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Desire to Have Children Among Transgender People in Germany: A Cross-Sectional Multi-Center Study

Matthias K. Auer, MD,[1,2,*] Johannes Fuss, MD,[3,*] Timo O. Nieder, PhD,[3] Peer Briken, MD,[3] Sarah V. Biedermann, MD,[4] Günter K. Stalla, MD,[1] Matthias W. Beckmann, MD,[5] and Thomas Hildebrandt, MD[5]

ABSTRACT

Background: Many trans individuals undergo medical interventions that result in irreversible loss of fertility. Little is known about their desire to have children and attitudes toward fertility preservation options.

Aim: To study how the desire for children and the use of fertility preservation options varies among trans women and trans men in different transitioning stages in Germany.

Methods: In this cross-sectional multi-center study, N = 99 trans women and N = 90 trans men were included. Of these, 26 of each sex were just about to start medical treatment.

Outcomes: Outcome parameter were the prevalence and determinants of a desire to have children in trans persons.

Results: Before treatment, a desire for children was significantly higher in trans men compared to trans women ($P = .016$). In contrast, in those who had already started treatment, a current desire to have children was equally present in about one fourth of participants of both genders while the interest in having children in the future was significantly higher in trans women (69.9%) than in trans men (46.9%; $P = .034$). Although 76.1% of trans women and 76.6% of trans men indicated that they had at least thought about preserving germ cells before starting medical transition, only 9.6% of trans women and 3.1% of trans men had put this idea into practice. Most trans men in both groups indicated that insemination of a female partner with sperm from an unrelated donor was a suitable option to fulfill their child wish, potentially explaining their low interest in preserving their own germ cells. Finally, a logistic regression analysis accounting for potential confounders revealed that overall trans women were more than twice as likely to have a current desire to have children (odds ratio 2.58), and this wish was on average 5.3% lower with each year of increasing age.

Clinical Translation: A low level of fertility preservation among trans persons is contrasted by a high level of desire for children. This highlights the importance of counseling trans individuals regarding fertility preservation options.

Conclusions: To our knowledge, this is the first study that addresses desire to have children in a clinical sample of trans women. It is also the first that investigates this issue among trans men who have not started medical treatment, and the first comparison of both genders. A limitation for the generalization of our results is the special legal context in Germany that forbids oocyte donation for reciprocal in vitro fertilization. Reproductive desire is high among trans individuals, but the use of reproductive options is surprisingly low. **Auer MK, Fuss J, Nieder TO, et al. Desire to Have Children Among Transgender People in Germany: A Cross-Sectional Multi-Center Study. J Sex Med 2018;15:757–767.**

Key Words: Transgender; Gender Dysphoria; Fertility; Children; Reproduction; Preservation

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[1]Research Group Clinical Neuroendocrinology, Max Planck Institute of Psychiatry, Munich, Germany;

[2]Medizinische Klinik und Poliklinik IV, Klinikum der Universität München, Munich, Germany;

[3]Human Behavior Laboratory and Interdisciplinary Transgender Health Care Center, Institute for Sex Research and Forensic Psychiatry, University Medical Center Hamburg-Eppendorf, Hamburg, Germany;

[4]Department of Psychiatry and Psychotherapy, Center for Psychosocial Medicine, University Medical Center Hamburg-Eppendorf, Hamburg, Germany;

[5]Department of Gynecology and Obstetrics, Universitätsklinikum Erlangen, Erlangen, Germany

*These authors contributed equally to this article.

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INTRODUCTION

Individuals diagnosed with gender dysphoria (GD) (*Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*[1]) or transsexualism (*International Statistical Classification of Diseases, 10th Revision*[2]) often receive hormonal treatment to alter sex-typical bodily features (ie, gender-affirming hormone treatment [GAHT]). Trans women usually receive estrogens in combination with anti-androgens such as cyproterone acetate or spironolactone, while trans men use testosterone. On the one hand, these medications induce the intended development of secondary sex characteristics of the identified gender; on the other hand, they significantly impair the fertility of trans persons.[3] Although this seems to be potentially reversible,[3] it cannot be predicted if and when gamete maturation will return to normal if hormone treatment is discontinued.[4,5] After the initiation of GAHT, some individuals also strive for gender-affirming surgery. In trans women, the male genitals are reshaped to appear as female genitalia and testicles are removed.[6] In trans men, in addition to mastectomy, hysterectomy and bilateral salpingo-oophorectomy are usually included in gender-affirming surgery.[6] In both groups, these surgical interventions irreversibly lead to sterility. Until the highest German court declared its non-conformity to the constitution in 2011,[7] infertility and being divorced were mandatory prerequisites for trans persons to change civil sex to match it with the identified gender. This having changed, in addition to the fact that not all trans persons seek both GAHT and gender-affirming surgery, opens new possibilities to fulfilling a reproductive wish in this population.

Importantly, the current desire to have children seems to increase with age in the general German population from adolescence until the age of 40 years.[8] Since a substantial number of trans persons begin medical transition in adolescence and early adulthood, it is possible that some will develop a desire to have children only after starting medical transition with its reversible or irreversible fertility sequelae.[3] This side effect of medical transition may become even more problematic as the number of adolescents referred to gender clinics seems to be increasing in the Western world.[9,10] To reduce the risk that individuals regret medical transition because they are unable to have a genetically related child afterward, the International Standards of Care of the World Professional Association for Transgender Health recommends informing patients about future reproductive options before starting endocrine treatment.[11] These options include long-term cryo-preservation of sperm in trans women,[12] while in some countries trans men can choose among oocyte banking, embryo banking, and banking of ovarian tissue.[13] Individual reproductive choices may depend on sexual orientation. Importantly, trans men with female partners can choose to use sperm from a donor while trans women with male partners depend on a surrogate mother to bear a genetically related child. Of note, however, some trans individuals report a change of their sexual orientation during or after transition.[14]

Earlier studies investigating the desire to have children and the use of reproductive options in trans people studied Belgian populations[12,15] or online populations from various countries.[16] Importantly, however, the legal situation concerning reproductive options differs significantly between countries. While some such as Belgium, the Czech Republic, or the Netherlands allow oocyte donation for reciprocal in vitro fertilization (IVF) (ie, the use of oocytes from one partner, fertilized with donor sperm and placed into the other partner's uterus), it is considered egg donation and therefore is illegal in others such as Germany, Switzerland, and Austria where only sperm and embryo donation and banking of ovarian tissue for auto-transplantation are allowed.[13]

Here, we were interested in the reproductive desires and behavior of trans persons from a German multi-center study (TRANSIT) that was designed to investigate a wide range of metabolic and psychological outcomes in these individuals.[17]

We were particularly interested if and how these wishes differ between patients who had already transitioned medically and those who were yet to start hormone treatment.

These 2 groups were expected to not only differ in terms of treatment progress but also in terms of general characteristics such as age and already having children. As these factors may affect desire and motivation for fertility-related wishes and efforts, we wanted to identify the most key factors influencing current desires to have children. Moreover, we were interested if these factors are intrinsic (eg, sexual orientation) or extrinsic and therefore potentially modifiable.

Earlier studies suggested that pre-transition psychosocial burden is particularly high[27] and may therefore interfere with long-term decision making[28] and a positive perception of the future.[29] Both factors seem to be important modulators for future desire for children. Notably, it has been repeatedly reported that depressive symptoms are significantly improving during medical treatment[18] and may therefore result in changing views on parenting. Thus, we were also interested if depressive symptoms affect desire for children in our sample.

Earlier studies also indicate that there are differences in desire for having children, respectively interest in fertility-preserving options between trans men[15] and trans women.[16] Those studies suggest that desire for children seems to be generally higher in trans women than in trans men,[15,16] but may also be affected by a variety of interfering factors such as age or the higher rate of already having biological children. Rare cases such as the one of Thomas Beatie[24] who became famous due to wide media coverage as he became pregnant by insemination after initiation of GAHT may also have obscured the view on the reality of trans men's parenting wishes. For most trans men, getting pregnant and giving birth is a highly feminine if not the most feminine act, which should be expected to conflict with a trans male self-concept.

We therefore hypothesized that a desire to have children is higher in trans women compared to trans men and that a desire for having children might be higher after medical transition in both sexes when accounting for potential confounders.