

# Clinical and Phenomenological Characteristics of the Formation of Gender Reassignment Ideation in Schizophrenia Spectrum Disorders

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**Objective.** To study the characteristics of the formation of gender reassignment ideation in schizophrenia spectrum disorders and the differential diagnosis of these psychopathological formations vs. transsexualism. **Material and methods.** The study included 100 outpatients referred for consideration of gender reassignment. Subjects were divided into two groups. Group 1 consisted of 58 patients with schizophrenia spectrum disorders (F20.0; F21; F22) and gender reassignment ideation. Group 2 included 42 patients with diagnoses of “transsexualism” (F64.0). Clinical psychological, pathopsychological, and statistical study methods were used. **Results and conclusions.** Patients with transsexualism were statistically significantly more often adapted in terms of work and family, had experience of living in the desired gender, used independent hormone therapy, and underwent gender-determining interventions before attending medical boards for gender reassignment and were also more rarely hospitalized in psychiatric institutions ( $p < 0.05$ ). Patients with schizophrenia more frequently experienced delays and disharmony in psychosexual development. Gender reassignment ideation was more frequent in schizotypic disorders. Gender reassignment ideation in schizophrenia spectrum disorders generally formed in the soil of pre-existing abnormalities at the early stages of formation of sexual identity. The central place in the psychopathology of schizophrenia spectrum disorders with gender reassignment ideation is occupied by depersonalization-dysmorphophobic experiences forming the background on which overvaluation, delusion-like, or paranoid gender reassignment ideation formed.

**Keywords:** gender identity disorders, transsexualism, gender dysphoria, schizophrenia spectrum disorders, schizophrenia, gender reassignment ideation.

Questions of gender identity, which currently produce a particular social resonance, are important for the state legal system and healthcare [1]. Over the last decade, many countries around the world have seen increases in medical attending by patients wanting gender reassignment [2]. At the same time, the desire for gender reassignment can be formed not only in transsexualism, but also in other psychopathological states. Russian and foreign studies have demonstrated that among people attending medical institutions for gender reassignment, the proportion with schizophrenia spectrum disorders ranges from 1.8% to 24% [3, 4].

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In addition, the question of the relationship and interaction of schizophrenia and transsexualism remains insufficiently studied. Bleuler [5] considered cases of gender identity doubt in some schizophrenic patients as a direct consequence of the schizophrenic process. Krizer and Lindinger (cited in [6]) suggested that the onset of the endogenous process at early age can impair the formation of sexual self-awareness, with the result that gender identity, gender role behavior, and the orientation of sexual desire can be altered, especially when influenced by adverse environmental factors. Kagan [7] took the view that unconscious impairments to gender identity, not apparent in the pre-morbid period, could provide the “soil” determining the content of delusional experiences. It was suggested that the schizophrenic process might influence the manifestations of exist-

ing gender identity impairments [4, 8]. Another view is that transsexualism and schizophrenia can coexist [3, 4, 8–11].

Some patients suffering mental disorders see gender reassignment as a way of adjusting their lives. They believe that only gender-determining procedures will allow them to continue their education, find a good job, arrange their personal life, and widen their circle of friends. However, these expectations are not always justified. Even after transitioning, many patients retain low levels of social and occupational adaptation and remain dissatisfied with the results of surgery; some seek sex change reversal [12].

Given the irreversibility of most gender-determining procedures, it is clearly important to distinguish “true” transsexualism from other psychopathological states which involve the formation of gender reassignment ideation, particularly schizophrenia.

In addition, it is important not only to make the correct differential diagnosis between transsexualism and gender reassignment ideation in schizophrenia spectrum disorders, but also to determine ongoing patient management tactics. Gender reassignment ideation in the framework of processual endogenous disorders is usually persistent and in some cases resists psychopharmacotherapeutic correction, while an obsessive attitude to gender reassignment when it cannot legally be carried out not infrequently leads to suicide and other autoaggressive actions.

Nonetheless, current views on providing help to people with gender identity disorders in schizophrenia are ambiguous. Some investigators [13, 14] regard gender reassignment ideation exclusively as delusional and recognize the need for psychopharmacological treatment. These views are supported by deterioration in the mental state of such patients on the background of hormone therapy during gender reassignment procedures [15]. Others, adhering to the point of view that transsexualism and schizophrenia can coexist, have proposed providing medical care to such people in the same way as to patients with transsexualism [3, 8, 9]. It is suggested that stress associated with gender dysphoria can exacerbate the course of comorbid mental pathology, particularly promoting exacerbations of psychotic symptoms [11].

Thus, the absence of any unified view on the interaction between gender identification disorders and schizophrenia spectrum disorders generates the need for further research.

The aim of the present work was to study the characteristics of the formation of gender reassignment ideation in schizophrenia spectrum disorders and to carry out a differential diagnosis between these pathological formations and transsexualism.

**Materials and methods.** Studies were performed at the Department of Gender Studies and the Treatment of Sexual Dysfunctions, Moscow Science Research Institute of Psychiatry, an affiliate of the Serbskii National Medical Research Center for Psychiatry and Narcology, Russian Ministry of Health, from October 2018 to May 2020. The

study included 100 patients attending as outpatients for gender reassignment.

Study patients were divided into two groups. Group 1 consisted of 58 patients with schizophrenia spectrum disorders (diagnoses of schizophrenic paranoia, F20.0; schizotypic disorder, F21; chronic delusional disorder F22) with gender reassignment ideation. Within this group, 22 patients (38%) were women and 36 (62%) were men; mean age at attendance was  $25.5 \pm 10.0$  years.

Group 2 included 42 patients with diagnosis of transsexualism, F64.0, among whom 26 patients (62%) were women and 16 (38%) were men; mean age at presentation was  $26.2 \pm 6.6$  years.

The study excluded patients with endocrine and genetic diseases, which cause gender identity disorders, as well as patients with severe somatic pathology.

Clinical psychopathological and pathopsychological study methods were used. Data were processed statistically in SPSS Statistica using descriptive statistics methods (computation of mean values and standard deviations) and nonparametric methods – the Mann–Whitney U test and the Pearson  $\chi^2$  test.

**Results and discussion.** Of the 58 patients in group 1 (schizophrenia spectrum disorders), only nine (15.5%) had partners, the other 49 (84.5%) being single or divorced; six (10.3%) had children. A total of 28 patients (48.3%) were employed, 16 (27.6%) were students, and 14 (24.1%) were neither working nor studying.

Inherited burden of mental illness was found in 19 schizophrenia patients (32.8%). Ten patients (52.6%) had relatives with alcoholism, five (26.3%) had affective disorders, and four (21.1%) had schizophrenia spectrum disorders.

A total of 21 patients (36.2%) had histories of hospitalization in psychiatric institutions. Fourteen patients (24.1%) had made suicide attempts, of whom 11 had tried to end their lives by suicide on the background of feelings of gender noncorrespondence. Self-harming behavior was seen in 24 patients (41.4%).

In this group, only 13 (22.4%) had experience of living in the desired gender, and the mean duration of this experience was  $3.8 \pm 3.1$  years.

A total of 45 subjects (77.6%) showed impairments to psychosexual development, mainly in the form of delay or disharmony. Homo- and bisexual sexual behavior was predominant (41.4%).

Twenty patients (34.5%) had independently commenced hormone therapy and one male patient had undergone orchidectomy before the therapeutic gender reassignment board.

Subjects of group 1 were dominated by patients with schizotypic disorders (45 patients (77.6%)), while eight patients (13.8%) had paranoid schizophrenia and five (8.6%) had paranoial schizophrenia. The oldest age for attending for gender reassignment was in patients with paranoial schizophrenia – an average  $46.4 \pm 13.3$  years. The corre-

sponding figure for paranoid schizophrenia was  $27 \pm 8.7$  years and that for schizotypic disorder was  $22.9 \pm 6.7$  years.

The eight patients with paranoid schizophrenia consisted of five men and three women. Psychotic episodes were linked with gender issues in seven patients. However, doubts regarding gender assignment arose during the prodromal period in adolescence or young adulthood and were accompanied by increasing dissatisfaction with their appearance, initially associated not with primary or secondary sexual characteristics but with the belief that they were overweight or had “incorrect” facial features. These disorders were accompanied by a depressive background mood and psychopathology-like behavior. It should be noted that most patients or their relatives reported details of gender role behavior in childhood. For example, behavior that was “too soft” and episodes of dressing in female clothing in boys and masculine behavior in girls. After psychotic episodes not linked with gender issues, some patients (five of eight) experienced strengthening of attitudes to gender reassignment. In terms of external appearance and behavior, these patients tried to achieve greater correspondence with the opposite gender. At medical institution attendances they said they “felt” themselves to be a person of the opposite sex and insisted on complete transition, i.e., updating of documents, hormone therapy, and surgical gender reassignment. Two patients experiencing psychotic episodes not linked with gender issues did not have stable attitudes to gender reassignment. They continued to experience doubts in relation to their sexual orientation but did not seek gender adjustment. Medical attending was initiated by relatives due to elements of trans role behavior.

In one male patient, a psychotic episode was accompanied by delusions of sexual metamorphosis with cenesthopathic features in the form of sensations of female-type bodily changes.

Schizotypic disorder with gender reassignment ideation was diagnosed in 45 subjects of group 1 (26 (57.8%) men and 19 (42.2%) women). Many patients (27, 60%) had shown signs of sexual self-awareness and gender role behavior from childhood, with lack of development of concepts of differences between the genders (“As a child I didn’t distinguish between boys and girls” [a female respondent] and “I thought girls also had a penis” [a male respondent], “I believed that when I grew up I would turn into a boy” [a female respondent]), preference for games more typical of the opposite gender, and cross-dressing.

In adolescence, some of the patients (28 cases, 62.2%) experienced doubts regarding their gender assignment. Some did not feel themselves to be either boys or girls, calling themselves “middle gender.” These phenomena can be regarded as a variant on autopsychic depersonalization. This was followed by development of rejection of their primary and secondary sexual characteristics, and the idea of changing gender developed. The leading syndrome at attendance consisted of overvalued ideas of gender reassign-

ment. In some cases, the affective charge of ideas of gender reassignment, the interpretation of the person’s own life in terms of their views of own trans identity, and the lack of sufficient insight into their own state allowed such psychopathological syndromes to be seen as delusional, the so-called overvaluation delusion [Birnbaum, 1915].

Another 14 patients (31.1%) formed the determination to undergo gender reassignment after the onset of signs of dysmorphophobia and was not limited to primary and secondary sexual characteristics. These patients initially experienced dissatisfaction with their appearance, which was not linked with the genitals. They developed the view that gender reassignment would avoid feelings of this type. Signs of depersonalization appeared on the background of dysmorphophobia as feeling that one is a member of the opposite sex with doubts about one’s own gender assignment and subsequent formation of overvalued views on gender reassignment. Patients dominated by dysmorphophobic experiences generally started hormone therapy independently and expressed the wish to undergo sex change and esthetic surgery.

In three cases, the symptoms of gender dysphoria appeared at age 4–6 years. These patients preferred to carry out tasks typical of the opposite gender and from childhood made attempts to socialize in the desired gender. At age 11–13 years, with the onset of secondary sexual characteristics, feelings of gender misalignment increased. Endogenous depressive or mixed affective disorders developed on this background, with episodes of delusion-like and illusory symptomatology, unusual and finicky fears, and particular changes in the emotional and thinking domains, providing grounds for suggesting a low-grade course of endogenous illness. Patients were poorly adapted to society. Within a small circle of close people (including family members), they followed a role opposite to that of their biological sex. Psychological investigation showed that changes to sexual self-awareness of the transsexual type arose on the background of impairments to the thinking and emotional domains typical of the schizophrenic process (loss of purposefulness, tangential thinking, cognitive slippage, impairments to generalization, emotional frigidity). These data lead to the suggestion that schizotypic disorder and gender identification disorder can be comorbid states.

The subgroup of patients with paranoid schizophrenia consisted of five males. These subjects were the latest to attend in relation to gender reassignment (age range from 27 to 61 years). Most cases were dominated by the idea of altering their social role, rarely asking about surgical sex change, which may be due to the relatively old age at which they attended and apprehension with respect to their somatic state. Attitudes to their own genitals were generally “neutral.” As in the case of males with paranoid schizophrenia and schizotypic disorder, subjects of this subgroup frequently noted childhood episodes of transdressing in female clothing and preference for games more typical of girls. In adolescence and young adulthood, these subjects developed

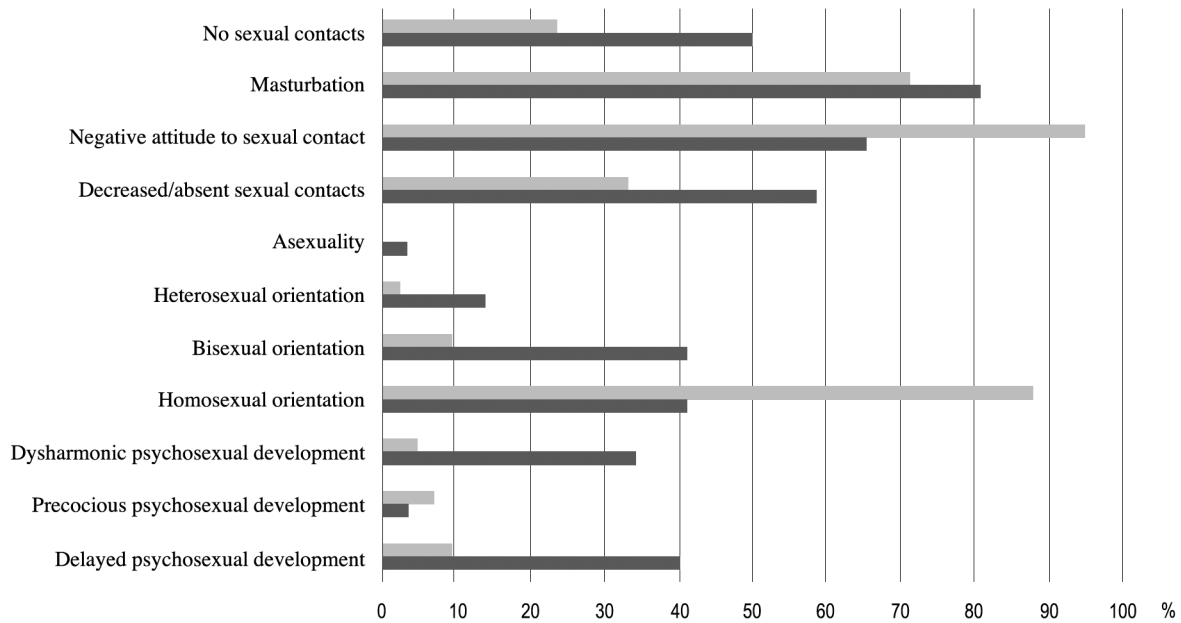


Fig. 1. Relative frequencies of signs of impairments to the psychosexual domain in patients with schizophrenia spectrum disorders and transsexualism ( $p < 0.05$ ): (■) subjects significant transsexualism; (■) subjects with schizophrenia spectrum disorders.

doubts regarding their gender assignment, often provoked by external factors such as random comments from acquaintances about being “too soft” or “looking feminine.” This was followed by rethinking of life experience and the search for facts supporting their transgender identity, which was accompanied by strengthening of views on sex change. It is of note that this group of patients had higher levels of adaptation. Almost all (four of the five) worked, and some were department managers or entrepreneurs. Two were married and their wives were aware of their husbands’ intention to undergo sex change and supported this intention.

The results of pathopsychological investigations indicated that patients with schizophrenia spectrum disorders had impairments to the operational (ambivalence, having multiple plans, tangentiality) and dynamic aspects of thinking, features of infantilism, dysharmony, and impoverishment in the emotional-personality domain.

Studies of the features of gender self-awareness in men with schizophrenia spectrum disorders frequently showed immaturity in the psychosexual domain, weakness of sexual attraction, and negative or ambivalent attitudes to themselves. Gender self-awareness was generally undifferentiated or dual. Gender role behavior was weak and the gender role was undifferentiated or had features of femininity.

In women, gender self-awareness and gender role behavior were also poorly differentiated or had features of femininity. A negative or ambivalent attitude to the self was noted. Concepts of male and female gender roles were poorly developed and sexual-erotic arousal was decreased.

Twenty-five patients (50%) of group 1 (three with paranoid schizophrenia and 26 with schizotypic disorder) received psychopharmacological treatment to reduce the

affective, neurotic, and psychopathy-like manifestations of the main disease. Treatment included antipsychotics, antidepressants, and normothymics depending on the leading syndrome. Treatment produced positive changes, with reductions in hallucinations (in patients with paranoid schizophrenia), stabilization of the affective background, and partial reductions in the severity of negative attitudes to sexual characteristics, though gender reassignment ideation persisted. Only two patients with schizotypic disorder had doubts about the need to undergo sex change and reduce the symptoms of gender dysphoria.

In group 2, consisting of 42 patients with transsexuality, 22 (52.4%) had partners and the other 20 (47.6%) were single or divorced; two (4.8%) had children. Most patients (31 cases, 73.8%) were employed, four (9.5%) were students, and the other seven (16.7%) were neither employed nor students.

Inherited burden of mental illness was noted in nine patients (12.4%). The relatives of three patients suffered from alcoholism and the same number from affective disorders. Drug addiction, autism, and organic brain damage were each encountered in one case.

Ten patients (23.8%) had attempted suicide, in all cases associated with feelings of gender noncorrespondence. Self-harming behavior was seen in 15 patients (35.7%). Three patients (7.1%) were hospitalized in psychiatric facilities due to comorbid mental pathology.

Forty patients (95.3%) displayed trans role behavior in childhood: choices of pastimes and clothing more typical of the opposite sex. From the onset of sexual maturation, patients started to reject, with different severities, their primary and secondary sexual characteristics as they developed

on the background of hormonal changes: from having a “neutral” attitude and ignoring changes through severe dislike to autoaggressive actions.

A total of 36 patients (85.7%) had experience of living in the desired gender and the mean duration of this experience was  $6.3 \pm 6.4$  years. Twenty-six patients (61.9%) started hormone therapy independently and eight (19%) underwent gender reassignment surgery before the gender reassignment medical board. In this group, for women it was generally more important to acquire the opposite social role, while for men it was more important to undergo gender reassignment interventions.

As compared with patients with schizophrenia spectrum disorder, subjects with transsexualism more rarely showed impairments to psychosexual development; homosexual sexual attraction was predominant (37 patients, 88%) (Fig. 1).

Nineteen patients (45.2%) had concomitant mental pathology, mainly organic CNS lesions, with the corresponding personality features, as well as personality disorders; anxiety and depressive disorders, both linked with feelings of gender noncorrespondence and autochthonous, were also present.

The pathopsychological investigation results showed that patients with transsexualism had the following main features of gender self-awareness:

– in men – gender identity was female or undifferentiated, but with a predominance of feminine features; attitudes to self were ambivalent or negative, and sexual attraction was weak.

– in women – gender identity was male and the behavioral model was masculine (often overplaying the role) and attitudes to self were positive or ambivalent.

**Conclusions.** The present study showed that patients with transsexualism were statistically significantly more frequently adapted to work and family life, had experience of living in the desired gender, started independent hormone therapy, underwent gender reassignment interventions before the gender reassignment medical board, and were more rarely hospitalized in psychiatric facilities as compared with patients with schizophrenia spectrum disorders ( $p < 0.05$ ). In patients with schizophrenia, awareness of gender noncorrespondence generally arose at a later age ( $p < 0.01$ ).

Studies using the Pearson  $\chi^2$  test demonstrated a statistically significant relationship between the diagnosis and the nature of the complaints presented. Patients with transsexualism “feel” that they are people of the opposite sex, while patients with schizophrenia spectrum disorder, apart from feeling that they are of the opposite sex, experience doubts in relation to their sexual assignment or express the desire to become a person of the opposite sex ( $p < 0.01$ ) (Fig. 2).

This study showed that gender reassignment ideation in schizophrenia spectrum disorders generally forms in the soil of ongoing abnormalities at the early stages of formation of gender identity, which is confirmed by the high frequency of impaired concepts of gender, cross-dressing, and inversion of gender role behavior from childhood. Attention

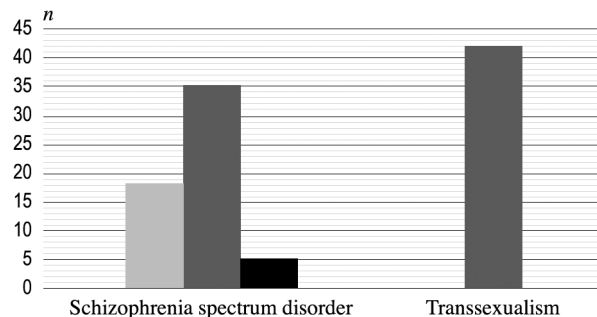


Fig. 2. Relationship between symptoms of impaired gender identity and diagnosis in schizophrenia spectrum disorders and transsexualism ( $p < 0.01$ ): ■) desire to be a person of the opposite sex; ■) feeling oneself as a member of the opposite sex; ■) doubts regarding gender assignment;  $n$  – number of patients.

is drawn to the common finding of delay and disharmony in psychosexual development in schizophrenia patients. The formation of attitudes to gender reassignment in schizophrenia spectrum disorders more often occurs in adolescence. The central place among schizophrenia spectrum disorders is occupied by depersonalization-dysmorphophobic experiences, with overvalued, paranoid, or delusional gender reassignment ideation forming on this background. This type of view is seen more frequently in schizotypic disorders than in other variants of schizophrenia and is less subject to psychopharmacotherapeutic correction. However, this point requires more detailed study.

The authors declare no conflicts of interests.

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