Journal of Adolescent Health ■■ (2017) ■■–■■

ELSEVIER

JOURNAL OF ADOLESCENT HEALTH

www.jahonline.org

Original article

Attitudes Toward Fertility and Reproductive Health Among Transgender and Gender-Nonconforming Adolescents

Diane Chen, Ph.D. [a,b,c,*], Margaret Matson, M.P.H. [d], Kathryn Macapagal, Ph.D. [b,d], Emilie K. Johnson, M.D., M.P.H. [e,f], Ilina Rosoklija, M.P.H. [e], Courtney Finlayson, M.D. [c,g], Celia B. Fisher, Ph.D. [h], and Brian Mustanski, Ph.D. [b,d,f]

[a] *Division of Adolescent Medicine & Department of Child and Adolescent Psychiatry, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, Illinois*
[b] *Department of Psychiatry and Behavioral Sciences, Northwestern University Feinberg School of Medicine, Chicago, Illinois*
[c] *Department of Pediatrics, Northwestern University Feinberg School of Medicine, Chicago, Illinois*
[d] *Department of Medical Social Sciences & Institute for Sexual and Gender Minority Health and Wellbeing, Northwestern University Feinberg School of Medicine, Chicago, Illinois*
[e] *Division of Urology, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, Illinois*
[f] *Department of Urology & Center for Healthcare Studies, Northwestern University Feinberg School of Medicine, Chicago, Illinois*
[g] *Division of Endocrinology, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, Illinois*
[h] *Center for Ethics Education & Department of Psychology, Fordham University, Bronx, New York*

Article history: Received August 18, 2017; Accepted November 28, 2017
Keywords: Transgender; Gender-nonconforming; Adolescents; Fertility; Family formation; Family building; Reproductive health

A B S T R A C T

Purpose: Little is known about the reproductive desires of transgender and gender-nonconforming (TGNC) adolescents who may seek gender-affirming medical care that leads to infertility. The current study addressed this gap by examining attitudes toward fertility and family formation in a diverse sample of TGNC youth.
Method: An online survey about sexual/reproductive health in sexual and gender minority (SGM) adolescents ages 14–17 years was conducted from September to October 2016.
Results: A total of 156 TGNC adolescents (M_{age} = 16.1 years; 83.3% assigned female at birth; 58.3% youth of color) responded. Overall, 70.5% of TGNC adolescents were interested in adoption and 35.9% in biological parenthood; more gender-nonconforming youth (43.8%) than transgender youth (25.8%) expressed interest in biological fertility. Discussions with health-care providers about fertility and reproductive health were uncommon—only 20.5% of youth had discussed fertility in general and only 13.5% had discussed effects of hormones on fertility. However, 60.9% of respondents were interested in learning more about their fertility and family building options. Key themes emerging from qualitative comments included concerns related to fertility/reproductive health (e.g., stigma of SGM parenthood, effect of gender-affirming treatments on fertility), and the need for additional reproductive health information both tailored to their individual experience and for SGM individuals more generally.
Discussion: TGNC adolescents expressed interest in multiple family building options, including adoption and biological parenthood, and identified a need for more information about these options. Thus, clinicians working with adolescents should be aware of the unique fertility and reproductive health needs of TGNC youth.

IMPLICATIONS AND CONTRIBUTION

TGNC adolescents expressed interest in multiple family formation options, including adoption and biological parenthood, and identified a need for more information about their options. Health-care providers working with adolescents need to be aware of the unique fertility and reproductive health counseling needs of TGNC youth.

Conflicts of Interest: The authors have no conflicts of interest to disclose.

* Address correspondence to: Diane Chen, Ph.D., 225 E. Chicago Ave, Box 10B, Chicago, IL 60611-2605.
E-mail address: DiChen@luriechildrens.org (D. Chen).

1054-139X/
https://doi.org/10.1016/j.jadohealth.2017.11.306

Many transgender and gender-nonconforming (TGNC) individuals seek interventions to align their bodies with their gender identity [1]. Gender-affirming hormones (GAH)—testosterone for females assigned at birth (FAAB) and estrogen for males assigned at birth (MAAB)—are indicated to treat gender dysphoria [2]; however, long-term exposure may negatively impact fertility and reproductive functioning [3–5]. Thus, clinical guidelines established by the World Professional Association of Transgender Health, Endocrine Society, and American Society of Reproductive Medicine all recommend counseling regarding fertility and reproductive options before medical treatment [2,6,7].

As a growing body of research suggests that transgender adults desire biological children [8–11], an increasing number are being referred for fertility preservation (FP) [12]. However, little is known about the fertility and family formation desires of a growing population of TGNC youth initiating GAH during adolescence [13–15]. Two recent studies reported low FP utilization rates among transgender adolescents pursuing GAH. Despite counseling regarding the risks of hormones on fertility and referral to fertility clinics, less than 5% chose to pursue FP [16,17]. Some barriers to FP identified by transgender adolescents (e.g., cost) are universally reported by other patient populations facing fertility-compromising treatments [18]; however, some appear unique to TGNC youth. For instance, transgender youth identified physical discomfort with FP procedures as barriers, including masturbating for a semen sample [17] and invasiveness of an oocyte-harvesting cycle [16]. Additionally, one participant in each study (N = 105 [16] and 78 [17]) cited concern that pursuing FP would delay hormone initiation.

Nahata et al. found that almost a quarter of their sample of 78 TGNC youth "never wanted to have children" and almost half planned to adopt [17]. These findings differ from adult research, suggesting that about half of transgender men [8] and transgender women [9] desire biological children. Research on cisgender teen girls also suggests strong desires for biological parenthood [19]. The limited research on TGNC youth's fertility and family formation desires focuses exclusively on youth with gender dysphoria presenting for GAH. Thus, it remains unclear whether reported findings on fertility and family formation desires in this population reflect true differences in attitudes and values about fertility and parenthood among TGNC youth versus their cisgender counterparts, or whether findings are potentially confounded by youth prioritizing transition-related needs. To address this gap, the current mixed-methods study examined attitudes toward fertility and family formation in a diverse, online-recruited sample of TGNC adolescents who were not explicitly seeking transition-related medical care.

Methods

Participants and recruitment

As part of a larger study [20–22], participants were recruited for an online survey on adolescent sexual health and HIV prevention research with the following eligibility criteria: ages 14–17; identifies as a sexual minority and/or TGNC; romantically/sexually interested in cisgender males; lives in the United States; eighth grade English reading level; and HIV-negative or naïve to HIV testing. The analytic sample for this study consisted of participants who self-identified as TGNC. All procedures were approved by the Northwestern University and Fordham University Institutional Review Boards. A waiver of parental permission was granted and a Certificate of Confidentiality was issued from the National Institutes of Health.

Participants were recruited through paid advertisements on Facebook from September to October 2016, which targeted adolescents in the United States who were romantically interested in people of the same or both genders and/or listed interests relevant to sexual and gender minority (SGM) youth. Clicking on advertisements linked to an online eligibility survey. Eligible participants were presented with an online consent form and then automatically directed to the survey after agreeing to participate. Participants whose data passed the study's validation protocol received a $30 electronic Visa gift card.

Measures

Demographics, sexual orientation, and gender identity. Participants completed items assessing age, state of residence, race and ethnicity, assigned sex at birth, gender identity and sexual orientation, and disclosure of sexual orientation and gender identity to parents. Responses to a closed-ended item assessing gender identity were dichotomized into transgender (woman, man, transgender man, transgender woman) and GNC (genderqueer, gender-nonconforming) groups for comparison. For analyses, race and ethnicity were combined into one variable reflecting two groups: white non-Hispanic/Latino youth and youth of color (e.g., Hispanic/Latino, black or African-American, Asian, multiracial/other).

Health-care experiences. The larger survey included items examining SGM youth's experiences with affirming health care. Only items specific to TGNC youth and fertility were included in the present analysis. Yes/no questions assessed whether participants had ever received pubertal suppression treatment or GAH and whether participants had ever discussed these therapies with a health-care provider.

Fertility and family formation. Fifteen items (13 closed-ended and 2 open-ended) assessed participants' thoughts about fertility/biological parenthood and family formation (the former defined as using their own eggs or sperm to have children), including the degree to which they have discussed fertility and family formation with others and comfort having these discussions, and preferred methods of obtaining information about fertility and family formation. Open-ended questions specifically asked respondents to describe reasons for discomfort discussing fertility and any other thoughts they may have about fertility and family formation.

Data analysis

Descriptive statistics were computed for all relevant variables. Pearson chi-square tests were used to assess sociodemographic group differences (i.e., age, race/ethnicity, assigned sex at birth, gender identity) in participants' thoughts about and discussion of fertility and family formation; Fisher's exact test is reported when expected cell counts were less than five. Qualitative data were imported into Dedoose, an Internet-based qualitative data analysis package, and were analyzed thematically [23]. Two root codes reflecting each open-ended item were applied to each transcript: *other thoughts about fertility and family formation* and *reasons for discomfort with answering questions about fertility and family formation.* Next, open coding was performed