

# Transgender men's experiences of fertility preservation: a qualitative study

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**STUDY QUESTION:** How do transgender men experience fertility preservation (FP) by cryopreservation of oocytes?

**SUMMARY ANSWER:** The procedures required prior to oocyte cryopreservation, such as hormonal ovarian stimulation and transvaginal ultrasound (TVS), have a negative impact on gender dysphoria as they are closely linked to the men's female assigned sex at birth, which is incompatible with their current status.

**WHAT IS KNOWN ALREADY:** Transgender persons often have high dissatisfaction with assigned sex-specific body features, such as the genital organs and androgen/oestrogen-responsive features. Thus, undergoing FP that requires genital-specific examinations, aimed at obtaining oocytes to cryopreserve, could be distressing. As no previous studies have investigated transgender men's experiences of FP involving cryopreservation of oocytes, little is known about their experience of the procedures.

**STUDY DESIGN, SIZE, DURATION:** This is a prospective study among adult transgender men referred for FP between March 2014 and December 2015. Individual in-depth qualitative interviews were conducted shortly after FP treatment. The interviews lasted between 62 and 111 min (mean 81 min) and were digitally recorded and transcribed verbatim.

**PARTICIPANTS/MATERIALS, SETTING, METHODS:** Participants were recruited on their first visit to the assisted reproduction clinic for reproductive counseling. There were 15 men, scheduled for FP, who chose to participate in the study (age 19–35); none had given birth and eight had a partner. Data were analyzed by thematic content analysis.

**MAIN RESULTS AND THE ROLE OF CHANCE:** The analysis resulted in three main categories: the journey to FP, reactions to the FP proceedings and strategies for coping. The referral for FP was an important part of the assessment and diagnosis and sometimes lined with frustrating waits and doubts. The reaction to the FP proceedings revealed that the genital examinations and the physical changes associated with discontinuation of testosterone or hormonal stimulation treatment triggered gender incongruence and dysphoria. However, for some, the negative expectations were not met. The participants used several coping strategies in order to manage the procedure, such as focusing on their reasons for undergoing FP, reaching out to friends and family for support and the cognitive approaches of not hating their body or using non-gendered names for their body parts. The results demonstrate the importance of contextual sensitivity during FP procedures.

**LIMITATIONS, REASONS FOR CAUTION:** The authors have strived to be reflective about their pre-understanding of the phenomenon. The majority of the participants resided in large urban areas; it is possible that transgender men living in rural areas have different experiences.

**WIDER IMPLICATIONS OF THE FINDINGS:** As the results are based on qualitative data from 15 transgender men, the results cannot readily be generalized to larger populations. However, the results are suggested to be applicable to other transgender men who want to undergo FP by cryopreservation of oocytes. The results show that transgender men's experience of FP places may elicit gender incongruence

and gender dysphoria. However, health care personnel can alleviate distress by using a gender-neutral language and the preferred pronoun. Also, reassuringly, the men also have coping strategies of how to handle the situation. This knowledge is important to ensure adequate professional support for patients with gender dysphoria during FP.

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## Introduction

Transgender individuals present with a gender identity that is incongruent with their phenotypic sex assigned at birth. Transgender men are assigned female at birth and usually identify as male. Some suffer from gender dysphoria and might need gender-affirming medical intervention (GAMI) in order to masculinize body parts to ease the gender dysphoria. GAMI could include cross-sex hormonal treatment (CHT) and gender-affirming surgery. Among transgender men, GAMI will lead to irreversible infertility in the case of hysterectomy and oophorectomy. Masculinizing hormone therapy (androgens) alone may have an atrophic effect on the endometrium (Perrone et al., 2009) or cause hyperplasia of the ovarian cortex and stroma (Ikeda et al., 2013). Nonetheless, research shows that even if the treatment leads to amenorrhea, it does not affect the ovarian follicle pool (Van Den Broecke et al., 2001; Ikeda et al., 2013). The reproductive health needs of transgender persons are described in the Standards of Care version 7 from the World Association of Transgender Health (Coleman et al., 2012).

Studies investigating aspects of fertility preservation (FP) in connection with gender dysphoria are rare. A single center study in Belgium among 50 transgender men showed that half of them wanted to have children at the time of the study, and if FP options had been available at the time of their transition, 38% would have considered using it (Wierckx et al., 2012b). Whereas clinical experiences of sperm banking among transgender women have been reported (Wierckx et al., 2012a), only a few case reports of transgender men who have undergone FP by ovarian stimulation and oocyte cryopreservation are available (Rodriguez-Wallberg et al., 2014; Wallace et al., 2014). In both reports, the clinical procedures are described and the psychological assessment of the patient is described in the single-case report (Wallace et al., 2014). However, a description of the patients' experiences of FP is not reported. A Canadian study of nine transgender individuals' experiences of assisted reproduction services showed that overall they had negative experiences of health care encounters, such as having to cope with normative assumptions and being refused service (James-Abra et al., 2015) and a recent study of 14 self-identified transgender patients discussed the patient's characteristics, clinical routines and barriers to successful gamete banking (Jones et al., 2016). However, none of the previous studies have investigated transgender men's experiences of undergoing the FP procedures.

Cryopreservation of oocytes is a clinically established FP method that demands transvaginal ultrasound (TVS) examinations and ovarian stimulation with gonadotropins, which may be challenging for this patient group.

Increased knowledge on transgender person's reproductive health care and their experiences of FP is needed (Reisner et al., 2016). The aim of the present study was to evaluate how transgender men experienced FP aimed at oocyte cryopreservation in a pilot program, which was developed within an established university hospital-based FP program.

## Materials and Methods

### Context

The care of individuals with gender dysphoria in Sweden who require GAMI or change of legal gender is organized in six national gender teams. A law regulating legal change of gender and genital surgery for transgender persons came into force in 1972 and was updated on 1 January 2013 when the prerequisites being unmarried and sterile were removed. This enabled transgender persons seeking GAMI to also undergo FP. After diagnostic evaluation by the gender team, individuals who receive one of the gender dysphoria diagnoses in ICD-10 are referred for GAMI and, if requested, FP as a part of the tax-funded national health care system. However, GAMI and FP are only included in the national health care system for those who after a diagnostic evaluation receive one of the gender dysphoria diagnoses in ICD-10. At the Reproductive Medicine Clinic of Karolinska University Hospital, where the present study was performed, existing guidelines for FP were adapted for the case of transgender men through multidisciplinary collaboration and developed into a pilot project using the framework suggested by INVOLVE (INVOLVE, 2015).

The men who chose to cryopreserve oocytes underwent ovarian stimulation with daily recombinant FSH injections for ~9–11 days using a GnRH antagonist protocol in combination with oral Letrozole, in order to maintain low systemic oestradiol levels (Oktay et al., 2010; Rodriguez-Wallberg et al., 2014). The recruitment of ovarian follicles was monitored by serial TVS examinations and occasional serum hormone assessments, and a trigger injection of recombinant human chorionic gonadotrophin was administered to induce final oocyte maturation 37 h prior to oocyte pickup. Ovarian follicle aspiration was performed by transvaginal puncture under local anaesthesia and mild sedation, and recovered oocytes were subsequently vitrified (Rodriguez-Wallberg and Oktay, 2012). Individuals who were on CHT treatment had to discontinue the treatment until menstruation resumed before starting ovarian stimulation, which took ~3–6 months.

### Study participants and procedure

In the present study, we have chosen to use the pronoun he and the term transgender man (Center of Excellence for Transgender Health, 2016) or participant to describe the individuals sample. Other definitions are given in Table 1. The participants were recruited between March 2014 and

**Table I Terminology and definitions.**

Assigned sex at birth <sup>a</sup>	The assigned sex at birth, typically based on primary sex characteristics
Cisgender <sup>a</sup>	When a person's gender identity and expression is in line with their sex assigned at birth
Gender dysphoria <sup>a</sup>	Distress that gender incongruence might cause
Gender identity <sup>a</sup>	The gender one identifies with, such as man or woman or an alternative gender, regardless of assigned sex at birth
Gender incongruence <sup>a</sup>	The experience of a gender identity and/or expression that does not align with the sex assigned at birth
LGBTQ	Abbreviation for Lesbian, Gay, Bisexual, Transsexual and Queer
Transition <sup>b</sup>	Period of time when individuals change from the gender role associated with their sex assigned at birth to a different gender role. For many people, this involves learning how to live socially in another gender role; for others, this means finding a gender role and expression that is most comfortable for them. Transition may or may not include feminization or masculinization of the body through hormones or other medical procedures. The nature and duration of transition is variable and individualized
Transgender/trans <sup>a</sup>	An umbrella term describing persons whose gender identity and/or expression does not align with their sex assigned at birth
Transgender men	Used in this study to indicate a persons who was assigned female at birth but is male identified and will start a medical transition including masculinization of the body
Transsexualism <sup>c</sup>	Transsexualism F64.0—a medical diagnosis (ICD-10) 'A desire to live and be accepted as a member of the opposite sex, usually accompanied by a sense of discomfort with, or inappropriateness of, one's anatomic sex, and a wish to have surgery and hormonal treatment to make one's body as congruent as possible with one's preferred sex, so called gender dysphoria' <sup>c</sup> . The ICD-10 diagnosis is needed in Sweden to access gender-affirming health care. In many countries, the diagnosis is called Gender Identity Disorder (DSM-IV or Gender Dysphoria (DSM-5)). A revised new diagnosis with a proposed new name 'Gender Incongruence' is expected to appear in the next ICD-11, planned for the year 2018
Transgender women	Used in this study to indicate a persons who was assigned male at birth but is female identified and will start a medical transition including feminization of the body

<sup>a</sup>Definitions from Zeluf *et al.* (2016).

<sup>b</sup>Definition copied verbatim from WPATH Standards of Care (Coleman *et al.*, 2012).

<sup>c</sup>Definition copied verbatim from ICD-10, F64.0 (World Health Organization, 2016).

December 2015. Inclusion criteria were being referred for GAMI and FP by cryopreservation of oocytes, and being able to communicate in Swedish. Participants received information about the study aims after counseling for FP, and were told that participation was voluntary and could be interrupted at any time without it having any impact on their treatment. After the men had undergone FP, they were contacted by the first author (G.A.), who was not involved in the individuals' health care and who performed all interviews. Out of 18 individuals informed about the study, 17 agreed to participate in an interview. However, two of the men did not come to the agreed interview. The time and place of the interview were decided by mutual agreement, predominantly chosen by the participants. All the men who participated signed a consent form before the interview.

The interviews started with one question: 'How has it been for you to undergo treatment to freeze gametes?' The interviews covered the following areas: the referral process, the stimulation, the pelvic examinations and collection of gametes, reasons for undergoing FP and health care encounters. When clarification was needed, supplementary questions were asked. Field notes were taken, containing reflections about the interview and preliminary interpretations as well as the interviewer's own reaction to the interview. These field notes functioned as a tool for a preliminary evaluation of the findings, and recruitment of study participants continued until saturation was reached, i.e. when no novel information was obtained in the interviews. In this study, this was achieved after 12 interviews but 3 additional interviews were held in order to ensure that adequate and complete saturation was reached. The interviews lasted between 62 and 111 min (with a mean of 81 min) and were digitally recorded and transcribed verbatim.

Socio-demographic and clinical characteristics of the participants are presented in Table II. All participants were nulliparous. Seven men had started GAMI and one of these had undergone sterilization by tubal ligation, as previously required for a legal sex change. The others had stalled legal sex-change

**Table II Socio-demographic and clinical characteristics (n = 15).**

Variable	n (%)
Age	
Mean (SD)	24.7 (4.55)
Range	19–35
Occupation <sup>a</sup>	
Employee	7 (46.7)
Student	6 (40.0)
Job-seeker	3 (20.0)
Sick leave	2 (13.3)
Work practice (training)	1 (6.7)
Home community	
Metropolitan area	12 (80.0)
Smaller city	2 (13.3)
Urban	1 (6.7)
Relationship status	
Partnered	8 (53.3)
Single	7 (46.7)
Gender-affirming medical interventions (GAMI)	
Bilateral mastectomy	10 (66.7)
Testosterone before FP	7 (46.7)
Testosterone started after FP	3 (20.0)

<sup>a</sup>Some combined work, studies and/or sick leave; FP, fertility preservation.

procedures as they wanted to preserve their fertility. Overall, the FP procedure yielded a mean of 11 oocytes per individual (range 3–22).

## Data analysis

Data were analyzed by thematic content analysis as described by Burnard (1991) and Burnard et al. (2008). As transgender men's experiences of FP had not been previously explored, an inductive approach was chosen where the analysis is data driven rather than predetermined by a theory or framework. The transcripts were read repeatedly in order to obtain a sense of the participants' stories (Burnard, 1991; Burnard et al., 2008). By using open coding, phrases related to the study aim were identified and summarized in notes. Notes mirroring the same context were then brought together and preliminary categories were formed. In the final coding, overlapping or similar categories were studied. Depending on the outcome, these were grouped together into categories and subcategories, redefined or collapsed into already existing categories. By using constant comparison, transcripts were reread alongside the list of categories and subcategories in order to ensure that the categories covered all aspects of the participants' narratives that were related to the study aim. In this study, the results are illustrated by quotations from the participants and the interviewer's questions, clarifications and excisions (three dots) are marked with squared brackets. The study was approved by the Regional Ethical Review Board in Stockholm, Sweden.

## Results

The analysis resulted in three main categories: the journey to FP, reactions to the FP proceedings and strategies for coping (Table III).

### The journey to FP

#### *Referral, assessment and diagnosis*

Some participants had taken the initiative to discuss the possibilities to cryopreserve gametes by discussing the changes to the law and its impact on their options to undergo FP, while others had been offered FP as a package together with other referrals, such as referrals to an endocrinologist or a surgeon. Interestingly, the former group was concentrated in the first period of data collection when the gender team had just begun making referrals to FP. This implies that over time the referral process became routine for the gender team and the endocrine department.

It's absurd. Had I started [my evaluation] one year ago, I had not been able to save [gametes]. Instead, they had required me to be sterilized. [...] It feels like ... one ended up lucky in some way. There is so much that people have been struggling with [amendment of the sterilization requirement] that happened just when I've made contact with the health care. And then ... then it was easy to get the referral.

TSFP 5

#### *A frustrating wait*

The period of time between the referral and the first visit to the Reproductive Medicine clinic was experienced as long and frustrating. The participants described how satisfied they felt after they had finally received their diagnosis and were on the point of starting their new lives. They were eager to get it over with and to start or reinstate the testosterone treatment.

I feel like my life is put on hold. I'm just waiting. I'm waiting for the hormones, I've been waiting for surgery, and I've been waiting to save gametes. [...] In some ways, it feels like the whole life ... has been waiting ... It took many years before I admitted [that I was transsexual], but I've still known and felt it since I was little, you know.

TSFP 16

#### *Doubts and encouragement*

Some participants described how they had been hesitant about whether or not to proceed with FP. They were worried about the examinations and the side effects of the treatment as they had heard that it could be stressful. However, they had been encouraged by the referring clinic and, after some hesitation, had decided to go through with FP.

An appointment was booked but I cancelled it as I was worried. [...] I was concerned about the injections and what the consequences would be, and such. And I had read about complications among others who had done it [the FP]. [GA: How long did it take before you felt that you wanted to do it?] I think it was nine months. And so I went back and then he asked, 'Are you ready?' And I said 'Yes, now I'm ready.'

TSFP 11

### Reactions to the FP proceedings

#### *Discontinuing the testosterone treatment to regain menstruation*

Seven of the participants had been on testosterone treatment before FP. While some did not see discontinuing the treatment as a problem, any more than having to exercise harder to maintain muscle strength, others described how it had been a challenge and a mental strain. In the interlude between discontinuing testosterone treatment and before their former hormonal system had reasserted itself, they felt tired and exhausted. They also described how they began to smell different, how their bodies had become more feminine and their voices higher.

Ceasing to take testosterone so that the [bleeding] would reappear was one of the hardest things. [GA: How has it been?] It has been very tough. It was tough mentally to discontinue. [...] It affects everything; I could feel how I smelled differently when I didn't use testosterone. [...] Then I noticed it mentally also. I was back in the more ... What to say? ... varying hormone cycle ... that I don't really appreciate.

TSFP 2

I felt a little bit in between being a woman and being a man, and one came back to square one again [...] I also noticed that my body became a bit

**Table III Overview of main categories and subcategories.**

The journey to FP	Reactions to the FP proceedings	Strategies for coping
Referral, assessment and diagnosis	Discontinuing the testosterone treatment to regain menstruation	Goal-oriented
A frustrating wait	Resumption of menstruation	Searching for support
Doubts and encouragement	The hormonal treatment	Changing the focus
	Becoming exposed by pelvic examinations and being seen by others	A cognitive approach
	Not as bad as anticipated	

more ... went back to being a little more feminine, so ... Then I felt that, 'No, I don't feel good about this' [being without testosterone].

TSFP 8

### *Resumption of menstruation*

Participants who regained bleeding after stopping their previous CHT described this feature as one of the toughest parts of the FP procedures. It reminded them of something they did not want to be a part of—the gender they strived to leave behind—as it was perceived as a typically female thing. Bleeding was described as psychologically stressful and anxiety inducing, and was also perceived as being the cause of a relapse of self-harming behavior.

It was damn hard, it was. Yes, it was so tough that I started to self-harm again. [...] [GA: Did you think it was triggered by being without testosterone?] It was triggered by the menstruations. It felt like I was teleported four years back in time and it was a damn tough period for me. [...] It really felt like I was back there again and it was horrible. I didn't manage it. [...] But I think it only happened three times during that time [the FP procedures], later I could control it a little better.

TSFP 14

### *The hormonal treatment*

While a few men described the hormonal treatment as being uncomplicated, the majority felt that it had an impact on their mood, making them irritable or unstable and less comfortable with their bodies. They described how taking the hormones required for FP increased their bodily gender dysphoria. The hormonal treatment induced hips, chest and belly swelling, which gave them a more female appearance or made them look pregnant.

It felt like one became a little more swollen in the body, including the hips. So I think this was a bit trying with the treatment ... that one felt that the body became [feminine]. Maybe it also was anxiety. One might imagine a little, you know, 'Now, things will happen that are the opposite of [what you want]'. You know, when one takes testosterone one wants the body to be more manly. Now one takes a hormone that helps the germ cells instead.

TSFP 8

### *Becoming exposed by pelvic examinations and being seen by others*

Some participants had had previous problems with nudity and had a complicated relationship to their genitalia, saying that they 'always had hated that part of myself' (TSFP 3). Nudity and the exposure of genitals during pelvic examinations made them feel uncomfortable, vulnerable and even humiliated, and the participants described how they felt exposed as they showed something that was not supposed to exist. In particular, the penetration involved in TVS examinations triggered negative feelings and they described how it made them 'become as physical women' (TSFP 4).

Probably nobody thinks it's fun to lie in a gynecological examination chair; it's a pretty exposed position. But for me it's genitalia that I don't want to have and that I don't want to acknowledge. Having someone else going on and examining it ... especially with the ultrasound probe and such ... It feels awkward at so many levels.

TSFP 6

Nakedness and pelvic examinations also functioned as a sort of revealing act. From being seen as a man before the examination, undressing and climbing up into the examination chair exposed them to being seen as women. This also manifested itself when health care professionals used the wrong pronoun when talking about them with others in the room. In addition, the use of gender-specific words, such as 'egg', 'vagina', 'ovaries' and 'uterus', created irritation and distress, reminding them of their gender incongruence/dysphoria as well as

confirming that others saw them as a woman. Some men had chosen not to involve partners or friends in the FP procedures, or even tell them about it. They did not want to be seen in a vulnerable feminine situation, and reveal to or remind others about their gender incongruence. However, the hormonal treatment sometimes gave rise to such side effects that others asked them if they were pregnant. This increased their feeling of being different.

There were several people who asked if I was pregnant at my work. Which was ... that has never happened before [...] [GA: How did you feel about getting such questions?] Like shit. You know, it was really a pain in the ass. It was ... it was like 'Should I say this now?' [That I'm transgender] Because nobody asked that question. The society's norms ... The idea of a pregnant man is not in people's mind, so that means they think I'm a woman, you know. No, that wasn't funny at all.

TSFP 5

### *Not as bad as anticipated*

Some described how they had expected the procedures to be worse than it turned out to be. They had expected themselves to be more worried and distressed, and that the whole procedure would be more troublesome, with a longer referral process, for example, or that it would be more painful to retrieve the gametes, or that they would have had more severe side effects from the hormonal treatment. The later positive outcome was attributed to treatment with an aromatase inhibitor, which kept their oestrogen levels low.

Maybe I became a little more sensitive, but otherwise I didn't feel like such a big difference. But I received this thing to keep the hormones low, I don't remember what it was called but ... [GA: But it was to keep the estrogen levels low?] Yeah, so maybe it was due to it. But I didn't ... It [the FP procedures] was easier and better than what I had expected it to be.

TSFP 16

## Strategies for coping

### *Goal-oriented strategies*

The participants coped with stress and negative feelings by focusing on the purpose of the FP, that is, their ability to have genetically related children in the future. They repeatedly reminded themselves about this during the FP procedures. They felt that it was worth having to wait for testosterone, or having to go through psychologically challenging procedures, in order to obtain potentially fertilizable oocytes to cryopreserve.

I felt it in the whole body, 'Run! Run the other way!' So I tried to persuade myself 'I am doing this because if I when I'm twenty-five want to have children, it is pretty good to have a load [euphemism for eggs] in the freezer.' It makes it easier, you know.

TSFP 12

### *Searching for support*

Even if it was challenging to show oneself in a vulnerable state, some of the participants described how they had reached out to friends and partners for support and advice during the FP procedures, which had helped them to cope. They had also forewarned the people around them, so that they would be understanding about mood swings. Sometimes, they simply wanted their compassion at having to go through such an ordeal.

My friends were told beforehand that I was going to do it [FP], and when I was about to start I warned them, 'If I become inexplicably irritable the next two weeks, it's because I'm stressed out and might have problems



with the hormones.' So I warned them, 'You mustn't hate me during these two weeks, I will come and apologize in 14 days.'

TSFP 6

### Changing the focus

The participants described how they tried to think of something else when they felt that the situation was particularly distressing. They tried to distract and convince themselves to take one step at the time, saying that it would soon be over. They also described how they tried to be blank, to turn off their feelings or to disconnect themselves from what was happening in order to cope better with the situation.

I didn't want to put too much thought on it. Of course it's hard. Of course one doesn't want to expose oneself, to do an examination. And of course it's crap that you should have to do it, you know. One just has to try to disconnect oneself, and to do it anyway.

TSFP 10

### A cognitive approach

Some participants used a cognitive approach to cope with the situation. They had prepared themselves that it would be tough; they were incongruent with their phenotypic sex assigned as female and the procedures could not be done in any other way even if they wanted to. Some of the men described how they had decided not to hate their body. This led to a less complicated body relationship, making it easier to cope with the procedures.

[One] becomes as physical woman [at the examinations] but I have ... I decided very early on, when I realized I was transsexual, that I wouldn't get myself that immense hatred that many have toward their female parts. It complicates things and there is no need for that when you are transsexual; there are so many things that are complicated anyway. [...] Of course, as I said, it's not fun [to be in the examination chair] but it's not like I am lying there in anguish.

TSFP 4

## Discussion

The findings show that FP aiming at oocyte freezing among transgender men had a negative impact on gender dysphoria as the procedures involved are closely linked to their phenotypic female assigned sex at birth. In addition, it either prolonged the time before they could start to masculinize their bodies or they had to take a break in testosterone treatment. However, although they felt that the treatment was tough and gave rise to distress, they also had coping strategies to deal with the situation.

During the study period, it became evident that offering FP prior to GAMI, which is in line with international guidelines, had become a part of the diagnostic procedures (Coleman et al., 2012). This in turn may have shortened the delay to starting cross-sex hormone treatment thus reducing the distress experienced by participants in our study.

Whilst it may be inferred that cryopreserving oocytes may be seen as a link to an incongruent assigned sex at birth, data presented herein suggest that the FP procedures were in themselves distressing, triggering increased gender dysphoria and even self-harm. The distress was not only based on how the procedures affected the body, such as the swollenness and breast tenderness associated with the hormonal treatment, or how they felt intruded upon in connection with the TVS, but also on how others, such as health care professionals and acquaintance saw and talked about them. However, oocyte freezing in itself did not seem to trigger gender dysphoria. This is in contrast to earlier

findings where one-third of the transgender women indicated that storage of frozen sperm would make it impossible to break with the past as a 'male' (De Sutter et al., 2002). The difference could be due to gender differences or reflect that the view of seeing gametes as something gendered has changed since 2002 and thereby reflecting less internalized cisgender normativity in the transgender male participants of our study. No previous studies investigating transgender men's experiences of FP have been identified. However, a former study among transgender women showed that if FP had been available, some women would still have found it emotionally impossible to masturbate in order to produce a sperm sample (De Sutter et al., 2002). Both the TVS examination and masturbation are closely connected with assigned sex at birth and the genitals. Research has shown that dissatisfaction with gendered body parts is high in transgender persons (van de Grift et al., 2016). There is higher dissatisfaction with assigned sex-specific body features, such as the genitals and androgen/oestrogen-responsive features, than with features less related to assigned sex at birth, such as facial features and body shape (Becker et al., 2016). In light of this, it is to be expected that the procedures required for FP, which include hormonal stimulation to the ovaries and TVS, both of which reminds them of their phenotypically assigned birth sex, are likely to increase distress and gender dysphoria. In order to ease the gender dysphoria and related distress, it is important to use non-gendered words as far as possible, such as 'bleeding', 'gametes' and 'pelvic examination' instead of 'menstruation', 'eggs' and 'gynecological examination', and to use the right pronoun. The latter can easily be achieved by simply asking the individual which pronoun is preferred. However, it is important to remember that the distress experienced may not only relate to the gender dysphoria. Research among the general cisgender women (i.e. not transgender) shows that women who had not previously undergone pelvic examination, who were young or nulliparous, were more likely to experience pelvic examinations as distressing (Wijma et al., 1998; Fiddes et al., 2003). The men in our study were not only inexperienced regarding pelvic examinations, but they were also young and all were nulliparous. With this in mind, it is important to inform transgender men not only about the increased risk of gender dysphoria, but also about the procedures and what to expect. It is also important to discuss different ways to handle the situation such as focusing on the goal, bringing a friend or partner to the examinations or using distractions.

This study has followed the consolidated criteria recommendations for reporting qualitative research (Tong et al., 2007) and the criteria's for trustworthiness by Lincoln and Guba (1985). The different backgrounds in the research group, including nursing, psychiatry and reproductive care, were an important asset in the analysis process as any pre-understanding of the data was challenged and questioned (Lincoln and Guba, 1985). The variation of participants regarding age, relationship status and occupation made it possible to capture FP experiences from different standpoints. However, the majority of the men lived in the same metropolitan area and it is possible that we might have captured different narratives if participants from other parts of Sweden had been available.

A major strength of this study is that we have chosen to interview a relatively homogenous group since all participants had received a clinical diagnosis of gender dysphoria. It may be inferred that the results are transferable to other transgender men undergoing FP by cryopreservation of oocytes. During the study period, several transgender men declined referral for FP. We have little knowledge of the reasons

for the transgender men declining referral for FP, but financial reasons are unlikely, as suggested by Jones *et al.* (2016) since the procedure and storage of gametes is provided at no cost by the Swedish tax-funded health care system. One reason given for declining FP when offered was not wanting to undergo the procedures required. Thus, those who chose to undergo FP were men who judged it bearable to undergo the required FP procedures and it is possible that this group has less gender dysphoria compared with those who declined FP. The study group was slightly younger as compared with the group who declined referral for FP (mean age 24.7, SD 4.55 vs 26.8, SD 8.1), which may indicate that older men already had decided not to have children, or already had the desired number of children.

In relation to the James-Abra study published in 2015, where transgender individuals' experiences of health care encounters were presented (James-Abra *et al.*, 2015), the present study adds important knowledge about transgender men's experiences of undergoing FP by cryopreservation of oocytes. Data presented herein demonstrate the importance of contextual sensitivity during FP procedures; knowledge about the men's vulnerable position in connection with FP can assist health care professionals to understand the situation at hand. With this knowledge, health care professionals can help to reduce distress through their actions, or at least not increase it. Importantly, this can be done by safeguarding the men's personal integrity by asking how they experience the procedures, and by using gender-neutral language and the preferred pronoun.

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## Authors' roles

K.A.R.-W. and G.A. designed the study and constructed the interview guide. G.A. interviewed the participants. K.A.R.-W., G.A. and C.D. performed the analysis, with G.A. having the main responsibility. K.A.R.-W. provided economic and administrative support. G.A., C.D., J.I.O. and K.A.R.-W. participated in the writing of the manuscript and approved the final version.

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## Conflict of interest

None to declare.

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