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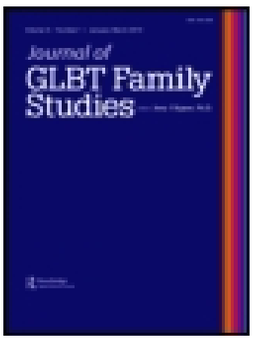

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Family Building Desires among a Sample of Transgender and Nonbinary Students

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ABSTRACT

Transgender and nonbinary (TNB) individuals may elect gender-affirming treatment that may affect their ability to have genetically-related children. The purpose of this study was to explore how the family-building goals of TNB college and graduate students shaped decisions about fertility preservation and gender-affirming care. Participants (N = 39) completed a phone interview and demographic survey about their experiences in higher education. Several themes developed as important in shaping TNB students' family-related desires, including gender-affirming treatment priorities, and partner and financial considerations. Therapists and medical professionals can support this population by expanding family planning counseling options and providing sufficient counseling on the effects of gender affirming care.

KEYWORDS

transgender; gender identity; qualitative research

Implications and contributions

Gender-affirming treatment priorities and partner and financial considerations developed as important in shaping family building and fertility desires of transgender and nonbinary college and graduate students. Therapists and medical professionals who work with transgender and nonbinary adolescent and young adult clients can support these individuals by exploring family building options with them, including fertility preservation methods.

Transgender and nonbinary (TNB) individuals may elect gender-affirming medical treatment that may affect the ability to have genetically-related children (Hembree et al., 2017; Maxwell et al., 2017). These treatments, which bring TNB individuals' bodies closer to their identified gender, may include hormones (e.g., estrogen, testosterone) or surgery. ("Guidelines for the Care of Lesbian, Gay, Bisexual, and Transgender Patients," 2006; Coleman et al., 2012; Hembree et al., 2017) Counseling regarding potential effects of these treatments on fertility and information regarding fertility preservation is recommended by several professional organizations("Access to Fertility Services by Transgender Persons: An Ethics Committee Opinion," 2015; "Committee Opinion No. 685: Care for Transgender Adolescents," 2017; Hembree et al., 2017). The permanence of the effects of estrogen or testosterone on fertility is just beginning to be the subject of research. The long-term treatment of estrogen affects the reproductive organs, although some transgender women continue to produce gametes (Jindarak et al., 2018; Schneider et al., 2015). Among transgender men, many have

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been able to achieve pregnancy following testosterone use (Light et al., 2014), suggesting that hormone use may not permanently affect fertility in these individuals.

Prior research focused on TNB individuals has predominantly explored potential fertility in TNB youth prior to medical transition (Chen et al., 2017) or pregnancy experiences of TNB adults (Chen et al., 2017; Jerardi et al., 2017; Light et al., 2014; Nahata et al., 2017; Obedin-Maliver & Makadon, 2016; Tornello & Bos, 2017). Some research has gone beyond fertility related to medical transition to consider desires for family building more broadly. A mixed method study of TNB adolescents and their families found that these youth and their caregivers and siblings described family building desires as shaped by factors on multiple levels, including reproductive identity, familial and community expectations about family building, and sociopolitical factors (Stark et al., 2021) A qualitative study of transgender adults examined how they conceptualized becoming parents and options for how to achieve those parenting goals (Tornello & Bos, 2017). An additional quantitative study examined demographic characteristics of 160 TNB adults with a range of parenting desires (Riggs et al., 2016). In that study, 18% of participants desired to have children in the future, 53% did not desire to have children, and 29% were unsure. Participants who desired to have children were younger and more likely to have support from their family of origin, compared to participants who did not desire to have children (Riggs et al., 2016). A recent study of transgender teens and young adults along with their parents found that the majority want fertility preservation options to be discussed by their medical team who provide gender care (Quain et al., 2020). This must be done with care, however, as TNB individuals can feel pressured to engage in fertility preservation by parents, therapist, or medical professionals, and discussions related to fertility preservation may emphasize genetic reproduction as the ideal method of family building, without providing a full range of options (Riggs & Bartholomaeus, 2020; Stark et al., 2021).

In the literature on TNB adults, some similar themes are present. However, whereas much of the TNB youth literature about family building is focused on genetic reproduction, TNB adult literature describes a broader range of family building options. Notably, this literature has found that nonbinary individuals are often left out of fertility counseling entirely (Riggs & Bartholomaeus, 2018). For many TNB adults, parenting may be part of their life plan, but they may not feel that they fit into cisgender systems for parenting due to their gender identity (Tasker & Gato, 2020), making it difficult to imagine options for family building. As such, researchers in Australia have emphasized the need for medical professionals to provide medically accurate information to patients, while not over-emphasizing parenthood (Bartholomaeus & Riggs, 2020). In sum, although previous research has begun to examine family building desires among TNB youth and adults, more research is needed to understand how this population thinks about and makes decisions related to family building.

TNB college and graduate students are a unique population for examining family building considerations. At this life stage, many individuals – regardless of gender identity – are focused on educational and career goals, particularly if they are currently enrolled in a higher education program. However, emerging adulthood is also a developmental stage during which longer-term romantic relationships may be established and these individuals may be beginning to think about the next life stage, including future family building (Arnett, 2000). For TNB emerging adults, this life stage may also include steps taken toward medical transition for individuals whose TNB identities emerged later in adolescence or for those individuals whose families were not supportive of medical transition while these individuals were under age 18 years and subject to their parents' medical decision-making. In addition, TNB college and graduate students may have concerns about their safety on their school campus due to their gender presentation (Goldberg et al., 2019) and may additionally have to consider whether or not to pursue gender affirming hormone treatment as a student (Goldberg & Kuvalanka, 2018). Thus, TNB college and graduate students may have unique needs and desires related to family building as they are navigating both their TNB identities and potential medical transition, as well as their ideas about future family building,

given their developmental stage as emerging adults. The purpose of the current study was to qualitatively explore TNB students' goals for future family building, and how these goals impacted decisions about fertility preservation and gender-affirming care.

Methods

Participants were a sample of 39 TNB college and graduate students, ages 18-35 years ($M = 25.21$, $SD = 3.83$). Participants reported their gender identity as trans man/man (36%), trans woman/woman (15%), or nonbinary/genderqueer (49%). Race/ethnicity of the sample was 82% White/European American and 8% mixed race/ethnicity. All but one participant resided in the U.S. (one in Canada). Other demographic characteristics of the sample are reported in Table 1.

Participants were recruited from LGBTQ groups at a diverse range of two- and four-year colleges and universities and via social media to participate in a study about their experiences being a TNB student in higher education (Goldberg, Beemyn, & Smith, 2018; Goldberg, Kuvalanka, & dickey, 2018). The larger study was concerned with the educational challenges and experiences of TNB students in higher education. To be eligible to participate, individuals had to identify as transgender and/or nonbinary and be enrolled at a college or university in the previous two years. Enrollment in the larger survey study included 506 participants.

Participants who were graduate students or had transferred or left college, and who also had a valid email address, were subsequently contacted about an interview opportunity. Forty-three participants contacted the researcher and all 43 participated in follow-up interviews. Of these, 39 were included in the analytic sample for the current study; 4 were excluded because their interviews did not contain any relevant content in response to the interview question (see Interview Protocol).

The research team represented a range of identities, training, and life experience that may have impacted the data analysis and interpretation. All members of the team were cisgender women, and thus we lacked perspectives from TNB individuals who may have interpreted the data differently based on their life experiences. All but one member of the research team was a parent. Sexual orientation identities included bisexual, queer, and straight. Racial/ethnic identities included White and Black. Prior to coding, the analysis team documented their relevant biases and assumptions and discussed these intermittently to remain reflexive throughout the coding and analysis process. In particular, we were highly cognizant of our cisgender identities throughout the process, and frequently revisited the importance of centering TNB participants' perspectives and the need to be aware of our cisgender positionality.

Interview protocol

Interview questions addressed participants' experiences being a TNB student, including support received/not received in their educational setting, and gender transition experiences while attending high school, college, and/or graduate school. For the current study, data were analyzed from participants' responses to the following three questions: "What are your thoughts about parenthood?", "Have you thought about when and how you might have or adopt children?" and "Have you thought about fertility preservation options (e.g., egg/sperm freezing)?"

Procedure

Data were collected via semi-structured interviews conducted in Spring 2017. Each participant completed a one-time, one-on-one, semi-structured interview via phone. Participants also completed an online demographic survey via Qualtrics. Interviews ranged from 60-90 minutes. Interviews were conducted by the senior author (AG) and a psychology doctoral student (not an author). Each participant received $30 USD. Interviews were audio-recorded and transcribed

Table 1. Sample demographic characteristics (N = 39).

Measure	Sample
Age, range 18-35 years, M (SD)	25.21 (3.83)
Gender identity, n (%)	
Trans man/man	14 (35.9)
Trans woman/woman	6 (15.4)
Gender nonbinary/genderqueer	19 (48.7)
Assigned female	16 (84.2)
Assigned male	3 (15.8)
Assigned sex, n (%)	
Female	31 (79.5)
Male	8 (20.5)
Race/ethnicity, n (%)	
White/European American	37 (94.9)
Latino/a/Latin American	2 (5.1)
Asian/Asian American	1 (2.6)
Native American/American Indian/Aboriginal	1 (2.6)
Mixed race/ethnicity	3 (7.7)
Another race/ethnicity	2 (5.1)
Sexual orientation (n, %)	
Queer	17 (43.6)
Bisexual	7 (17.9)
Pansexual	7 (17.9)
Gay	2 (5.1)
Lesbian	1 (2.6)
Heterosexual	1 (2.6)
Another sexual orientation identity	4 (10.3)
Education level, n (%)	
Current undergraduate student	7 (17.9)
Recent college graduate (2016-2017)	5 (12.8)
Current graduate student	22 (56.4)
Other type of student	5 (12.8)
Geographic region, n (%)	
Western U.S.	7 (17.9)
Midwestern U.S.	10 (25.6)
Northeastern U.S.	9 (23.1)
Southern U.S.	10 (25.6)
Western Canada	1 (2.6)
Not reported	2 (5.1)
Gender affirmation, n (%)	
Hormones (took)	25 (64.1)
Assigned female	20 (80.0)
Assigned male	5 (20.0)
Hormones (considered)	12 (30.8)
Assigned female	9 (75.0)
Assigned male	3 (25.0)
Chest surgery – removal or implants (had)	14 (35.9)
Assigned female	13 (92.9)
Assigned male	1 (7.1)
Chest surgery – removal or implants (considered)	23 (59.0)
Assigned female	16 (69.6)
Assigned male	7 (30.4)
Genital surgery (had)	2 (5.1)
Assigned female	2 (100.0)
Assigned male	0 (0.0)
Genital surgery (considered)	18 (46.2)
Assigned female	12 (66.7)
Assigned male	6 (33.3)

Notes. One participant who was assigned female reported being intersex. Frequencies reported for assigned sex within the gender nonbinary/genderqueer group and within each type of gender affirmation are calculated based on the overall n for gender nonbinary/genderqueer and each type of gender affirmation. Frequencies for race/ethnicity may add up to greater than 100% because participants could select more than one option.

verbatim. All study procedures were approved by the Clark University Institutional Review Board (March 2, 2017). This analysis was determined to be exempt by the Boston Children's Hospital Institutional Review Board due to containing de-identified information for secondary analysis.

Analytic methodology

Interview transcripts were analyzed using immersion/crystallization (Borkan, 1999) and thematic analysis (Braun & Clarke, 2006) approaches. The process of immersion/crystallization involved reading and re-reading the interview transcripts while taking notes about any noteworthy excerpts or potential themes. Transcripts were coded using Dedoose (Dedoose Version 7.0.23, web application for managing, analyzing, & presenting qualitative & mixed method research data, 2016). The team created a codebook using a subsample of five interview transcripts, which represented participants across multiple gender identities. The codebook was tested on the same subsample of transcripts and revised throughout the coding process. Each transcript was coded primarily by one coder, and then checked by a second coder. Themes were developed, named, and defined, and then validated in the dataset by revisiting the excerpts within each code to ensure that they represented the larger theme. Theme names and definitions were finalized by three members of the research team (CEG, SKW, and EM).

Results

Analysis of participant transcripts resulted in 17 codes and 20 subcodes, which are listed by theme and subtheme in Table 2. Three codes and five subcodes were omitted due to low frequency of usage (occurred one or fewer times). Four overarching themes were developed from the data: 1) whether and how to build a family; 2) intersections between family building and gender identity; 3) physical and psychological aspects of pregnancy; and 4) external factors related to family-building decisions.

Theme 1: Whether and how to build a family

Theme 1 reflected desire and lack of desire to have children, as well as the diversity of family building methods among TNB individuals who desire a family. Family-building aspirations were commonly presented in a future-oriented manner and typically involved the mention of specific methods of family building, such as adoption or carrying biological children.

While many participants expressed a desire to have children, there was a spectrum of opinions among participants, ranging from a firm lack of desire to have children, to a more receptive stance that heavily revolved around timing or non-genetic family building options. Many participants expressed longstanding disinterest in pursuing parenthood, as did this 23-year-old nonbinary participant assigned female at birth:

> So, I've pretty much always known I don't wanna have human kids. (Laughs.) Um … so I haven't—I haven't worried about that. I don't know, I've never had any interest, even from when I was pretty young, in having—in kids.

Some participants were less firm on their stance regarding future parenthood, and instead focused on the physical experience of gestating a child and remaining open to non-genetic options, such as fostering or adoption. This was illustrated by a quote from a 24-year-old nonbinary, androgynous participant assigned female at birth:

Table 2. Number of codes by theme and subtheme among participants (N = 39).

Theme	Subthemes	Codes	Number of Participants
1) Whether and how to build a family	Desire for children	General desire to have children	14
		No desire to have children	11
		Indecision about having children	10
		Desire to have children when ready	7
		Change in desire to have children	2
	Methods of family building	Have biological children	22
		Adopt children	20
		Various family building methods	4
2) Intersections between family building and gender identity	Decision-making about gender-affirming treatment (GAT) and fertility	Priority to pursue GAT over fertility	10
		GAT limits ability to have biological children	6
		Effect of gender affirming treatment on fertility	2
	Access to and perceptions of fertility information	Individual perception of fertility-related information	2
		Receive information about fertility preservation	2
	Identity-related factors	Intersection of TNB identity and parenting	4
3) Physical and psychological aspects of pregnancy		Physical impact of experience	5
		Preexisting medical or mental health condition	5
		Psychological impact of experience	3
4) External factors related to family-building decisions	Partner-related factors	Partner has key role in family building	12
		Partner's preferences impact decision making	5
		Partner has ability to carry children	3
	Financial and career considerations	Financial burden of family planning	8
		Financial investment of having children	3
		Impact of education and career on starting a family	2
	Macro-level factors	Political and social climate effect on family planning	3

> Everyone says that I'll be a great mother and I'm like I don't wanna have a kid. I don't. I just can't ever see myself getting pregnant. So I'm like I definitely think that I will foster kids in the future and being kind of like an aunt or maybe even adopting a kid.

Ten participants described a consistent state of indecision related to having children, as illustrated by one 26-year-old nonbinary participant assigned female at birth:

> After I think like a year of being on T [testosterone] or so—I always thought I wanted children and then I convinced myself I didn't want children and then I started T and I was like okay, probably not going to have children. Like after a year, I had this breakdown and cried a lot about how I wanted children (chuckles). The next morning I was like I definitely don't want children.

While for many participants, the desire to have children was dynamic in nature and evolved over time, others considered the idea of waiting to start a family until they reached a more stable point in their lives. A 22-year-old trans woman expressed interest in waiting to have children and explore various fertility options in the future when she was more prepared:

> I mean I'm definitely interested in parenthood, at a time when I'm done with graduate school and settle down somewhere, and preferably with a guy—I don't think I could do that whole single-parent responsibility. Still determining how many kids I would want and the methods I would want to have them with.

Theme 2: Intersections between family building and gender identity

Theme 2 reflected the decision-making process around prioritizing gender-affirming treatment over fertility preservation and genetic family building, access to and perceptions of the quality of

information received about fertility preservation and family building, and the identity-related factor of how TNB identity intersected with family building desires.

For several participants, the decision to pursue gender-affirming treatment was linked to discomfort caused by the incongruence between one's body and gender identity, above and beyond future fertility. One 21-year-old trans man described his frame of mind when starting gender-affirming treatment:

> I mean I didn't really think about when I was transitioning. My friend, he was like "you might want to think about fertility stuff". But when you're 18 years old and everything you think about is T [testosterone], you don't give a shit about (laughs)—you are not thinking about fertility stuff. You are just like "get the T in my body." So yeah, I've thought about it, yeah.

For many participants who chose to pursue gender-affirming treatment, there was general awareness of its effect on fertility outcomes. Starting hormone therapy or having a hysterectomy reduces the options for having biological children, but a 21-year-old trans man described why he did not view this as a limitation:

> Too kinda late for me, 'cos I started T [testosterone] two years ago. I mean, I know I can … preserve eggs, but I don't see the value in passing on my own genetics. My family has a history of heart disease and depression. I don't really … value my family enough to care about passing on their line.

Participants who decided to pursue gender-affirming treatment prior to the study period expressed diverse opinions about the adequacy of fertility preservation information that they received. A 28-year-old trans man described positive feelings about the presentation of fertility preservation options:

> I feel pretty comfortable with the way in which information was presented to me and I was able to say yes, no, that's fine, I'll pass, when I certainly am ready to think about this, I'll deal with the consequences of that then.

Conversely, a 24-year-old male participant who received limited fertility information from medical professionals before receiving gender-affirming treatment did not voluntarily ask questions out of fear of appearing indecisive:

> And also, for better or for worse, I knew what I wanted, but they never told me about any preservation techniques or how much it would cost or how it would work. They never told me about any of that because I wasn't personally interested.

Theme 3: Physical and psychological aspects of pregnancy

Theme 3 highlights the perceived impact of pregnancy experiences on family building decisions. This theme reflected the physical and psychological effects of pregnancy, childbirth, or postpartum experiences. A 35-year-old nonbinary participant assigned female at birth discussed their fear of pregnancy as a result of gender dysphoria:

> I definitely never want to carry a child and never have. I think a lot of my dysphoria is especially about internal reproductive parts, so I don't ever want to have a kid. I don't ever really want to raise a baby.

Additionally, the presence of a preexisting mental health or physical condition was a factor that influenced fertility desires and family building decision making. A 26-year-old nonbinary participant assigned female at birth disclosed their inability to carry children and the physical toll of raising children:

> I've kind of have come to accept, like, with my medical stuff, like, not only would it be damn near impossible to be pregnant and carry a child it would be like nearly impossible, extremely painful, and even if I had a child or even if I adopted a child—like I have nieces and nephews and I love them to bits but after a couple of hours I have to go lay down; cause its just—like physically it's just it can be a lot for my body and I'm okay with that. I have great nieces and nephews.

Theme 4: External factors related to family-building decisions

Theme 4 reflected external factors that impacted family building decisions, including the significant role that their partners played in family building decision making, financial and career considerations, and a macro-level factor of political and social climate that affects TNB individuals' decisions related to family-building.

Some participants described the significant role that partners played in family building decision making. A 34-year-old nonbinary participant assigned male at birth described how the preferences of their partner influenced their desire to have children:

> For me, having kids largely depends on who I'm with. Like I could see myself having kids specifically with my ex-wife, and because she really wanted them, that I knew it was important to her, so that was important to me. If I never have kids, I'm okay with that. But if I'm with a partner who really wants them, who definitely I could see as being a good person to raise a child with.

An external factor that was considered a barrier to family building was the financial burden associated with fertility preservation and other family building options. A 28-year-old trans woman described seeking alternative options outside of gamete banking due to cost:

> Yeah, I made the decision to not to [do fertility preservation], because of the money. And how sometimes even if you didn't preserve it, it sometimes can fail. And I figure if I do want children I can always adopt.

A 23-year-old nonbinary participant assigned female at birth similarly described the financial requirement for raising children as a barrier:

> I've been hit by "baby fever" really badly lately, and I have to keep reminding myself like, "Even though I want a baby, I don't actually want a baby. I can't afford it; I am too disabled for that. There's too much going on in my life, I need to graduate at some point!"

Outside of financial limitations, the challenges faced by TNB individuals exploring family building in the current U.S. sociopolitical climate were discussed by several participants. A 29-year-old trans man discussed his struggles navigating the intersection of their identity and parenting within a broader social context:

> I have thought you know, parenthood is not going to be an easy path for me, as a trans person and as someone who is sort of living on the thwarting edge of the trans experience in America. My life chances of becoming a parent are not as easy as my straight and cis-gendered peers. And because of the society we live in, and maybe this decision is actually a little up out of my control. Or at least less in my control than it is for other people.

Discussion

This study found four key themes which describe considerations for family building and fertility preservation among TNB college and graduate students. Although some participants did not desire future families, for participants who were interested in family building, there was a reported tension between preserving future fertility and continuing with gender-affirming treatment. Many participants' narratives represented the idea that family building is limited to genetic reproduction; these narratives were often discussed in the context of decision-making about gender-affirming treatment. However, many participants also described non-genetic methods of family building, such as using gamete donors, fostering, and adoption. The results also highlight how this is a unique sample in that college and graduate students are future oriented and educationally oriented, which has been noted to also contribute to family building planning of cisgender female graduate students (Hickman et al., 2018). Although cisgender female graduate students are quite different from the current sample in terms of their gender experience and additional family planning considerations, they nevertheless occupy a parallel educational status and developmental stage of emerging adulthood. In the current study, many participants clearly expressed a desire not to have children, regardless of the type of family building. This finding was similar to

previous research with TNB adults, which found that more than half did not desire children (D. W. Riggs et al., 2016). At the same time, the lack of desire to have children among TNB participants in this study was surprising considering the age group of the sample.

Some themes and subthemes were more specific to TNB individuals' experiences, whereas others may be more common to all individuals in this developmental stage who are considering future family building. As an example, while the theme of intersections between family building and gender identity was specific to TNB individuals, the theme of whether and how to build a family was more universal to emerging adulthood. However, within the themes and subthemes that appeared to reflect experiences that are less specific to TNB individuals, the participants' narratives described how these themes uniquely occurred for TNB individuals. For example, many people might think about partner-related factors for family building, but TNB individuals also have to think about unique experiences, such as whether their partner has the ability to carry a child (e.g., if the TNB person does not have a uterus).

Prior literature has described transgender adolescents' desire to be parents primarily through adoption rather than fertility preservation (Chiniara et al., 2019; Stark et al., in press), although transgender adults have been found to fear discrimination from adoption agencies, which may represent a barrier to pursing this option for family building (Goldberg et al., 2020). In addition, biological parenthood has been found to be common among transgender parents, especially those who became parents prior to transition and have partners of a different sex assigned at birth. (Tornello et al., 2019) Similarly, other literature has found that the rates of fertility preservation are low among adolescents who gave similar reasoning for not pursuing preservation, including cost and concerns about preservation delaying medical affirmation (Chen et al., 2017; Abern & Maguire, 2018). However, small case series are starting to suggest that it is possible to have successful pregnancies from gametes collected after testosterone treatment (Adeleye et al., 2018). Thus, it is crucial that medical professionals continue to inform patients of updates in technology and to make patients aware that testosterone as gender-affirming care does not necessarily prevent future genetic parenthood and it is the responsibility of the medical professional to continue to be informed in this area (Bartholomaeus & Riggs, 2020).

Bartholomaeus and Riggs (2020) has outlined that there are three costs to fertility preservation: financial, transition-related cost (e.g. to engage in gamete retrieval delays transition), and time (Bartholomaeus & Riggs, 2020). Therapists and medical professionals should consider advocating for their clients and patients with regards to having insurance cover fertility preservation and ensure that discussions surrounding fertility do not over emphasize parenthood and follow a client/patient-centered approach. Counseling by medical professionals prior to surgical intervention for individuals assigned female at birth could include options beyond removing ovaries and uterus together (Maxwell et al., 2017). Other options for gender affirming fertility preservation techniques include offering noninvasive imaging modalities for gamete retrieval (Insogna et al., 2020). Moreover, the results from this sample indicate that TNB adults are interested in other options for family building (such as adoption) which must also be incorporated into the counseling dialogue without using a cisgenderist approach (i.e., treating cisgender experiences as the norm). That is, while it is important to offer fertility preservation (D. W. Riggs & Bartholomaeus, 2018), too much emphasis on fertility preservation may feel cisgenderist to TNB individuals and show an unconscious bias by therapists and medical professionals to favor a certain type of family building (Riggs & Bartholomaeus, 2020); it may also operate as a form of gatekeeping. Participants in the current study reported a variety of experiences regarding fertility counseling adequacy (or lack thereof). It is notable that encouraging TNB individuals to engage in gamete preservation just in case the individual changes their mind is not the preferred approach among this population (Riggs, 2019).

Strengths of this study include a relatively large sample of qualitative interviews of a potentially difficult to reach population regarding their views on family building and fertility preservation.

Moreover, it additionally includes nonbinary individuals who are often excluded from research (Frohard-Dourlent et al., 2017; Scandurra et al., 2019), particularly regarding family building desires. Individuals from across the U.S. were queried, rather than from a single geographic region or urban center. The use of qualitative interviews allowed for nuanced descriptions regarding why participants did not seek fertility preservation, which can provide guidance on how therapists and medical professionals can broach these conversations with individuals seeking gender affirming care.

Limitations of the study include a predominantly White sample who was assigned female, which may limit the generalizability of study findings to assigned males and people of color. Additionally, the larger study did not focus on fertility and family building; thus some of the transcripts contained limited content on this topic. Moreover, participants were in varying stages of transition so we were unable to examine how the experiences of individuals who had had prior irreversible gender-affirming treatment were different from those individuals who had not undergone any gender-affirming care. Additionally, this was a U.S.-based study. Although, where some U.S. states are expanding insurance coverage of fertility preservation coverage, this coverage varies by state and the benefit to TNB people is unclear (Kyweluk et al., 2019). Findings from this research may not be as applicable to TNB individuals from regions or other countries where fertility preservation is not an option and/or not financially feasible due to lack of insurance coverage. Moreover, the particular identities of the authors may have constrained or impacted our interpretations, especially as all identify as cisgender females.

Emerging adulthood, including attending college and graduate school, is a unique developmental period for TNB individuals outside of family building, as many individuals newly have independence related to gender-affirming treatment decision-making, which may intersect with family-building desires and decision-making. Future research should explore how intent to preserve fertility may change as insurance companies provide more support for fertility preservation and how nuanced conversations with therapists and medical professionals may impact the desire to engage in fertility preservation or build families in the future. Several factors emerged as important in shaping transgender and nonbinary students' desire to have children. Therapists and medical professionals can provide support to their TNB clients and patients about fertility preservation methods and other family building options, listening to clients and patients when they say they do not desire genetically related children, and engage in advocacy to decrease cost-related barriers for fertility preservation.

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