

Psychosexual functioning among transgender individuals in Poland: an examination of sexual experiences within the diagnostic and therapeutic process

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Summary

Aim. The aim of this study was to examine the psychosexual functioning of transgender individuals in Poland, with particular attention to their sexual experiences, partner relationships, and sexual satisfaction in the context of the transition process.

Method. The study involved 104 transgender individuals at various stages of transition. Data were collected using a proprietary questionnaire and the Sexual Satisfaction Questionnaire (SSQ).

Results. The results indicate a relationship between the stage of transition and the level of sexual activity, satisfaction with sexual life, and openness in intimate relationships. Individuals at later stages of transition more frequently reported positive sexual experiences, higher levels of body acceptance, and fewer concerns related to physical intimacy. No significant associations were observed between sociodemographic variables and the level of sexual satisfaction.

Conclusions. The findings indicate an association between the stage of the diagnostic and therapeutic process and selected aspects of sexual functioning among transgender individuals. The obtained results highlight the importance of incorporating psychosexual care into a comprehensive approach to the health of this group and point to the need for further research on transgender sexuality.

Key words: transgender, sexuality, sexual behavior

Introduction

Human sexuality constitutes a fundamental dimension of personal identity and human functioning. It encompasses biological, psychological, and social aspects, shaping the way individuals experience themselves and build relationships with others. Understood as a form of self-expression through gender, orientation, eroticism, intimacy, and procreation, sexuality accompanies people throughout life, influencing individual, relational, and social well-being. Its development results from a complex

interaction between personal needs, such as the need for closeness, tenderness, or love, and cultural norms as well as the broader social environment [1, 2].

Contemporary approaches emphasize the multidimensional nature of sexuality, highlighting the difficulty of formulating a clear and unambiguous definition. Sexuality integrates the domains of physiology, psychological functioning, and social relationships, and the degree to which these dimensions are harmonized determines an individual's level of psychosexual maturity. Within this context, particular importance is attributed to sexual satisfaction, defined as a subjective affective response to the quality of sexual relations. The literature indicates that it is not only one of the key sexual rights but also an important component of overall quality of life [2–5].

Sexual satisfaction, understood as a complex evaluation of the quality of one's sexual life, encompasses physical, emotional, and cognitive aspects and remains embedded in the context of interpersonal relationships and sociocultural conditions. The literature indicates that it is strongly associated with well-being, mental and physical health, the quality of interpersonal relationships, and the level of self-acceptance [6, 7]. Its level may be related both to previous sexual experiences and to current relational factors, including the quality of communication with a partner, sexual assertiveness, and social support. For many individuals, the ability to engage in satisfying sexual activity and experience sexual pleasure constitutes an important component of overall well-being and may also be associated with a sense of integrity of one's identity [8, 9].

Consequently, sexuality should be regarded as an important indicator of quality of life and mental health. It requires systematic research using a multidimensional approach that integrates medical, psychosexological, psychiatric, and social perspectives [4–6].

Within this context, the sexual experiences of transgender individuals – those whose gender identity does not align with their sex assigned at birth – demand particular attention. For many, sexual activity is associated with unique emotional, physical, and social challenges. Transgender identity is deeply intertwined with body image and sexual identity, and the transition process, including diagnosis, hormonal treatment, and surgical interventions, can profoundly influence how sexuality is experienced and expressed [10–16]. Achieving congruence between lived identity and physical embodiment often represents a fundamental condition for empowerment and well-being.

Both the physical and psychological aspects of the transition process may be associated with the level of sexual satisfaction, functioning in intimate relationships, and perceptions of one's own body attractiveness. In recent years, increasing attention has been devoted in the international literature to the sexual health of transgender individuals. Quantitative and qualitative studies have focused primarily on such aspects of sexual functioning as the level of sexual satisfaction [17], sexual activity and sexual abstinence [17–19], the impact of gender dysphoria on sexual health [20], and the social perception of transgender individuals in the context of their sexuality [21]. At the same time, relatively few studies have directly addressed the overall sexual functioning of transgender individuals and their sexual experiences in the context of the diagnostic and therapeutic process [22, 23]. Existing analyses suggest that gender-affirming interventions, including hormone therapy and surgical procedures,

may be associated with changes in sexual desire and sexual functioning. A review of studies on sexual functioning following hormone therapy and gender-affirming surgery, conducted mainly in European countries, indicated, among other findings, that the prevalence of low sexual desire among transgender individuals is comparable to that observed in the female population, whereas among transgender men an increase in sexual desire is often reported during hormone therapy and after gender-affirming surgery [24]. Despite the growing number of studies conducted in different countries, many issues related to the sexual experiences of transgender individuals remain unclear. This applies in particular to the relationships between specific stages of the transition process and the level of sexual activity, sexual satisfaction, and functioning in intimate relationships. Moreover, relatively little is still known about the sexual experiences of individuals undergoing diagnostic procedures and gender-affirming interventions in different socio-cultural contexts. Data concerning the sexual functioning of transgender individuals in Poland remain very limited. Findings from studies conducted in other countries cannot always be directly transferred to the Polish social and institutional context, which is characterized by, among other factors, a different organization of the diagnostic and therapeutic process, varying access to medical care, and specific socio-cultural conditions, including the level of social acceptance and experiences of stigma. For this reason, conducting studies that take into account the specificity of the local context appears justified.

The present study attempts to partially address this research gap by analyzing the sexual experiences of transgender individuals at different stages of the transition process.

Materials and methods

Initially, 112 transgender individuals undergoing the diagnostic and therapeutic process related to gender affirmation were recruited for the study. Participants were divided into groups according to the stage of the diagnostic and treatment process. The inclusion criteria were: age of at least 18 years, a clinical diagnosis of gender identity disorder (transsexualism/gender dysphoria) established during specialist sexological assessment in accordance with the ICD-10 and DSM-5 diagnostic classifications, and participation in the diagnostic and therapeutic process. Exclusion criteria included refusal to participate in the study and inability to complete the questionnaire independently. The survey study was conducted in two medical centers in Poland providing specialized diagnostic and therapeutic services for transgender individuals. These centers function as reference centers in the field of clinical sexology and provide services within the public healthcare system financed by the National Health Fund (NFZ). Participants were recruited during their visits to these centers as part of the diagnostic or treatment process. A total of 8 individuals were excluded from the final analysis due to a lack of declared sexual initiation, incomplete or incorrectly completed questionnaires, or withdrawal of consent to participate in the study. Ultimately, the analysis included 104 transgender participants. Prior to completing the questionnaire, each participant received an informational briefing regarding the purpose and proce-

dures of the study in order to obtain informed consent. Participants were subsequently instructed on how to complete the questionnaire. All respondents were informed about the confidentiality and anonymity of the study, the voluntary nature of participation, and their right to withdraw from the study at any stage.

The study was conducted with the approval of the Bioethics Committee of the Medical University of Silesia in Katowice (No. KNW/0022/KB/110/17).

The research instrument was a questionnaire consisting of the following components:

- Sociodemographic questionnaire – including questions concerning basic sociodemographic characteristics of the participants.
- Experiences of Transgender Individuals – this section included questions regarding the course of the diagnostic and therapeutic process and the characteristics of sexual activity. In this part, the Sexual Activity Characteristics Questionnaire, developed by Jorg and Zborowska for the purposes of the study, was used. The questionnaire included items concerning, among others, sexual initiation, frequency of sexual activity, number of sexual partners, and concerns related to engaging in sexual activity. The instrument consisted of closed and semi-open questions enabling the collection of detailed information on participants' sexual experiences and functioning during the diagnostic and therapeutic process.
- Sexual Satisfaction Questionnaire (SSQ) developed by Nomejko and Dolińska-Zygmunt – a tool used to measure the overall level of sexual satisfaction [25]. The questionnaire consists of 10 statements rated on a four-point Likert scale. The instrument is unidimensional and refers to individuals' cognitive and emotional attitudes toward their own sexual attractiveness and sexual activity. In validation studies, the reliability coefficient reached Cronbach's $\alpha = 0.89$ [25].

Statistical analyses

Statistical analyses were performed using IBM SPSS Statistics. Differences in counts between variables measured on a nominal scale were assessed using the chi-square test. Student's *t*-test or analysis of variance (ANOVA) was applied to examine differences between group means for variables measured on a quantitative scale that met the assumptions of normal distribution and homogeneity of variance. When these assumptions were not met, or when variables were measured on an ordinal scale, the Mann-Whitney *U* test or the Kruskal-Wallis test with Dunn's post hoc multiple comparisons of mean ranks was used, respectively. Pearson's correlation coefficient was calculated to assess relationships between quantitative variables with a normal distribution, while Spearman's rho correlation analysis was used for variables that were not normally distributed or were measured on an ordinal scale. To identify factors associated with the level of sexual satisfaction, multiple regression analysis was conducted. In all statistical tests, a significance level of $p < 0.05$ was adopted.

Results

Characteristics of the study group

Sixteen individuals (15.4%) were in the diagnostic process. Thirty-three participants (31.7%) were undergoing hormone therapy prior to legal gender reassignment, and 55 (52.9%) were receiving hormone therapy after legal gender reassignment (Table 1). All participants began the diagnostic and treatment process after reaching the age of majority. The overall mean age at diagnosis for the study group was 23.18 years ($SD = 5.33$). When stratified by gender identity, the mean age at diagnosis was 21.41 years for transgender men and 26.26 years for transgender women. Moreover, the median age at diagnosis was significantly higher for transgender women ($Me = 25$) than for transgender men ($Me = 21$; $U = 722$; $p = 0.00026$).

Table 1. Distribution of the study group by stage of the diagnostic and treatment process

Stage	Gender identity	Frequency	Percent
Stage 1: During the diagnostic process	Transgender man	12	75.0
	Transgender woman	4	25.0
	Total	16	100.0
Stage 2: During hormone therapy prior to legal gender reassignment	Transgender man	23	69.7
	Transgender woman	10	30.3
	Total	33	100.0
Stage 3: During hormone therapy after legal gender reassignment	Transgender man	31	56.4
	Transgender woman	24	43.6
	Total	55	100.0

The vast majority of surveyed transgender individuals reported living in medium-sized or large cities (84%). Those in more advanced stages of transition (stages 2 and 3) were significantly more likely to reside in large urban areas (over 200,000 inhabitants), whereas individuals in stage 1 were more commonly found in medium-sized cities (50,000–100,000 inhabitants). Transgender women predominated in large cities, while nearly 40% of transgender men lived in cities with populations of 50,000–200,000 inhabitants. One in three individuals who had undergone legal gender reassignment reported changing their place of residence, and over 20% planned to do so after completing their transition.

Most respondents had completed higher education (57.7%) and were in a stable professional situation: 82.7% were employed full-time or on a contract basis, 7.7% operated their own businesses, and 9.6% were students. In terms of religion, Catholics predominated (62.5%), although a considerable proportion of the sample (32.7%) reported no religious affiliation or had formally left the Church. No statistically significant differences in education, employment, or religion were observed based on gender identity or transition stage.

Sexual initiation, partnerships, and sexual activity

All study participants reported prior initiation of sexual activity. They were therefore asked to provide their age of sexual initiation and the number of previous sexual partners. The mean age of sexual initiation was $M = 19.0$ years ($SD = 3.76$), and the mean number of sexual partners was $M = 4.0$ ($SD = 2.6$). Comparative analysis revealed that the age of sexual initiation was significantly higher among transgender women ($Me = 19$) compared with transgender men ($Me = 18$), $U = 732$, $p = 0.00034$. Statistically significant differences were also observed in the number of sexual partners: transgender men reported more partners on average ($Me = 4$) than transgender women ($Me = 2$), $U = 843.5$, $p = 0.007$.

Regarding current relationship status, the largest group of participants declared they were cohabiting with a partner ($n = 53$; 51%), while 22% reported being single (not in a relationship). A smaller proportion were married ($n = 12$; 12%) or divorced and not in a cohabiting relationship ($n = 15$; 14%); one participant described themselves as divorced and not currently in a relationship. At the time of the study, 96% of participants reported having a sexual partner.

Participants were also asked to rate the frequency of sexual intercourse. The two most frequently chosen categories – 1–3 times per month ($n = 46$; 44%) and 2–3 times per week ($n = 33$; 32%) – together accounted for 76% of the sample. These responses were most common among individuals in the third stage of the diagnostic and therapeutic process. A smaller proportion of respondents ($n = 19$; 18%) reported intercourse less often than once a month, which was most characteristic of individuals in the first stage of transition. The highest frequencies of intercourse were recorded among individuals in the third stage: 4–5 times per week ($n = 3$; 3%) and 4–6 times per month ($n = 3$; 3%). Statistical analysis revealed significant differences in the mean frequency of intercourse between groups of individuals at different stages of the diagnostic and therapeutic process ($H(2, n = 104) = 30.57$, $p < 0.001$). The highest level of sexual activity was observed among participants at the third stage of the diagnostic and therapeutic process, whereas the lowest was found among those at the first stage. A significant moderate positive correlation was also identified between the stage of the transition process and the frequency of intercourse ($rs = 0.53$, $p < 0.001$). Participants were additionally asked whether they were satisfied with their declared frequency of intercourse. Only 34% answered affirmatively, while the majority expressed a desire for more frequent intercourse.

In a multiple-choice question, participants were asked about concerns related to sexual activity. The majority ($n = 82$; 59%) reported no concerns, particularly those in stage 3 ($n = 48$). The remaining respondents, especially those in stage 1, identified specific difficulties, most commonly fear of not meeting a partner's expectations ($n = 27$; 19%), as well as feelings of shame related to body image and perceived unattractiveness. Detailed data are presented in Table 2.

Table 2. Concerns about engaging in sexual activity

STAGE	Gender identity		A	B	C	D	E	F
Stage 1: During the diagnostic process	Transgender man	<i>n</i>	1	6	2	7	8	4
	Transgender woman	<i>n</i>	2	1	0	0	1	1
	Total	<i>n</i>	3	7	2	7	9	5
Stage 2: During hormone therapy prior to legal gender reassignment	Transgender man	<i>n</i>	22	7	0	0	0	0
	Transgender woman	<i>n</i>	9	2	0	1	1	2
	Total	<i>n</i>	31	9	0	1	1	2
Stage 3: During hormone therapy after legal gender reassignment	Transgender man	<i>n</i>	26	6	0	0	0	0
	Transgender woman	<i>n</i>	22	5	0	2	1	0
	Total	<i>n</i>	48	11	0	2	1	0

A – I have no concerns about sexual activity; B – I am afraid of not meeting my partner's expectations; C – I do not know any sexual positions that would satisfy me or my partner; D – I am ashamed of my body; E – I feel unattractive; F – I am afraid of rejection.

Sexual experiences and sexual behaviors

Participants were asked about their experiences in partner relationships and the nature of their sexual contacts. Analysis of the responses showed that the majority of respondents did not discuss methods of protection used during sexual contacts with their partners, including contraceptive methods and measures aimed at reducing the risk of sexually transmitted infections ($n = 97$; 93%). Those who reported discussing this topic were exclusively transgender women at the first and second stages of the diagnostic and therapeutic process ($n = 7$; 18%), while no such discussions were reported among participants at the third stage ($n = 24$). Interestingly, the majority of transgender individuals reported discussing mutual desires and preferred sexual positions with their partners ($n = 83$; 80%). In most cases, participants' partners were aware of their transgender identity ($n = 99$; 95%). Lack of disclosure concerned five individuals, all of whom were transgender women at the third stage of the diagnostic and therapeutic process following genital gender-affirming surgery.

At the time of the study, 13.5% of participants ($n = 14$) had been in a relationship with the same partner since the beginning of their gender transition, the majority of whom were transgender men ($n = 10$). Almost half of the study group reported owning erotic devices ($n = 51$; 49%), with transgender men accounting for the majority of owners and users ($n = 42$). Masturbation was practiced by 19 participants, predominantly transgender women ($n = 13$). All respondents reported viewing pornographic materials ($n = 104$), and most acknowledged being inspired by them ($n = 97$; 93%). Regarding their first sexual experience, nearly half of transgender men ($n = 32$; 48.5%) reported that their first intercourse was with a partner of the same sex, while more than half of transgender women did so as well ($n = 24$; 63%). Participants were also asked about

heterosexual relationships, defined as sexual intercourse with a partner of a different gender than their sex assigned at birth, prior to legal gender reassignment. Nearly half of transgender men reported having had heterosexual vaginal intercourse ($n = 28$; 42%), whereas this proportion was lower among transgender women ($n = 9$; 23%). When asked about current relationship preferences, almost all respondents expressed interest in heterosexual relationships ($n = 100$). The majority believed they would face no major difficulties in meeting a future partner ($n = 74$; 71%) and reported a desire to have children in the future ($n = 61$; 59%).

Sexual satisfaction (SSQ)

Analysis of the Sexual Satisfaction Questionnaire (SSQ) results showed that half of the transgender participants achieved a moderate level of sexual satisfaction ($n = 52$; 50%). A high level of sexual satisfaction was observed in 31% of respondents ($n = 32$), whereas a low level was reported by 19% of participants ($n = 20$). Statistical analysis revealed significant differences in the level of sexual satisfaction between groups at different stages of the diagnostic and therapeutic process. At stages 1 and 2, transgender women achieved significantly higher SSQ scores than transgender men (stage 1: $U = 6, p = 0.030$; stage 2: $U = 47, p = 0.007$). At stage 3, the opposite pattern

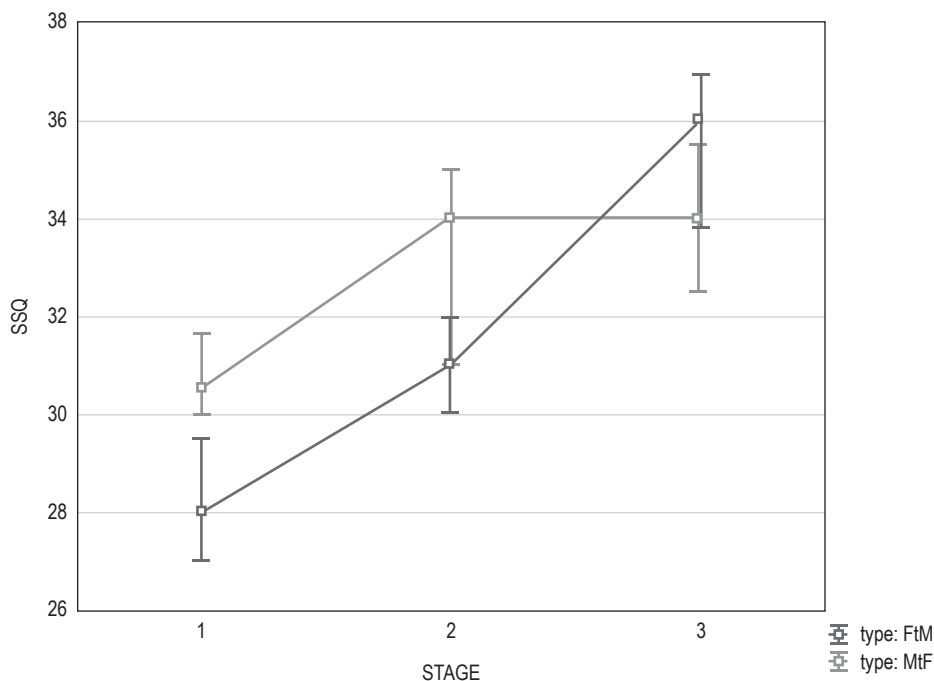


Figure 1. Distribution of mean SSQ scores by gender identity and transition stage among transsexual individuals

was observed: transgender men achieved higher SSQ scores than transgender women ($U = 205, p = 0.004$). These findings are illustrated in Figure 1.

The study examined whether correlations existed between the assessment of sexual life and sexual satisfaction (SSQ). Statistical analysis revealed a statistically significant positive, strong correlation ($r = 0.6138, p = 0.033742$) between the assessment of sexual life and sexual satisfaction, but only among transsexual men undergoing the diagnostic process. Thus, the higher the assessment of sexual life, the higher the SSQ score among transsexual men at this stage. We also investigated whether correlations existed between the importance of sex in the lives of the participants and their SSQ scores. Statistical analysis revealed a statistically significant positive, strong correlation ($p = 0.0004$) between SSQ scores and the perceived importance of sex among transgender men at stage 1 of the diagnostic and treatment process. Conversely, a statistically significant negative, moderately strong correlation ($r = -0.5002, p = 0.004$) was observed between SSQ scores and the importance of sex among transgender men at stage 3 of the process.

The study further demonstrated that both transgender women and transgender men who had undergone key surgeries achieved significantly higher SSQ scores compared with transgender women ($U = 11.5, p = 0.003278$) and transgender men ($U = 79,$

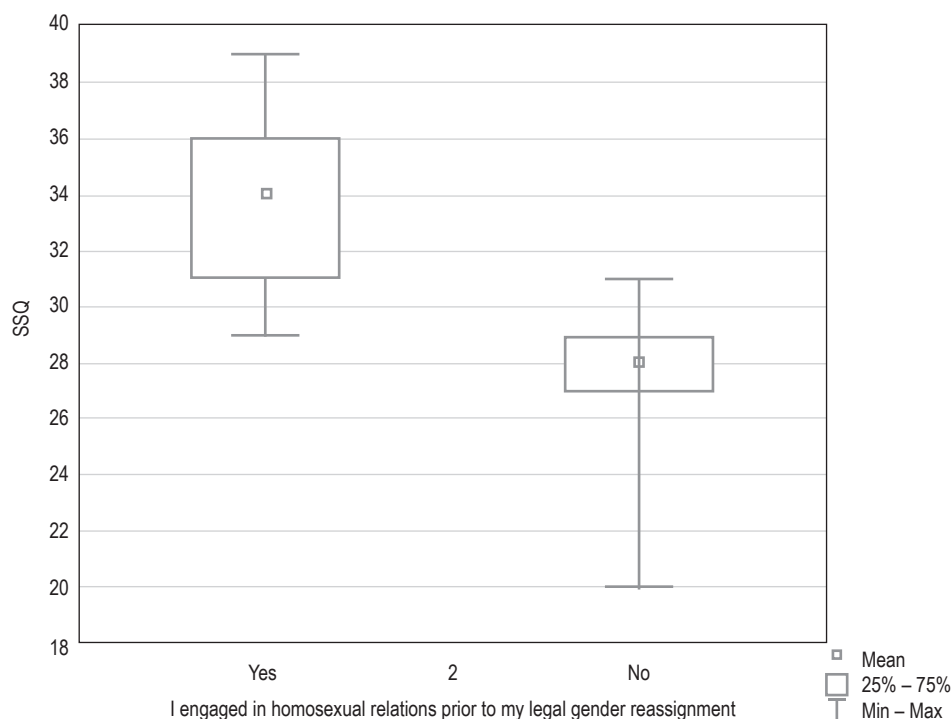


Figure 2. Distribution of mean SSQ scores by experience of homosexual intercourse prior to legal gender reassignment

$p = 0.000000$) who had not undergone surgery. In addition, significantly higher SSQ scores were observed among individuals who accepted their genitals compared with those who did not ($U = 534$, $p = 0.000000$). Finally, statistical analysis showed that transsexual individuals who had experienced homosexual intercourse before legal gender reassignment achieved significantly higher SSQ scores than those who had not ($U = 42$, $p = 0.000000$) (Figure 2). No significant correlations were found between sexual satisfaction or the characteristics of sexual experiences and sociodemographic variables such as age, education, place of residence, or professional situation.

Discussion

The aim of the present study was to analyze the sexual experiences of transgender individuals at different stages of the diagnostic and therapeutic process and to assess the level of sexual satisfaction in this group. The obtained results indicate that the stage of the transition process is associated with selected aspects of sexual functioning, including the level of sexual activity, the nature of partner relationships, and the level of sexual satisfaction. In particular, differences were observed between groups of participants at successive stages of the diagnostic and therapeutic process, which may reflect changes related to body acceptance, the sense of gender identity, and functioning in intimate relationships.

The obtained results are consistent with the growing body of research on the sexual health of transgender individuals and highlight the importance of considering sexuality as a significant component of quality of life in this population. At the same time, these findings should be interpreted in the context of existing research on the sexual functioning of transgender individuals as well as the specific characteristics of the diagnostic and therapeutic process.

Sexual initiation

In our study, the mean age of sexual initiation among transgender individuals was 19 years ($SD = 3.76$), which is higher than the value reported in most studies of the general population (typically 16–18 years; e.g., [26–28]) and similar to results from research on transgender populations (e.g., an average of 16.9 ± 3.4 years in [28]; F/M = 18.5 years, M/F = 17.5 years in [19]). The later age of sexual initiation may reflect additional psychosocial barriers faced by transgender individuals, including a longer process of forming and integrating experiences related to gender identity, concerns about social rejection, and limited access to reliable sexual education tailored to the needs of this group [30, 31].

Furthermore, transgender women reported a significantly later age of sexual initiation compared with transgender men ($Me = 19$ vs. $Me = 18$). This difference may be explained by distinct patterns of gender socialization and varying levels of social support. Previous studies suggest that individuals with a more expressive feminine identity experience stronger stigma, which may delay sexual activity and lead to later initiation [32]. These findings align with those of Restat et al. [34], who reported that

transgender individuals with a feminine identity tend to initiate sexual activity later, potentially as a result of increased stigma and psychosocial barriers.

Mean number of sexual partners

The mean number of sexual partners in the study group was 4 ($SD = 2.6$). Transgender men reported a higher median number of partners ($Me = 4$) compared with transgender women. These results are consistent with findings from studies of LGBT+ populations (e.g., 3–5 partners in Bauer et al. [34]) and indicate a lower number of partners compared with the general population (average of 6 partners per person in Poland [35]). Differences in the average number of sexual partners between transgender individuals and the general population may result from different motivations for sexual contact and varying partner-seeking strategies. In transgender populations, the need to establish a sense of safety and acceptance may play a more prominent role, which in turn can limit sexual exploration.

Taken together, the obtained results indicate a relatively later age of sexual initiation and a moderate number of sexual partners among transgender individuals, with differences observed depending on gender identity. The literature emphasizes that the sexual development of transgender individuals may be influenced by various psychosocial factors, including the level of social support, access to reliable and inclusive sexual education, and experiences of stigma and discrimination. Therefore, further research appears warranted to better understand the role of these factors in shaping the sexual experiences of transgender individuals.

Sexual attractiveness and preferred partners

In light of the obtained results, according to which nearly half of transgender men (48.5%) and more than half of transgender women (63%) indicated that their first sexual contact had a homosexual character, it may be assumed that early sexual experiences of transgender individuals often develop in the context of seeking relationships consistent with their experienced gender identity. Data from the present study also indicate that experiencing homosexual intercourse prior to legal gender recognition was associated with higher levels of sexual satisfaction.

Similarly, in the study by Gil-Llario et al. [36], as many as 86% of transgender women reported that their first partner was male, confirming the predominance of relationships oriented toward men in this group. In the population of transgender men, the proportion of first homosexual contacts (48.5%) suggests greater diversity in sexual experiences, which may reflect a broader range of identities and erotic orientations in this group. Similar observations were reported by Almás et al. [19], who found that individuals assigned female at birth and identifying as male most often declared sexual interest in both women and men, interest in a person regardless of gender, or exclusively in women. Among individuals assigned male at birth and identifying as female, interest in both genders was also most frequently reported, although interest exclusively in women was indicated more often than interest in a person regardless of gender.

With regard to heterosexual relationships, fewer than half of transgender men (42%) and a minority of transgender women (23%) reported having had sexual intercourse with partners of the sex opposite to the one assigned to them at birth. These findings may be compared with the results reported by Bockting et al. [37], who found that approximately 30–40% of transfeminine individuals in the United States had heterosexual contacts before initiating the transition process. This reflects reports indicating a substantial proportion of heterosexual experiences despite a predominant orientation toward partners of the same biological sex.

The present study also showed that more than 70% of respondents did not report significant difficulties in establishing relationships consistent with their experienced gender, and 59% declared a desire to have children. These relatively high percentages may reflect increasing social adaptation and opportunities for transgender individuals to realize their life plans, particularly in the context of broader access to medical and psychosocial support, although significant disparities compared with the general population are still observed [19,35].

In the present study, transgender individuals most often reported sexual intercourse 1–3 times per month (44%) and 2–3 times per week (32%), which together accounted for 76% of the sample, with the highest level of activity observed among participants at the third stage of the diagnostic and therapeutic process. A relatively small proportion (18%) reported intercourse less than once a month, most often among individuals at the early stage of transition.

Similarly, other studies have reported frequencies most often of 1–2 times per week (31%), once every three months or less (28%), and 1–2 times per month (20%), which may indicate substantial variability in preferences and opportunities for establishing intimate contacts across different socio-cultural contexts [36]. Moreover, the highest frequencies – 4–5 times per week (3%) and 4–6 times per month (3%) – were observed in the group most advanced in the transition process. Statistical analysis confirmed significant differences between stages of transition as well as a moderate positive correlation between the stage of transition and the frequency of intercourse. A similar association was described by Almås et al. [19] in a Norwegian study of transgender individuals, where participants at later stages of gender recognition reported significantly higher sexual activity.

Participants were also asked whether the reported frequency of sexual intercourse was satisfactory. Only 34% responded affirmatively, whereas the remaining participants expressed a desire for more frequent sexual activity. In comparable studies [33–38], more than half of respondents reported satisfaction, with transgender women more often satisfied than transgender men. The relatively low level of sexual satisfaction observed in our sample requires further interpretation. The literature indicates that various psychosocial factors may influence the sexual functioning of transgender individuals, including the quality of partner relationships, the stage of the transition process, and the level of social support. However, these issues require further investigation in transgender populations.

Body acceptance

In the present study, nearly 60% of transgender individuals reported no concerns related to engaging in sexual activity. This finding may suggest a relatively high level of perceived security in the context of intimate relationships within the studied group. Nevertheless, the remaining respondents – particularly those in the early stages of transition – reported specific difficulties, most commonly fear of not meeting their partner's expectations and feelings of shame related to body appearance and perceived attractiveness.

Further statistical analysis confirmed that acceptance of one's genitals constitutes one of the key factors associated with the quality of sexual life. Individuals who reported a positive relationship with their genitals achieved significantly higher scores on the Sexual Satisfaction Questionnaire compared with those who did not accept their genitals. In the present study, multiple regression analysis showed that body satisfaction was the strongest predictor of most dimensions of sexual behavior and experience (with the exception of masturbation frequency and the importance attributed to sexuality in the FtM group). In many cases, this variable reduced or even reversed the influence of treatment status alone.

Findings from a review of studies [38] indicate that gender-affirming interventions, both hormonal and surgical, are associated with significant improvements in body image and reductions in symptoms of eating disorders. In many of the analyzed studies, individuals who underwent surgical procedures reported increased body satisfaction and improved psychological functioning following surgery. These changes have been interpreted as resulting from greater coherence between body image and experienced gender identity [39–41].

However, it should be noted that most of the cited studies have a longitudinal design, whereas the present study was cross-sectional. Therefore, comparisons between these findings should be interpreted with caution. In contrast, one study [42] did not demonstrate significant differences in the level of body acceptance depending on whether vaginoplasty had been performed.

Both the concerns reported by participants and the importance of body acceptance indicate the need for further research on the specific sources of anxiety (e.g., fear of pain or partner evaluation) and on psychosocial factors that may influence the sexual experiences of transgender individuals.

Masturbation

Previous research on the sexual experiences of transgender individuals has largely focused on the outcomes of gender-affirming treatments, both hormonal and surgical, often assuming that sexual satisfaction and the ability to achieve orgasm are reliable indicators of treatment success. Our results, however, suggest that masturbation is relatively uncommon in this group: only 19 participants reported engaging in masturbation, the majority of whom were transgender women. Moreover, neither the type of gender-affirming surgery nor the stage of the diagnostic and therapeutic process

showed a significant association with masturbation. This suggests that psychosocial factors and individual preferences may play a greater role than medical interventions alone. At the same time, pornographic materials appear to constitute a consistent element of sexual and romantic experience: all participants ($n = 104$) reported viewing such materials, and as many as 93% indicated that they served as a source of sexual inspiration. The central role of pornography and masturbation as forms of sexual expression in transgender populations has also been confirmed in previous research [43].

Sexual satisfaction (SSQ)

Findings from studies examining the sexual experiences of transgender individuals after gender reassignment surgery (SRS) are heterogeneous, which may result from methodological differences between studies as well as variation in the studied populations. Despite this variability, some recurring observations regarding the sexual behavior of transgender individuals can be identified in the literature. Most studies focus on such aspects of sexual functioning as the frequency of sexual contacts and masturbation [13–15].

In the present study, half of the transgender participants achieved a moderate level of sexual satisfaction (50%), 31% obtained high scores, and 19% low scores on the Sexual Satisfaction Questionnaire. Similarly, in another study [36], the mean post-coital satisfaction score was 3.17 on a five-point scale. Analysis taking into account the stages of the diagnostic and therapeutic process revealed significant differences between groups. At the first and second stages, transgender women achieved significantly higher scores than transgender men. At the third stage, the opposite pattern was observed, with transgender men reporting higher levels of satisfaction. Furthermore, both transgender women and transgender men after gender reassignment surgery achieved significantly higher scores compared with the period prior to surgery, which confirms previous observations [42, 44].

The literature also includes studies that do not demonstrate significant differences in overall sexual satisfaction depending on the stage of transition or the type of gender-affirming treatment [45]. This may suggest that the level of sexual satisfaction is also influenced by other factors, such as psychosocial conditions, the quality of partner relationships, and access to specialized support, as highlighted in other studies [9, 21, 34, 45].

Regarding the frequency of sexual activity, most studies report an increase in sexual intercourse among transgender men undergoing testosterone therapy and a decrease among transgender women receiving estrogen therapy [18, 47], although some studies have not confirmed a direct relationship between hormone therapy and the frequency of intercourse, suggesting that the effect may be mediated by changes in sexual desire [18]. In one study, Yaish et al. [47] demonstrated that gender-affirming hormone therapy was associated with increased sexual desire among transgender men and decreased erectile function among transgender women, without significant changes in other dimensions of sexual functioning. Long-term prospective observations by Defreyne et al. [48] further confirmed that although GAHT produces short-term effects on sexual

desire – an increase after testosterone in transgender men and a decrease after estrogen in transgender women – after three years libido tends to return to baseline levels. Interestingly, gonadectomy in transgender individuals, unlike in cisgender individuals, has been associated with an increase in sexual desire. Finally, other studies [43] emphasize the important role of body dysphoria in shaping sexual well-being and pleasure. The more strongly dysphoria affects body areas closely related to sexual functioning (such as the genitals or chest), the greater its influence on engagement in intimate relationships and sexual satisfaction. Overall, although medical interventions such as SRS or GAHT may have positive effects on sexual satisfaction and sexual functioning, a comprehensive understanding of transgender individuals' sexual experiences requires consideration of multiple interacting factors, including psychological and social conditions as well as the level of body dysphoria.

Regardless of other factors that may influence sexual satisfaction, the results of the present analyses indicate differences in its level among individuals at different stages of the diagnostic and therapeutic process. Sexual experiences may serve for many individuals as a confirmation of gender identity, potentially strengthening self-awareness and facilitating the acceptance of both sexuality and gender identity.

Conclusions

The results of the study indicate that the sexual functioning of transgender individuals may be associated with various biological, psychological, and social factors, as well as with the stage of the diagnostic and therapeutic process. The obtained findings suggest that the advancement of the transition process is related to both the level of sexual activity and the perceived level of sexual satisfaction. Individuals at the third stage –after legal gender recognition and undergoing hormone therapy – reported the highest levels of sexual activity, the greatest satisfaction with their sexual lives, and the highest level of openness in intimate relationships. This stage was also associated with significantly lower levels of concern related to engaging in sexual activity.

Further analysis also confirmed that important predictors of sexual satisfaction include acceptance of one's genitalia, sexual experiences consistent with experienced gender prior to legal gender recognition, and open communication with a sexual partner. Individuals who reported a positive attitude toward their bodies and who were in relationships characterized by mutual honesty and understanding achieved higher scores on the Sexual Satisfaction Questionnaire (SSQ). Significant associations were also observed between the importance attributed to sexuality and the level of sexual satisfaction, particularly among transgender men in the first stage of transition.

The results also indicate limited communication regarding the use of protective methods in sexual contacts. Most transgender individuals reported that they did not discuss this issue with their sexual partners, particularly at later stages of the transition process. At the same time, a high proportion of respondents reported viewing pornographic content as a source of sexual inspiration, and nearly half reported using erotic devices, which may indicate the need to expand knowledge regarding safer and more informed sexual practices.

In summary, the findings indicate differences in selected aspects of sexuality, intimate relationships, and sexual satisfaction among transgender individuals depending on the stage of the transition process. At the same time, they highlight the need for continued interdisciplinary research on this topic and for the development of psychosexual and educational support tailored to the specific needs of transgender individuals at different stages of life and gender affirmation.

Limitations of the study

Despite its cognitive and practical value, this study has several important limitations that should be considered when interpreting the findings. First, the sampling method was purposive and non-probabilistic. Because participants were recruited from clinical centers, the sample is not fully representative of the broader transgender population. The study was conducted in only two centers, which may restrict the perspective to individuals with access to specialized medical and psychiatric care, a group that is relatively more privileged in terms of diagnostic and therapeutic opportunities. It should also be noted that the subgroup sizes, particularly those in the first stage of transition were relatively small, which limits the statistical power of comparative analyses. Finally, the study was cross-sectional, preventing the assessment of changes over time or causal relationships between the analyzed variables.

Notwithstanding these limitations, the study constitutes an important step toward a better understanding of transgender sexuality in Poland and may serve as a foundation for further longitudinal, comparative, and qualitative research that incorporates socio-cultural diversity and the dynamics of transition processes.

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