their decision Sharing their stories

The main reason I decided to freeze my eggs was so that I wouldn't feel like I was under biological pressure to make a decision that I wasn't ready to make. I didn't want to be at the mercy of my biological clock. I wanted to just let my life unfold the way it would, and if children happened to be along that path, then it could happen much easier with eggs frozen when I was younger, versus trying to do it with older eggs.

Two participants who were single at the time of the study shared their sense of grief and loss about realizing that their lives had not turned out the way that they had expected. Freezing their eggs was one way to reduce the pressure of their declining fertility and helped them come to terms with how their lives were unfolding.

Interestingly, the only participant who was in a relationship at the time of her egg freezing procedure chose to freeze her eggs rather than freeze embryos using her partner's sperm, which generally has a higher success rate. Her partner supported her decision to pursue egg rather than embryo freezing to keep both of their future parenting options open. This participant felt her egg freezing decision equalized how she and her partner felt about being able to allow their lives together to develop without the pressure of having to decide about having children together and to make that decision before they were both ready:

It's put our relationship on the same playing field now because he never felt like he had to make decisions based on his biology, and now neither do I. We

really are in the same position in our relationship to allow our lives to develop as we see fit, and not feel like we have to make decisions before we're ready.

Taking Control and Reproductive Agency

The participants spoke about feeling a sense of control and reproductive agency that came about as a result of freezing their eggs. The women recognized that egg freezing was not an ideal scenario in terms of their lives, nor was it a guarantee that they would be able to have a child in the future. Rather, it was the *best possible decision* they could make given their life circumstances at the time. In the words of one participant,

Women think, "Oh, I'll freeze my eggs and then I'm guaranteed to have a baby whenever I want." That's not the case. I understand that egg freezing is not an insurance policy at all, but it's the next best. It's the best option. I've now put myself in the best possible position to conceive if I want to.

In reflecting on their decision to freeze their eggs, the women in this study said they had *no regrets* about undergoing the procedure. As one participant stated emphatically, "I'm glad I did it. I have no regrets whatsoever. It was probably the best thing I've ever done in my life." The participants saw egg freezing as a way for them to be *active agents* in their lives, rather than victims of their life circumstances. Egg freezing was seen as a concrete step—a proactive decision rather than a reactive one—that would move these women closer toward the goal of having a child in the future when and if they were ready:

I felt good because I didn't make the decision as a reaction to something. I just thought this is a good decision—a smart, adult move. This is something that I can give to myself, that would put my mind at ease and allow my life to develop as I see fit without being under biological pressure.

One participant faced significant challenges in accessing the procedure in another city when she was denied access to egg freezing by a fertility clinic because she was a single woman and had not received a medical diagnosis of infertility. She considered herself to have "situational infertility" because she was not in a position in her life to be able to pursue child-bearing. She referred to this as a "human rights issue" and spoke about her belief that access to reproductive technologies should be improved and available to more women: "If I have the right to end a pregnancy if services are available, I should have the right to potentially preserve the possibility of a pregnancy and create one if the services are available too." All the participants shared a common sense of resolve to pursue egg freezing to take control and be active agents in their reproductive lives.

Personal Empowerment and Acceptance

All the participants reported feeling a sense of personal empowerment as a result of going through the egg freezing procedure. They spoke about the decision to freeze their eggs as being a very positive choice in their lives—one that increased their confidence and optimism about being able to have a child in the future when they were ready. They felt a greater sense of self-determination and ability to take control over the direction of their lives. An important step in their empowerment was *becoming well-informed* and knowledgeable about reproductive health and the fertility lifespan. They spoke about the importance of educating themselves about their fertility as critical in understanding their reproductive options and making the decision to freeze their eggs. The participants lamented the fact that, since egg freezing is a relatively new procedure, there is limited information on how many eggs are “enough” to increase the chances of a future viable pregnancy:

I think for me, the only piece of information that I wish more patients had access to were the success rates and the possible future outcomes. Because the field of egg freezing is such a brand new field . . . we don't actually have a very clear picture to understand per age group, what is a reasonable number of eggs to have frozen to have a reasonable outcome. As a patient, that made it very difficult because at the end of it, I've gone through this whole thing and now I have eggs frozen, and I'm faced with the questions, Is this enough? Have I got enough eggs?

Having decided to freeze their eggs potentially to preserve their future fertility, these women felt a greater *sense of acceptance* about their current and future life circumstances. By coming to terms with their life circumstances, which included not being able to have a child, the participants felt more accepting of their situations and the way their lives were unfolding:

I don't know if this is a result of going through the process or just me growing up over the last 5 years, too, is that sense of pressure being relieved, but also, I guess, more of an acceptance of there are no guarantees in life in anything. You do the best that you can at a given time, and then you deal with the consequences of that going forward.

Each woman saw the egg freezing decision as a *gift to herself*—a positive step in her life that gave her a greater sense of autonomy and self-determination about her reproduction and reduced the pressure of her biological clock. As one participant explained, “It was such an empowering decision. I feel so good for doing that for myself. There's very few things like that, that you can do for yourself that are so empowering.” Another participant referred to her decision to freeze her eggs as an act of self-love: “This is the part of loving yourself, I think. This is what it is. . . .

Taking care of yourself.” The women in this study saw egg freezing as a concrete way they could empower themselves to feel more confident about their ability to have a child in the future, if and when they were ready, and the circumstances of their lives were in place for them to become a mother.

Feeling Fortunate

The participants felt fortunate to have the resources and the ability to freeze their eggs and were grateful and relieved that the procedure turned out to be *easier than they had expected*. Overall, their experiences of the egg freezing procedure were positive. They felt well cared for by their care providers and had fewer symptoms from the procedure than they had anticipated. The women described experiencing some symptoms from the medications, including bloating and discomfort, and although these symptoms were uncomfortable, they seemed acceptable to the participants. They talked about egg freezing as being less involved, difficult, and painful than they had expected.

The participants expressed a *sense of feeling lucky* at the number and the quality of eggs that they were able to freeze with their first attempt. The women in this study had between 10 and 19 mature eggs frozen from their respective procedures. Although there is no clear cut-off for the number of eggs needed to ensure a successful future pregnancy, each of the participants eventually decided that one procedure was enough for her to feel confident about her chances of success using her frozen eggs in the future. Although they were aware that egg freezing does not guarantee future fertility, the women believed that by freezing their eggs they had a better chance of being able to have children, if and when they tried to get pregnant in the future, compared with other childless women in their age group who had not undergone the egg freezing procedure. One woman expressed this shared sentiment: “It did take some of the pressure off. It feels really good. I feel in a way better position than a lot of women my age who are in the same situation but don’t have frozen eggs.”

The women also shared a *sense of gratitude* for having both access and economic resources to be able to freeze their eggs. They spoke about being “glad we have science to make this happen” and about feeling “very lucky to live in a time” where fertility preservation is a reproductive option for women: “Thank God it’s an option these days. . . . We have tools now . . . it’s an amazing resource.” In terms of the cost versus the value of going through the egg freezing procedure, the shared sentiments of the participants were captured in the words of one participant: “Money just comes and goes, but it’s the decisions you make that can be so impactful. . . . Money can come and go. You can win and lose it . . . but you can’t turn back time.” Another participant justified the cost in this way: “It’s a lot of money, but if you’re going to have kids, the amount of money that you’re spending on egg freezing is a fraction of what it’s going to cost to raise those kids.”

Keeping Their Reproductive and Parenting Options Open

The participants felt the decision to freeze their eggs gave them a sense of *keeping their options open* for how they might have a child in the future. Despite knowing that frozen embryos generally have a higher success rate and are more likely to lead to the conception and live birth of a healthy child, the participants intentionally chose to freeze their eggs as a way to keep their options as open as possible in terms of choosing the genetic father of their future child.

Although each participant spoke about the hope of having a “natural” conception with a willing partner in the future, egg freezing was considered to be a *backup plan* that would allow her a greater chance of being able to have a child in the future when she was ready, whatever her relationship circumstance at that time. Although the participants were aware that egg freezing did not guarantee that they would be able to have a child in the future, they knew that using their frozen eggs to conceive when they were ready would increase their chances of a successful pregnancy. As one woman stated, “It’s not an insurance policy, but it’s definitely a hope policy. It just gives you this added hope and takes away some pressure.”

Having “put their fertility on ice” metaphorically speaking, the participants no longer felt bound by the biological clock. This gave them a sense of more *fluid age boundaries* regarding the circumstances in which they anticipated using their frozen eggs in the future, including both their age and their relationship status. Although the women all stated a preference for using their eggs before they turned 45, that timeline appeared to shift upwards as the years marched on and the circumstances of their lives were still not in place to pursue a pregnancy.

Although most participants hoped to have a child within the context of a loving relationship with a willing partner, they felt freedom in knowing that they could choose to be a single mother in the future using the sperm of a known or an anonymous donor. Freezing their eggs bought the women time to put the necessary things in place to pursue a pregnancy on their terms in the future. In the words of one participant, “It’s a sense of freedom. I’ve already made a decision that by this certain age if I do not have a partner, I will become a single mother.”

Openness and Support

The participants spoke about being open with family, friends, and other women about their egg freezing experience, and most felt *supported in their decision* to freeze their eggs. However, one participant explained how telling her parents about her decision to freeze her eggs had led to a rift in their relationship. The participants wanted to *share their stories* of egg freezing with others because it was such a positive experience and because they wanted others to know that this fertility preservation option was available. As one woman articulated,

My parents were very supportive. . . . I shared with my girlfriends, and they were happy for me. I guess my thought was I want to be able to share my experience so that I can help give other women the courage to make their own choice.

The participants expressed feeling a sense of hope that, by sharing their experiences, they might help to inform others and demystify the egg freezing procedure. One participant expressed this shared sentiment in the following way: “I don’t think it should be taboo, and I think part of what is going to make it less taboo is people being open about their own experience.” The participants felt that by sharing their experiences and recommending egg freezing to other women, they might empower others to take control of their reproductive health: “I want to be able to share my experience so that I can help give other women the courage to make their own choice.”

Discussion

The current study has led to several novel findings regarding participants’ reasons for pursuing social egg freezing, the decision to freeze eggs rather than embryos, and the importance of being well informed about egg freezing; it also has highlighted controversies regarding social egg freezing. Our findings echo previous research suggesting that women elect to freeze their eggs to reduce a sense of pressure at being able to find the right partner with whom to conceive naturally (Baldwin et al., 2019; Carroll & Kroløkke, 2018; Pritchard et al., 2017). The participants in this study perceived social egg freezing as a way to reduce the risk of future infertility and to increase their chances of being able to have a child when they were ready. As current workplace policies often do not support child-bearing and motherhood adequately, and as it becomes increasingly difficult to be able to afford a child, particularly as single parents, many women feel forced into the position of needing to ensure a stable career and financial security in order to feel ready to pursue parenthood responsibly. Social egg freezing has become one available alternative for women who are not within the emotional, relational, or economic context to be able to bring a child into the world but who would like to maintain the possibility of having a child in the future.

Consistent with the extant literature, the women in this study viewed social egg freezing as a backup plan for pursuing parenthood in the future, preferring if possible to have a child “naturally” and within the context of a committed relationship (Baldwin et al., 2015; Carroll & Kroløkke, 2018; Hodes-Wertz et al., 2013). Previous research has cited the lack of a partner as an important factor in women’s decisions to freeze their eggs, and, for the participants in this study who had yet to find a suitable partner, this was an important factor in their decision to delay child-bearing and freeze their eggs, based on their desire

to pursue parenthood with a partner (Baldwin et al., 2019; Carroll & Kroløkke, 2018; Pritchard et al., 2017). Other reasons that previous research has shown to be important in the decision to delay child-bearing—including health, a mutual desire for a child, and financial security—do not appear to be salient factors in the decision to pursue social egg freezing.

Unique to this study, the participants spoke about how the process of coming to terms with and accepting the reality of their current life situations had been an important factor in the decision to freeze their eggs. By confronting directly the reality of their life circumstances at the time, including not being in the right relationship and not being able to have a child, they felt empowered to act and to undergo the procedure. Following the procedure, they felt an increased sense of acceptance toward their life circumstances as well as a greater sense of freedom to allow their lives to unfold. Although the women in this study were well aware that egg freezing did not guarantee a successful outcome, egg freezing gave them a sense of confidence that they had taken a step in the right direction.

Our study suggests that the women in this sample were intentional about their decision to freeze eggs rather than embryos, to increase the options available for pursuing child-bearing in the future. This was relevant for both the single women and the partnered women in this study. Although embryo freezing tends to have higher success rates than egg freezing, if the women in this study had fertilized their eggs with the sperm of either a current partner or a known or anonymous donor, they would have had to commit to deciding who would be the genetic father of their future child.

Based on the typical demographic profile of women who undergo social egg freezing, echoed by the participants in this study, as well as recommendations by the American Society for Reproductive Medicine (2014) and ESHRE Task Force on Ethics and Law et al. (2012) that women freeze their eggs when they are under the age of 38, it is evident that more information about social egg freezing, success rates, and optimal timing should be made available to younger women (Baldwin et al., 2019; Carroll & Kroløkke, 2018; Pritchard et al., 2017). Similar to findings by Pritchard et al. (2017), it appears that the decision to freeze eggs is often made as a reactive decision by women in their mid- to late 30s facing the realities of their life circumstances and their biological clocks. This highlights further the need for more information about egg freezing to be made widely available so that more women can learn about the viability and availability of social egg freezing as a fertility preservation option.

Notably, all the women in this study were well informed about reproductive health and the fertility lifespan. They cited this knowledge as an important factor in their decision-making process. Egg freezing was viewed by the participants in this study as a way to take control of their lives and to make the best possible decisions, given their life circumstances at the time, while increasing their chances of being able to have a child in the future. By taking an active role in managing

their reproductive options, they experienced an increased sense of personal agency. This attitude is contrary to previous research suggesting that women pursuing social egg freezing may lack adequate reproductive knowledge (Hodes-Wertz et al., 2013). However, it is consistent with Carroll and Kroløkke's (2018) findings, suggesting that women elect to freeze eggs to take responsibility for their reproductive futures by engaging in a form of "biopreparedness" (p. 10) to increase the possibility of future motherhood.

All the women in this study had undertaken tests to measure their fertility and to ensure that their fertility status was normal. They decided to freeze their eggs for non-medical reasons. They considered this knowledge about their fertility status to be an important part of making egg freezing an empowering experience. Interestingly, in studies on social egg freezing by Baldwin et al. (2015) and Pritchard et al. (2017), 22% and 13% of participants, respectively, believed that their fertility was threatened by a medical condition and cited this as one of the reasons for electing to undergo social egg freezing. These findings highlight the lack of clarity surrounding the term social egg freezing and underscore the need to develop clearly defined distinctions between egg freezing for medical vs. non-medical reasons.

The term social egg freezing is not without controversy, and several authors have suggested the word "social" may indicate that women who elect to freeze their eggs do so out of self-interest for reasons that are within their control and recommended that alternate terms such as egg freezing for non-medical reasons or "anticipated gamete exhaustion" be used instead (Baldwin et al., 2019; Pritchard et al., 2017; Stoop et al., 2015). Our findings support the notion that women often freeze their eggs for reasons beyond their control, and the use of the term "social" egg freezing may not represent accurately the experiences of women who elect to undergo this fertility preservation method.

Implications for Counselling Practice

The results of this study have important implications for counsellors who work with women of child-bearing age who may wish to have children in the future. Given the sense of pressure, both biological and social, that women may feel regarding child-bearing and their biological clocks, it is important that counsellors support women in making informed reproductive and child-bearing decisions. The counselling process can help women to explore various reproductive options and alternative avenues toward parenthood if their life circumstances and personal values do not align with the socially normative timeline of child-bearing. Previous research has shown that several factors are involved in reproductive decision-making, including age, relationship status, and sense of readiness to have a child (Cooke et al., 2012; Olafsdottir et al., 2011; Tough et al., 2007), and these were also acknowledged by the women in this study. With this knowledge, counsellors can assist women in examining the relevance of each of these factors in their

reproductive decisions and help them explore various options either to preserve their fertility or to pursue parenthood.

Our findings suggest that women may feel empowered to make well-informed decisions when they have accurate knowledge about reproductive health and maintain realistic expectations about the fertility lifespan. Reproductive counsellors can play an important role in providing psychoeducation about fertility and the various reproductive options that are available, including social egg freezing as well as the question of whether to freeze eggs or embryos. If women choose to pursue social egg freezing, counsellors can help women consider the potential risks, symptoms, and side effects of the egg freezing procedure. As women make time-sensitive decisions and take proactive steps on their reproductive journeys, counsellors can support these clients and encourage their sense of personal empowerment, self-determination, and agency in facing and making, rather than ignoring, such important and potentially life-altering reproductive decisions.

Given the complex and sensitive nature of decision-making about child-bearing, the counselling process can help women understand their values regarding parenting, explore ways to face the reality of their life circumstances, and possibly find a greater sense of acceptance in their lives. As suggested by our findings, some women who freeze their eggs may experience a sense of grief and loss about their life circumstances not having turned out the way they had expected, including not having found a suitable partner and not being in a position to pursue parenthood. This underscores the need for counsellors to work with clients in a respectful and non-judgmental manner and to help them acknowledge and express their feelings of grief and loss, make sense of their past decisions, and accept their current experiences.

Our findings indicate that some women may experience a sense of social stigma regarding their choice to undergo social egg freezing, and it is important for reproductive counsellors to be aware that women may experience unequal access to social egg freezing and may need support to navigate potential barriers or social stigma. Finally, counsellors can play a vital role in creating a safe and non-judgmental space in which women making child-bearing decisions can have the opportunity to talk freely about their experiences and to find a sense of support and validation.

Limitations and Future Research

The extent to which the findings resonate with the experiences of other childless women who are considering social egg freezing may be limited by the relatively small sample size and the homogeneous nature of the sample of participants in this study. It is plausible that the findings may be less resonant for women with diverse sexual identities or for women without the financial resources to consider social egg freezing as an option. Given that participation in this research was voluntary and that convenience sampling was used, a self-selection bias may also have

impacted the results. Different themes may have emerged from women who had less positive egg freezing experiences, women who had to undergo the procedure more than once, or women who were uncomfortable sharing their stories during an in-depth interview. It is also possible that recruitment through fertility clinics may have influenced the sample and that the women who were contacted by the clinics to share their stories had particularly positive experiences.

This study utilized a hermeneutic phenomenological study design to provide rich descriptions of the lived experience of undergoing social egg freezing. It remains to be determined to what extent the findings may have “empathic generalizability” (Osborne, 1990, p. 86) and be relevant for individual women who are considering social egg freezing or who have pursued this fertility preservation option.

Although research in the area of social egg freezing is growing, there is currently a limited body of literature on this relatively new fertility preservation option, and our understanding of this phenomenon is still in the early stages. Future research with larger and more diverse populations is recommended to allow for a range of experiences of social egg freezing and to illuminate the influence that ethnicity, culture, sexual orientation, and socio-economic status may have on the experience of undergoing social egg freezing and on the decision-making process related to this phenomenon. It may be beneficial to examine further how socio-economic status and the cost of elective egg freezing influence women’s decisions to undergo the procedure and how that affordability may currently serve to limit access to the service.

Finally, an important area of future research will be to examine women’s decision-making processes regarding how and when they use their frozen eggs, how and when they decide they have completed their families and no longer want to keep their frozen eggs, and how and when they decide to dispose of their frozen eggs. Such research could serve to improve our understanding of this newly emerging phenomenon and would be particularly relevant for counsellors working with women of child-bearing age.

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