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# The barriers and needs of transgender men in pregnancy and childbirth: A qualitative interview study

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ABSTRACT

*Objective:* Transgender and gender diverse individuals are individuals whose gender identity differs from their sex assigned at birth. The discordance between gender identity and sex assignment may cause significant psychological distress: gender dysphoria. Transgender individuals may choose to undergo gender-affirming hormone treatment or surgery, but some decide to (temporarily) refrain from surgery and gender affirming hormone treatment and hence retain the possibility to become pregnant. Pregnancy may enhance feelings of gender dysphoria and isolation. To improve perinatal care for transgender individuals and their health care providers, we conducted interviews to explore the needs and barriers of transgender men in family planning, pregnancy, childbirth, puerperium and perinatal care.

*Design:* In this qualitative study five in-depth semi-structured interviews were conducted with Dutch transgender men who had given birth while identifying on the transmasculine spectrum. The interviews were conducted online through a video remote-conferencing software program (n=4) or live (n=1). Interviews were transcribed verbatim. An inductive approach was used to find patterns and collect data from the participants' narratives and constant comparative method was adapted in analysing the interviews.

*Measurements and findings:* The experiences of transgender men regarding the preconception period, pregnancy and puerperium and with perinatal care varied widely. Though all participants expressed overall positive experiences, their narratives emphasized they had to overcome substantial hurdles pursuing pregnancy. For instance the necessity to prioritise becoming pregnant over gender transitioning, lack of support by healthcare providers and increased gender dysphoria and isolation during pregnancy

*Key conclusions:* Since pregnancy in transgender men enhances feelings of gender dysphoria, transgender men comprise a vulnerable group in perinatal care. Health care providers are perceived as feeling unaccustomed for the care of transgender patients, as they are perceived to often lack the right tools and knowledge to provide adequate care. Our findings help strengthen the foundation of insight in the needs and hurdles of transgender men pursuing pregnancy and therefore may guide health care providers to provide equitable perinatal care, and emphasize the necessity of patient-centred gender-inclusive perinatal care. A guideline including the option for consultation of an expertise center is advised to facilitate patient-centered gender-inclusive perinatal care.

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## Background

Transgender and gender diverse individuals (TGI) are individuals whose gender identity differs from their sex assigned at birth. In the literature, the discordance between one's gender identity and one's sex assigned at birth has been described as a cause of significant psychological distress, which is called gender dysphoria (American Psychiatric Association, 2013). In the Netherlands,

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the estimated prevalence of individuals assigned female gender at birth (AFAB) who experience gender dysphoria and seek medical treatment is ~1 in 5200 (Wiepjes et al., 2018).

In addition to social transitioning (i.e. adaption of physical appearance and social situations, and making legal changes, to reflect gender identity), some TGI desire medical treatment such as puberty suppression, gender-affirming hormonal treatment (such as testosterone) or gender-affirming surgery to adapt physical characteristics to experienced gender. These treatments can affect the options for a future family planning. However, transgender men may also decide to (temporarily) refrain from surgical removal of female reproductive organs. These transgender men retain the possibility to become pregnant. Studies have shown that many transgender people desire to have children (De Sutter et al., 2002; Defreyne et al., 2020; Marinho et al., 2020; Tornello and Bos, 2017; von Doussa et al., 2015; Wierckx et al., 2012), with rates comparable to the cisgender population (De Sutter et al., 2002; Defreyne et al., 2020; Wierckx et al., 2012).

Until 2014 the Dutch law mandated that transgender people had to be impermanently infertile as a prerequisite for legal gender recognition (House of representatives the Netherlands, 2013 33.351). Abolishment of this law caused the attitude of TGD people, their health care professionals and the society towards reproduction to change in positive direction. The desire for legal gender recognition and the wish to be a gestational parent are not mutually exclusive anymore. Overall, there has been a decrease in the amount of gender-affirming surgical procedures over the last decade. Subsequently reproductive options and possibilities for TGI have risen.

Existing literature shows that the attitude and experience of TGI towards pregnancy and childbirth varies widely, but that they often endure an increased degree of gender dysphoria and loneliness during pregnancy (Besse et al., 2020; Ellis et al., 2015; Hoffkling et al., 2017; Light et al., 2014). Furthermore, TGI appear to be at increased risk of postpartum depression (Besse et al., 2020; Light et al., 2014). The desire to carry a pregnancy has been described to enhance gender-questioning in TGI, since, in most cultures the ability to produce offspring is solely perceived as feminine (Charter et al., 2018). Physical changes, e.g. body shape, either induced by pregnancy and/or by the cessation of testosterone use when pursuing pregnancy, can trigger gender dysphoria (Charter et al., 2018).

Furthermore, transgender individuals may also experience stressors in healthcare settings, as some healthcare providers (HCP) may show subtle or unintentional, but nonetheless marginalising, behaviour towards minorities (Falck et al., 2020; Nadal et al., 2016). These so called micro-aggressions may affect mental health adversely (Falck et al., 2020; Nadal et al., 2016). As a result, transgender individuals may avoid seeking adequate medical care or disclosing relevant medical information (Grant et al., 2010).

Psychological stress during pregnancy may not only bear negative consequences for the gestational parent, but also for the child. Elevated levels of anxiety during pregnancy are associated with a higher chance of (spontaneous) preterm labor, lower birth weight, being small for gestational age and a smaller head circumference (Grigoriadis et al., 2018; Martini et al., 2010). A large body of evidence now suggests that stress during pregnancy (by psychosocial, cultural and environmental stressors) might produce lasting effects on behavioral and neurocognitive development, and on cardiometabolic disease risk among the offspring (Bush et al., 2020; Coussons-Read, 2013; Manzari et al., 2019; Thayer et al., 2018).

While efforts have been made to improve gynaecological care for transgender men, research and guidelines regarding pregnancy, labour and postpartum care for transgender men are scarce (American College of Obstetricians and Gynecologists, 2011; Obedin-Maliver and Makadon, 2016).

In this study we explored the experience of transgender men in family planning, pregnancy, childbirth, puerperium and perinatal care, to identify which hurdles transgender men have overcome, and to identify their needs in obstetric and reproductive care. Our study is the first to investigate the experiences of TGI in regard to conception, pregnancy, childbirth puerperium, and in perinatal care in the Netherlands. Elaborating on these experiences may help to tailor patient-centred, gender-inclusive and accessible healthcare, which would be beneficial for the mental and physical health of TGI and their offspring.

## Methods

In this qualitative study we conducted semi-structured interviews to explore in-depth how transgender men (someone who's sex assigned at birth was female, but identifies as male) experience family planning, pregnancy, childbirth, puerperium and perinatal care. All data were collected between September 2020 and January 2021.

### *Study participants*

For this qualitative interview study we aimed to recruit all individuals known to have been pregnant and that visited the Center of Expertise on Gender Dysphoria at the Amsterdam University Medical Centers, the primary and biggest expertise center for gender dysphoria in the Netherlands. As incidence of eligible individuals was very low, they were well known and identified by members of the clinical team. For this first qualitative assessment of transmasculine pregnancy there within our center there was no public recruitement performed. Individuals were eligible for the study if they had been pregnant after social transitioning, and had had a live birth in the past 5 years. Further eligibility criteria included: female sex assignment at birth, gender identification on the transmasculine spectrum prior to pregnancy, ≥18 years of age during the study, and language proficiency of Dutch sufficient for an in-depth interview. All eligible individuals were initially approached by a member of the clinical team and were asked for verbal informed consent to be approached by one of the independent researchers for participation in this study. The verbal informed consent was recorded in the electronic patient file. Subsequently the researcher sent the informed consent form and an information letter to the possible participant and, if they consented, made an appointment for the interview. At any time there was the option for the participants to withdraw their informed consent.

### *Data collection*

We used semi-structured interviews for data collection to allow detailed exploration of participants' experiences regarding family planning, pregnancy, childbirth, puerperium and perinatal care.

All interviews were conducted during the global COVID-19 pandemic. Hence, all interviews but one, were conducted through the remote-conferencing software program ZOOM by the primary author. One physical interview was conducted, but COVID-19 related restrictions were guaranteed.

Each interview started with a general introduction about the aim of the research and participants were informed their data would be kept classified and that anonymity would be guaranteed. Subsequently, the following topics were discussed: their wish for children, their wish to carry a pregnancy, their mode of conception, their gender identity, the phase of transition they were in before pregnancy and the steps they undertook to transition after pregnancy, how they experienced conception, pregnancy, childbirth and parenthood, and their experiences in perinatal care.

The interviews lasted between 40-60 minutes and were recorded and transcribed verbatim by the primary author. We aimed to recruit patients until theoretical data saturation was reached or until no new eligible cases were available (Dworkin, 2012; Thomson, 2010). Interviews were coded and analysed before the next interview was conducted (Boeije, 2002).

*Analysis*

Interviews were coded using the qualitative analysis software Atlas.ti. Since information on this subject is scarce, grounded theory methodology (Strauss and Corbin, 1994) was employed and inductive approach was used to find patterns and collect data from the participants' narratives. A constant comparative method was used to analyse interview transcripts (Boeije, 2002). Firstly, the primary author used open coding to code all transcripts chronologically on interview date. When new codes emerged after coding of every subsequent interview, previous coded transcripts were reread and recoded when necessary. After open coding axial coding was applied to identify connections between codes and determine broader categories. Finally selective coding was applied to identify subthemes among the codes and capture the essence of our study. After finishing coding all interviews, two interviews were checked by a second researcher to ensure consistency. The differences that arose were discussed and codes were reassigned by consensus. The final code set that emerged was applied to all transcripts.

Data analysis was conducted by the primary author, who also selected representative quotes. The selection of representative quotes was then discussed within the research team. The final selection of quotes was translated to English by the primary author in co-operation with an independent researcher and native English speaker, to ensure that no information would get lost during translation. To ensure participant anonymity selected quotes are presented without a reference to the participants. Due the design of the study and inherent small sample size, we will refrain from quantification in percentages in the result section.

## Results

Of the seven eligible individuals identified, one was untraceable and one did not consent to participation. Therefore, five individuals were included in this study. Participants' ages at interview ranged between 23 and 35 years. They gave birth between 2017 and 2020 and were 20 to 32 years old at delivery. All participants used the pronouns he/him. All participants were AFAB, one participant affirmed their genderas non-binary, the other participants affirmed their gender as male. A summary of personal and reproductive characteristics is shown in Table 1.

*Themes and subthemes*

Subthemes that were identified through data analyses were aggregated in six major themes, four themes that reflect the different phases and areas TGI have to navigate towards gestational fatherhood that were explored during the interviews (i.e. From reproductive intent to conception, Pregnancy, Puerperium and parenthood and Perinatal care), and two transcending themes (i.e. Informal support and Barriers in logistics and facilities). An overview of the different themes and subthemes is given in Table 2.

*From reproductive intent to conception*

*Reproductive wish and gender incongruence*

In our study all pregnancies were planned by the participants. Nevertheless, the wish to carry a pregnancy was not something every participant had desired since childhood. Two participants elaborated that the idea of carrying a pregnancy was something they desired from an early age, but for others bearing a child felt like a necessary step in order to fulfil their wish to parent a child. Our participants described varying perspectives on the relationship between pregnancy and their masculine gender identity as illustrated by the following quotes.

"It did not take me long to come to the understanding that the desire to have children is neither male or female. There are also men who are born as men and who also wish to have children. And to me it was almost self-evident that I would carry the pregnancy myself. I didn't like the idea of asking a surrogate mother. Because I think that, during pregnancy, you develop a very important bond with your child."

"I managed to separate the two. My identity is who I am and what I feel like is that I am a boy. And I happen to have a body that is able to bear a child."

"In the beginning, when I started to realize that I was transgender, it was already confusing. The confusion stemmed from the fact that I both had the desire to have a biological child, and at the same time wanted people to see me as a boy, like any other boy."

*Pursuing pregnancy and prioritizing pregnancy over transition*

Participants expressed feeling conflicted about disclosing their wish to carry a pregnancy to HCP during their medical transition. They feared that discussing their wish for a pregnancy would mean their eligibility for transition would be delayed, reconsidered or even rejected, as they feared HCP would interpret their wishes as inconsistent with gender dysphoria. Participants described these fears had indeed led to non-disclosure of this issue.

"I was so set on my transition that it was all that mattered, and I knew very well what my gender transition team needed to hear from me […] I didn't want my transition to be influenced or delayed by discussing things like my wish to carry a pregnancy. I was afraid that would make them think that I was not feeling "trans enough" to start my transition. Honestly, I don't quite remember whether at that point in my life I already had decided I would want to be pregnant myself. No, if I think about it, at the time I was just focused on reaching my goal, starting testosterone and having a mastectomy."

The fact that participant's views on future pregnancy had never been actively explored by HCP prior to transition was described to have led to the participants only considering the implications of a hysterectomy in terms of losing their ability to carry a pregnancy at a late stage of their surgical transition.

"Two weeks before I was planned for a hysterectomy, I was buying baby clothes with my pregnant sister. All of a sudden the though occurred to me: "Wow, I am never going to do this for myself". Of course, there are other ways of having children, but… it all made me feel strange. I had never really thought about the consequences [of the operation]. So I canceled the operation and left it at that for the while."

When disclosing the wish to become pregnant, some participants described they received insensitive reactions from HCP, as for instance HCP vocalized that they perceived a male gender identity and the wish to carry a pregnancy as incompatible. This caused participants to feel vulnerable and unsafe, ultimately (temporarily) curtailing transition related healthcare.

"For me it was very painful, because I was feeling very vulnerable at that time and was still exploring what I wanted. I felt dependent on the institute, which held the power over something I really wanted. [The HCP's] reaction was very hurtful to me: it scared me and felt a real set back. Which made me feel even more locked up and made me think: "okay, this is not the place where I should be. This does not feel safe."

**Table 1**
Characteristics of participating transgender men who carried a pregnancy.

| | | Number of participants (n=5) |
|---|---|---|
| Age at interview (y) | 29 ± 4,8 | |
| Age at first delivery (y) | 26 ± 5,1 | |
| Number of pregnancies | 1 | 4 |
| | 2 | 0 |
| | 3 | 1 |
| Number of deliveries | 1 | 4 |
| | 2 | 1 |
| Sex and gender identity partner | Cisgender woman | 2 |
| | Transgender woman | 1 |
| | Cisgender man | 2 |
| Transitioning pre-pregnancy | None | 2 |
| | Mastectomy | 1 |
| | Mastectomy and testosterone | 1 |
| | Testosterone | 1* |
| Mode of conception | Penile-vaginal conception without medical treatment | 2 |
| | Self-insemination with acquainted sperm of acquainted donor | 1 |
| | Intra uterine insemination sperm bank donor | 2 |
| Mode of delivery | Vaginal | 3 |
| | Caesarean section | 2 |
| Transitioning postpartum | Mastectomy and testosterone | 2 |
| | Testosterone | 3 |
| Chest feeding | Yes | 1 |
| | No | 4 |

* After first delivery

**Table 2**
Overview of themes and subthemes.

| Theme | Subtheme |
|---|---|
| From reproductive intent to conception | • Reproductive wish and gender incongruence<br>• Pursuing pregnancy and prioritizing pregnancy over transition<br>• Conception |
| Pregnancy | • The experience of being pregnant<br>• Coping with negative feelings and experiences in pregnancy<br>• Childbirth |
| Puerperium and parenthood | • Transitioning into parenthood<br>• Lactation |
| Perinatal care | • Care provider choice<br>• Positive health care experience<br>• Negative experiences attributed to health care |
| Informal support | • Support<br>• Role models |
| Barriers in logistics and facilities | |

Participants described that they deliberately chose to prioritize pregnancy over (medical) transitioning. The majority of participants refrained from the use of testosterone prior to their first pregnancy in fear of negative effects on fertility and pregnancy outcomes. Some participants found it hard to access the right information in regard to the effects of testosterone on fertility and mentioned that HCP often lacked the tools to adequately guide them.

The decision to prioritize pregnancy was often perceived as a burden, as they felt the strong desire to transition and felt that they had to put their own desires in second place.

"It was actually very difficult to continue with the inseminations and put myself in second place. I wanted to shout it out to everyone: "I want to be a man!" But instead I had to wait until after I had been pregnant. At least, if I was to have a child. It almost made me give up."

### *Conception*

Participants were in a range of different relationships (i.e. with cisgender men, transgender women or cisgender women). The mode of conception differed according to the possibilities within their relationship (see Table 1).

Some participants struggled with the fact that they were not able to conceive naturally with their partner, as they had the wish to have a biological child with their partner. In addition, conceiving through insemination was often perceived as an unpleasant medical intervention that was necessary to fulfill their gestational wish. Inseminations were experienced as stressful for logistical reasons, but could also trigger feelings of gender dysphoria, as they required genital exposure to HCP.

## Pregnancy

### *The experience of being pregnant*

For four out of five participants, pregnancy was a period of conflicting feelings. Some participants described the changes in their bodies and their possibility to bear a child as magical. Nevertheless, growing hips, feminization of the face and rounding of the body was often experienced as confronting and enhanced gender dysphoria. In one participant, who had undergone a mastectomy prior to pregnancy, the breast tissue that had not been re-

moved near the axillary region started growing which induced dysphoria as well. Furthermore, some participants used testosterone prior to pregnancy and described enhanced gender dysphoria after the cessation of testosterone due to feminization of the body with a different fat distribution and a diminishing amount of facial hair.

As a result, participants reported having tried to hide their changing body shape by wearing oversized shirts and had avoided looking in the mirror. All participants described that they presented themselves as male to the environment during their pregnancies. Due to these physical changes, individuals were more often misgendered by the environment. Nevertheless, they did not actively adopt strategies to influence their self-presentation to the outer world. Being addressed as a woman was often perceived as a negative experience, although the impact of this negative experience differed between participants and for some participants it was easy to let these feelings slide.

The physical changes instigated a turbulent phase described by many participants; navigating through a world where they were either unseen as a pregnant man, or were afraid of negative attention from the environment/confrontation had they been identified as a pregnant man, or were unseen as a man and simply perceived as a pregnant female.

"I didn't mind the pregnancy itself. What did bother me was that, in the hospital waiting room [of the obstetric outpatient clinic], people started addressing me as Madam instead of Sir. I looked pregnant. When I was waiting in the outpatient clinic and they called me in to measure my blood pressure, they said: Miss X. It would take me a second to realize: 'Oh that's me!' And I could feel people staring, as I was sitting there with my wife. People tended to start talking to her instead of me and I had to say: 'But it's me who is pregnant'."

"The fact that my body was changing made it hard for other people to see me as a pregnant man. Also because I had never started testosterone. My voice was high. People who didn't know me perceived me as a pregnant woman: maybe a rather masculine woman, not the standard pregnant woman. That was hard for me. For me it was a period in which I felt invisible."

Though the majority of our participants described their pregnancies as tough, with feelings of enhanced gender dysphoria and feelings of isolation, all participants also expressed that pregnancy was a unique positive experience and felt proud.

"I thought: 'At last, I am pregnant!'. And I felt proud being pregnant whether I am a pregnant man, woman or something in between- it shouldn't make any difference. I am proud to be carrying a child. Yes. I was just proud."

"I definitely wouldn't have wanted to miss it. And I'm not only talking about the pregnancy, but also about my baby. It suited me very well and I also felt very… I actually didn't suffer much from dysphoria. Or actually not at all."

Interestingly, one participant who gave birth twice after transition, noted that the experience was very different for each pregnancy. With the first pregnancy he was very concerned about the opinions of his environment, but with the second pregnancy he was able to let go and enjoy it more.

He attributed this to the fact that he felt much more comfortable in his body and more self-accepting. In addition, the strong feelings of dysphoria in his first pregnancy were less prominent during his second pregnancy.

One participant who had a relationship with a transgender woman described mixed feelings, as it was his partner who had a strong gestational wish, but biologically was not able to carry a pregnancy.

"I am [pregnant], but I don't want to be, I want her to be [pregnant], but she can't be. So it was really complicated."

*Coping with negative feelings and experiences in pregnancy*

Participants adopted different strategies of coping with the negative feelings they experienced during pregnancy. Strategies mentioned were disconnection of pregnancy and identity and ignoring being pregnant, isolating to avoid negative interactions with the environment and feeling less self-conscious in social interactions, and clinging to the idea that they would finally be able to start their medical transition after giving birth.

"At times when I felt shitty I just thought to myself: 'So be it'. Because after [the pregnancy] it will be my turn and that was such an incentive for me. Get through the pregnancy and then it will be me. Finally me."

During pregnancy it felt like my body was a vessel, doing what a body can do to make a baby. I thought: the baby will come out and then I will be a daddy. And I didn't really… It sometimes bothers me that I didn't make an effort to consciously experience my pregnancy."

*Childbirth*

Feelings in regard to their delivery varied among participants. Some participants described it as being 'just part of the process', but other participants described anticipated and experienced struggles. Exposure of genitals and gynecological examinations often were dreaded. Our participants described that the exposure of their genitals and the intimate investigations were triggers for feelings of gender dysphoria. Staff were reported to have been instructed well, to have showed understanding and to make an effort to limit internal examinations to the bare minimum and only essential investigations. For some participants a vaginal delivery was not always a realistic option, due to the negative effect on their gender dysphoria.

"I really wanted a natural childbirth, but I didn't like the idea of people seeing my genitals at such a vulnerable moment. It looks different down there after testosterone…. the clitoris is bigger for instance. I didn't like the idea of people seeing that. And I know what it's like in hospital settings: they chat about things that are different or special over lunch. And I was afraid that my genitals would be discussed during a coffee break. It was hard for me to let go of that thought."

"I mentally prepared myself for the fact that I was going to have a natural delivery. But if you ask me how I really felt, I had to be honest that I did have some concerns. What would it be like for me and, especially in the healing process after childbirth, and whether that might stand in the way of the bond between me and the baby. I was very honest about that [to HCP], that this was a concern for me."

The majority of our participants discussed the mode of delivery prior to delivery with their HCP. Participants felt that HCP expressed understanding and flexibility had they opted for cesarean section. Participants who decided to deliver vaginally often were reassured by the idea that, if they really needed it, they could always choose a caesarean section.

"I had really just hoped that I would be able give have natural childbirth and that it would feel okay for me. But I was also very glad, and it gave me a lot of peace of mind, to know that I could change my mind [and choose for a cesarean section] if necessary."

For one participant, arrangements had been made for a term cesarean section, but as contractions commenced prior to 37 weeks of gestation the decision was made to pursue a vaginal delivery. However, after he experienced vaginal delivery was a significant trigger for gender dysphoria, the decision was made to convert to a cesarean section.

## Puerperium and parenthood

*Transitioning into fatherhood*

Becoming a gestational parent was a big milestone for all our participants, expressing pride and joy.

Gestational parenthood was experienced in various ways. Most participants described that they felt like a father to their child and that having endured pregnancy and childbirth without having feminine feelings was confirmation of their masculine gender identity, and a confirmation for the wish to medically transition. Nevertheless, one candidate described that parenthood instigated genderquestioning, as he experienced very "motherly" protective feelings that he felt were not in line with his male gender identity.

"The hardest part for me was actually after childbirth, because that was the moment I got really confused. Who am I? Am I am woman or a man? There was just such a mix of hormones. […] At one point I realised I was a lioness. Like a lioness, I was protecting my child. I wouldn't even let my partner near my child. I wouldn't let anyone touch my baby and that was a really difficult period for me. I was often holding my child all by myself. I felt emotional and very confused about myself. […] It took four weeks, before I finally felt: 'Okay I really do want to be a man after all.' When it came, the feeling was twice as strong as it had been before. I thought: 'Yes, I can finally go ahead with this'."

Most participants (re)started the use of testosterone within a half year after delivery. Expressing feelings of liberation, as they finally had the chance to be who they wanted to be. After delivery our participants were often perceived as gestational mothers by the environment, but the vanishing of pregnancy adaptions to the human body and the initiation of testosterone resulted in them being seen as a father.

"Now I am visibly becoming a dad, which is different from just being 'formally named' as the father."

Nevertheless, some participants also vocalized they experienced some negative feelings after transitioning. They described that they felt that they "lost their queer identity" and or felt invisible as a gestational parent and having to elaborate to the environment about them being the gestational parent.

"Now that I appear more and more masculine, people perceive us as a mom and dad. Which is very nice, but also feels a bit strange as it erases part of my queer identity. It is hard, because people now assume that [my girlfriend] carried the baby. We are perceived as a straight couple, which doesn't necessarily match our own experience. People will ask my girlfriend 'inside information' about pregnancy and she than says: 'I don't know. I made my husband do it!'"

"A different kind of invisibility arrises, because people don't stop to consider that I may have carried our child. There will always be a certain invisibility to my identity. But I am getting used to it."

*Lactation*

There was a variability in participants being physically and mentally able to chest feed (i.e. a gender-neutral term for breastfeeding). In our study the majority of participants expressed that they refrained from chest feeding, as they often perceived this as a trigger for gender dysphoria. Two participants had undergone a mastectomy prior to pregnancy, which made chest feeding unavailable to them. A participant described that, despite having undergone a mastectomy, he did experience swelling of chest tissue and therefore used lactation suppressing medication. He had a mastectomy at a young age, not fully grasping the consequences it would have for his ability to chest feed in the future, and now regretted not being able to chest feed his child. Two participants who had not undergone a mastectomy prior to pregnancy suppressed lactation by either using lactation suppressing medication or wearing a binder. One participant was able to chest feed. He delivered twice and described that he was not able to chest feed his first child due to gender dysphoria, but was able to chest feed the second child as he felt more comfortable in his body.

Since some of our participants were not able to chest feed, but did desire the beneficial effect of human chest milk they tried to access the Dutch Human Chest Milk Donor Bank. Their claims were denied, much to their regret, as donor milk was only made available through the Milk Donor Bank to preterm babies.

## Perinatal care

*Care provider choice*

Health care settings for perinatal care and HCP choice varied within our participants. The narrative of one of our participants emphasized that not all HCP feel comfortable in providing perinatal care to TGI. One participant was denied perinatal care by an obstetrician in a hospital in his vicinity, as this obstetrician felt they had insufficient knowledge and experience to support him. Other participants were provided antenatal care by HCPs (i.e. first line midwive or gynaecologist in hospital not related to CEGD) with little experience with TGI, but who were nonetheless open to providing care. Postpartum care was provided by HCP with no experience with TGI, but were experienced as open and willing to learn.

Some participants were provided perinatal care (partly) by the gynaecologists of the Center of Expertise on Gender Dysphoria in Amsterdam (CEGD). This was considered a positive experience, because it did away with the need to explain their identity and they felt care was more tailored to their needs. CEGD was not accessible for perinatal care for all our participants, due to distance.

*Positive health care experience*

Overall participants described more positive than negative experiences in perinatal care.

According to participants it was important to feel seen and heard by HCP, and to receive acknowledgement that their wish to carry a pregnancy was not abnormal or inconsistent with their masculine gender identity. Though not all HCP had knowledge of transgender health, they often did their best to educate themselves and their colleagues and informed colleagues and facilities about the participant prior to their arrival. Participants expressed that HCP were often perceived as open for feedback, willing to learn, listen to the needs of the participants and respected them.

"[My gynaecologist] sent every research paper she could find about pregnancy in transgender men to the obstetricians and nurses on the obstetric ward, and asked them to read them. She told them that they might be of use in case they happened to be on call [the day I was going to deliver], and if not, they could forget all the information again."

"But again, [the gynaecologist working for the CEGD] called [the other hospital] and informed them about me, which I really appreciated. She saved me a lot of work actually. I am so used to having to be the one to inform everybody, and I was very grateful for her doing this for me."

Participants described how HCP tried to be creative to create a safe environment for them. By for instance, refraining from unnecessary physical examinations, being open for discussion about the mode of delivery and by enquiring information about the labeling of body parts and preferred pronouns. One participant described

how his HCP even invited him to the outpatient clinic prior to office opening hours to ensure he did not have to be confronted with a waiting room full of pregnant cisgender women.

"[She discussed with me] what my options were. A good example is that she told me that you can opt for a cesarean section you feel that is what you need. And that it was okay for me to say so. Things like that, and the fact that she herself raised them, really made me feel safe to elaborate on what I needed without having the feeling that I was asking for special VIP treatment. […]She really gave me the feeling that she was listening to my needs, by telling me these things."

*Negative experiences attributed to health care*

Though the experiences of all our participants in health care settings were predominantly positive, they also were confronted with negative experiences during their pregnancy. These negative experiences were often attributed to a lack of cultural competence among HCPs and a lack of knowledge and tools to provide adequate perinatal care. This was manifested by HCP using wrong pronouns, misgendering participants and lacking adequate awareness of their specific needs.

Our participants described that some well-meant and tailored care and behavior was experienced negatively. For instance, participants described that HCP tried to inform them about the struggles and changes that might lie ahead when pursuing pregnancy (i.e. feelings of isolation and enhanced gender dysphoria). Though most participants felt this information was helpful, some participants expressed that they felt overwhelmed by the information and that the information caused feelings of anxiety. Furthermore, participants expressed that HCP sometimes emphasized that transgender male pregnancy was special and unique, for example, one participant was called a pioneer. Our participant expressed that this instigated the feeling of erasure of pregnant transmasculine individuals in the past.

**Informal support**

*Support*

Participants valued adequate support from their partner, friends, family and their environment when pursuing pregnancy. One participant described that he and his partner originally refrained from having children, as, though they had a loving and supportive family, their environment did not feel sufficiently safe and supportive. But with growing support from his community and more acceptance of them being transgender individuals, they finally dared to think about starting a family.

"[Me and my partner] met each other when I was still a woman and she was still a man. At that time and place it was extremely hard to be in a relationship like ours. We decided to not have children at that point, because everywhere we went, we were laughed at. We decided that we couldn't do that to our children."

When disclosing their pregnancy (intention) to individuals outside their immediate network, i.e. colleagues, family members and acquaintances, our participants received varying reactions. Though most reactions were positive, sometimes they had to deal with a lack of understanding. Participants described how some people close to them struggled to understand why someone AFAB who affirms their gender as male would pursue pregnancy, as they perceived pregnancy as a feminine thing. Participants in a relationship with a cisgender female experienced responses of misunderstanding, as it made more sense to outsiders for the cisgender female to pursue pregnancy. Furthermore, for most participants it was often perceived as a tiresome period, since people had a lot a questions and needed a lot of explanation.

"I was 6 weeks pregnant when I told everybody I was pregnant, I just couldn't keep it to myself anymore. And everybody was like: 'Wow, you are pregnant? Not your girlfriend?' I answered 'No, I am pregnant'. And then they said 'That's really cool. So nice that it's all possible.'"

"I had the feeling that of coming out all over again. But now I was coming out as being pregnant and transgender. So I went through the whole process again."

*Role models*

Participants often experienced a lack of role models when growing up, particularly transgender individuals pursuing pregnancy. For our participants Thomas Beaty was experienced as a big milestone. Being the only visible non-cisgender pregnant individual in the media at that time.

"I came across a book written by Thomas Beaty, an American man, who has written a book about his pregnancy. And it was very enlightening for me. I thought: 'Okay, so it is possible and this is what it looks like.' I literally had an image and I felt strengthened by that."

"I did not hear any other transgender men being open about pregnancy at that time. Of course, there must have been some, but I did not see them and they were not visible in the media."

To find information about pregnancy, our participants sometimes resorted to online platforms. Due to the scarcity of platforms for transgender men sharing pregnancy experiences, one participant resorted to platforms for pregnant cisgender women. One participant found an online international forum for transgender individuals in regard to pregnancy, but struggled to identify with the people on the forum.

After their own pregnancy our participants were often approached by young trans masculine individuals for advice and to express their appreciation as them being out and open about their pregnancy empowered the young individuals.

**Barriers in logistics and facilities**

Our participants described that it was often experienced as a struggle to find the right information and to access the right facilities. For instance, information about the influence of testosterone on fertility or what legal steps are necessary to ensure legal shared parental custody were not always readily available.

One participant described that difficulty arranging postpartum care, as he was legally a man and the insurance only provided coverage for postpartum care to women.

Also, since not all individuals had the possibility or wish for spontaneous conception, they felt obliged to start a fertility treatment. Fertility treatments often had a long waiting list or were expensive if participants resorted to private clinics.

"In hindsight planning everything was very difficult, because you have to arrange something that you desire so strongly in a very clinical way."

Furthermore, participants expressed that identifiable content was lacking and they often had to resort to information and facilities that are not adapted to their specific situation. For example, they mentioned that most fertility, pregnancy and childbirth facilities address pregnant women and their male partners and are focused on cisgender women, with heteronormative information often less suitable for transgender individuals and people in a non-heterosexual relationship.

Moreover, pregnancy items, such as maternity clothes are perceived as very feminine by our participants. Our participants expressed their reluctance to buy these items, and kept wearing their own non-pregnancy clothes until they wouldn't fit anymore. It was

often experienced as a big challenge to find pregnancy clothing they felt comfortable in.

"It is almost as if a woman becomes a huge princess when she is pregnant. All those pregnancy clothes are very feminine. I think a lot of women wouldn't even think about looking like that."

"[I was trying on pregnancy clothes in a store] and I had my shirt off and the store clerk came to hand me something. She pulled away the curtain a little bit and saw my chest, my flat chest, and my belly and she was very shocked. She probably thought that I had suffered from breast cancer or something like that. It was an extremely uncomfortable moment for her, but also very confronting for me. It did not feel right to be in that changing room. It made me realize that that world, [of pregnancy facilities], is not made for me at all."

## Discussion

In this study we explored how transgender men experienced family planning, pregnancy, childbirth and the postpartum period, and perinatal care through semi-structured interviews.

Most of our participants described an overall positive, but widely varying experience from preconception to parenthood. Nevertheless, their narratives underline that in order to pursue gestational fatherhood transgender men have to navigate a cis-normative world and overcome many hurdles on their way. Since in an increasing number of countries sterilization is no longer a prerequisite for gender transitioning, and reproductive rights and options for transgender individuals are evolving (Transgender Europe, 2021), gestational parenthood is a viable option for transgender men. Nevertheless, the historical idea of infertility as a prerequisite for gender transitioning still has its repercussions, as it reinforces the belief that pregnancy and being a transgender man are mutually exclusive.

Our findings endorse previous research, highlighting transgender men comprise a specific group in obstetric health care (Besse et al., 2020; Ellis et al., 2015; Hoffkling et al., 2017; Light et al., 2014). Consistent with findings from other studies, we found that transgender individuals may withhold their desire to pursue pregnancy in fear of being refused transition or that it may delay their transition (Falck et al., 2020). Moreover, vocalizing their desire to bear a child was sometimes met with negative responses by HCP, as it was perceived incongruent with masculine identity, and caused TGI to withdraw from gender specific care.

TGI may become pregnant at different stages of their social, medical and surgical transitioning. Since some transition goals and options may impede future fertility, our findings support counseling on fertility options and fertility preservation should take place prior to gender transition (Coleman et al., 2012; American Society for Reproductive Medicine, 2021)

In the current legal context in The Netherlands childwish and fertility are no longer subject of relevance in the adjustment in legal gender in official documents. However, when people AFAB who identify as non-binary or male and have legal status confirmed, give birth to a child they will still be registered as mother on the birth certificate of the child. Currently some legal requests are being prepared which apply for the notification as 'parent' on the birth certificate of the child. In the UK, the McConnel case got international attention in 2021 when he was denied to be registered as a father of his child by the European Court of Human Right. Future development in this area is awaited.

Despite increasing attention to gender diversity in mainstream media, HCP may lack knowledge, training and therefore may be unaccustomed for the care of transgender and gender diverse individuals (Bockting et al., 2013; Falck et al., 2020; Johansson et al., 2020). However, the experiences with HCP in perinatal care that emerged from our participant's narratives reflect predominantly positive experiences and the will of HCP to acquire gender specific knowledge, though negative reactions, incomprehension and the lack of right tools for gender inclusive care were not uncommon.

In our study all participants often (had) sought care in the CEGD at the Amsterdam University Medical Centers, location VUmc, which offers integrated multidisciplinary care for people with gender dysphoria of all ages in one institute. Though the CEGD is the primary and biggest gender identity clinic in the Netherlands, TGI may seek gender related care elsewhere or not at all, and may become pregnant prior to accessing gender related healthcare services. These individuals may not have access to gender educated providers in perinatal care. Hence it is important that guidelines are developed nationwide to help HCP guide transgender individuals pursuing pregnancy and to refer them to the right platforms and information if necessary.

The understanding in most cultures that the ability to carry a pregnancy is perceived as solely feminine (Charter et al., 2018) evoked feelings of gender dysphoria, and the perception of "feminizing" bodily changes induced by pregnancy. Our findings underline results described by previous studies highlighting the different perceptions of pregnancy among transgender men, that also highlight feelings of loneliness and isolation during pregnancy as overarching themes. (Besse et al., 2020; Charter et al., 2018; Ellis et al., 2015; Hoffkling et al., 2017; Light et al., 2014) Our participants describe feeling unseen and unheard throughout pregnancy, either willingly isolating themselves out of fear of negativity and incomprehension from outside or due to shame and dysphoria for their changing bodies.

Though none of our participants described a post-partum depression (PPD), our findings and previous international research suggests that TGI are an important risk group for peripartum depression due to enhanced gender dysphoria (Besse et al., 2020; Light et al., 2014). PPD affects 10-20% of individuals after having given birth (Beck, 2001; Ko et al., 2017). Since baseline depression and suicide rates are higher in TGI than in the average population (Bockting et al., 2013; Parr and Howe, 2019; Rotondi et al., 2012; Veale et al., 2017) and achieving pregnancy and childbirth are potential periods of high distress, increasing gender dysphoria and isolation for TGI(Ellis et al., 2015; Hoffkling et al., 2017; Light et al., 2014; Riggs et al., 2016), TGI also comprise an important vulnerable group. Therefore awareness of HCP about the increased risk of peripartum depression and adequate anticipation on early signs is warranted.

The HCP that are mentioned in our participants' narratives openly counseled the participants about the mode of delivery. As a vaginal delivery may be a trigger for gender dysphoria, adequate counseling of TGI in regards of the mode of delivery may be beneficial. Though in cesarean section there are surgical risks, current and previous research (Charter et al., 2018; Ellis et al., 2015) illustrates that a vaginal delivery may have a negative impact on the mental health of the gestational parent and may possibly even have a negative impact on the parent-child bonding.

The motivation and possibility for transgender men to chest feed varied. In our study some participants had undergone mastectomy before pregnancy and hence the physical possibility to chest feed, but refrained from doing so. The growing pregnant chest and the perceived femininity of chest feeding often was too confronting and an anticipated trigger for dysphoria, as described similarly in other studies (Charter et al., 2018). But some transgender men, as was one participant in our research, did feel comfortable chest feeding (MacDonald et al., 2016).

In our study we perceived that TGI are aware of the health benefits of chest feeding, but often were not able to. In order to provide TGI a chance for chest feeding, it is important to adequately counsel TGI about lactation when individuals consider

chest surgery or the continuation or start of the use of testosterone after pregnancy. It is important to take into account that TGI may benefit of the use of testosterone, but elevated levels of testosterone have been shown to suppress lactation. Though, testosterone does not significantly pass through to human breast milk and there are no short term effects on infants, the long term health effects on infants remain unknown (Glaser et al., 2009; Health; Oberhelman-Eaton et al., 2021).

Furthermore, TGI should be informed that medical suppression of lactation postpartum is possible if desired. Some transgender men who carry a pregnancy may experience undesired chest growth and/or lactation even after chest reconstruction, and they should be forewarned about this and supported in suppression of lactation if desired (MacDonald et al., 2016).

HCP should offer preconception advise for TGI with a gestational wish to provide adequate information about TGI's expectations, anticipated struggles and needs, to adequately prepare them for what's to come, and to sufficiently assess risk factors for psychological distress and obstetric complications. For instance, TGI should either be referred to a gender expertise center for preconception advise or can be performed through video consultation of the TGI and their own HCP with a HCP of a gender expertise center. This may offer TGI the opportunity for accessible healthcare and a safe environment to discuss their needs and barriers for perinatal care.

*Strengths and limitations*

Our study was the first to investigate the experiences of TGI in regard to conception, pregnancy, childbirth puerperium, and in perinatal care in the Netherlands. Furthermore, it contributes to the small, but growing, body of research on transgender perinatal care. Our participants highlight the need for gender inclusive health care services This study may therefore benefit the competency and behaviour of HCP and by that the mental and physical health of the female-to-male individuals on around the world.

Nevertheless, our study has some limitations. Since in the Netherlands up until 2014 infertility was required prior to legal transitioning, the prevalence of pregnancy in TGI is rising, but the number of TGI who have been pregnant is still very limited. Because the experiences of TGI in regard to pregnancy and the puerperium in the Netherlands were not investigated before, we performed an exploratory study in which we solely recruited TGI that visited the CEGD at the Amsterdam University Medical Centers and subsequently became pregnant. Therefore the population may not be completely representative for other clinics and our study may not represent the entire population of Dutch TGI who have carried a pregnancy and gave birth to a child. Future research should make an effort to include the general Dutch population of TGI, for instance by distributing the call for participants to the target population through flyers or social media, and collaborating with other health care providers.

In our study participants were initially approached by their treating physician and were asked for verbal informed consent to be approached by one of the researchers for participation in the study. Being approached by a member of the clinical team on one hand may have given participants a feeling of safety and trust, but on the other hand it could have made it difficult for participants to decline the request. However, after giving verbal informed consent, participants were approached by an independent researcher for final written informed consent, so participants did have the possibility rethink their choice to participate and to decline study enrolment. At any time in the process they had the option to withdraw their informed consent.

Moreover, we only included TGI who had carried a pregnancy. We cannot exclude our findings regarding preconception care and family planning could have differed if we had included participants who had undergone surgery prohibiting future pregnancies before having been in the position to consider their feelings about being pregnant themselves.

In qualitative research, an adequate sample size is reached if analysis indicates that no new themes emerge from the data and thus theoretical data saturation was reached (Dworkin, 2012; Thomson, 2010). However, due to our small number of eligible individuals, data saturation was not reached and recruitment was stopped when no new eligible individuals were available. Our small sample size also resulted in an inability to study the influence of racial, ethnic, and socio-economical diversity on the experience of TGI in regard to conception, pregnancy, childbirth and the puerperium.

However, our study represents an almost complete sample of all transgender men who had been pregnant in the Netherlands, which makes our study unique and of value. Future work could aim to explore more themes

*Recommendations for future research*

Research on perinatal care for TGI remains scarce and there are still important aspects that have to be explored. More insight is needed in the prevalence of pregnancy, early pregnancy complications and obstetric complications in TGI and their access to adequate aftercare. Moreover insight is also required about the influence of racial, ethnic, and socioeconomical diversity on the experience of TGI in regard to conception, pregnancy, childbirth and the puerperium. Future research should also focus on the effect of gender affirming treatment (i.e. testosterone and surgery) on pregnancy and reproductive outcomes, health of future offspring and lactation. Furthermore, the effect of obstetric HCP training in transgender healthcare on the experiences of TGI in perinatal care should be evaluated.

## Conclusion

Pregnancy is not only limited to cisgender women. TGI are getting pregnant. Our findings show the experiences of TGI in regard to the preconception period, pregnancy and puerperium vary broadly. TGI comprise a vulnerable group due to their increased intensity of gender dysphoria and isolation induced by pregnancy, making them more at risk of postpartum depression, but also because they experience possible barriers to equitable care. HCP are perceived as feeling unaccustomed for the care of transgender patients, as they are perceived to often lack the right tools and knowledge to provide adequate care.

Our findings help strengthen the foundation of insight in the needs and hurdles of TGI pursuing pregnancy and therefore may guide HCPs to provide equitable perinatal care, and emphasize the necessity of patient-centred gender-inclusive perinatal care.

Though research and information in regard to perinatal care for TGI remains scarce, we advise to develop a national guideline in regard to perinatal care for TGI and that HCP resort to gender expertise centers for questions and advise for gender-inclusive perinatal care. This will provide the opportunity for high quality and gender-inclusive care, that will benefit the mental and physical health of TGI and their offspring.

## Ethical approval

Ethical approval for this study was obtained from the institutional review board at the Amsterdam University Medical Centers, location VUmc in Amsterdam, prior to participant recruitment. This study was classified by the institutional review board at the Amsterdam University Medical Centers, location VUmc in Amsterdam,

as not requiring ethical approval in accordance to the Dutch Act on Medical Research Involving Human Subjects (WMO). Ethical approval number: 2020.354

This study has been carried out in accordance with the Declaration of Helsinki.

All study participants provided verbal and written informed consent for this study.

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## Declaration of Competing Interest

None declared.

## CRediT authorship contribution statement

**J.E. van Amesfoort:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Validation, Visualization, Writing – original draft, Writing – review & editing. **F.B. van Rooij:** Conceptualization, Data curation, Formal analysis, Methodology, Validation, Writing – original draft, Writing – review & editing, Supervision. **R.C. Painter:** Writing – original draft, Writing – review & editing. **A.W. Valkenburg-van den Berg:** Writing – original draft, Writing – review & editing. **B.P.C. Kreukels:** Conceptualization, Methodology, Resources, Writing – review & editing. **T.D. Steensma:** Conceptualization, Methodology, Resources, Writing – review & editing. **J.A.F. Huirne:** Conceptualization, Writing – review & editing. **C.J.M. de Groot:** Conceptualization, Writing – review & editing. **N.M. Van Mello:** Conceptualization, Methodology, Resources, Validation, Writing – original draft, Writing – review & editing, Supervision.

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