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Gender identity in schizophrenia

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Summary

The aim of this paper is to present actual knowledge on how do people with schizophrenia experience themselves in the context of gender and how it affects their functioning.

A review of the literature available in PubMed, PsycNET and Google Scholar was performed accordingly. Study of gender identity issues in schizophrenia should take into account both the personal and social dimensions of patients' functioning. The research on the core gender identity poses numerous difficulties and has not yet provided reliable conclusions. Some indications allow to assume higher than in the general population incidence of gender dysphoria among people with schizophrenia and a higher incidence of schizoid and schizotypal traits among people with gender dysphoria. Some patients experience positive symptoms regarding sex change. The data on the gender roles in schizophrenia patients show that they differ from the general population in terms of typically female and male characteristics. This may cause adaptive difficulties and negatively influence social interactions, especially in males who suffer from this illness. To sum up, published reports indicate specific difficulties in relation to gender identity among people with schizophrenia.

Key words: schizophrenia, gender identity, gender roles

Introduction

Gender identity is a subjective experience of one's gender and is one of the essential components that determine sexuality and identity in general. At the same time, it is a multifaceted and complex construct. Beginning with Money, authors have distinguished various components of gender identity, oscillating around two fundamental elements: (1) internal conviction of belonging to a specific gender referred to as core gender identity, and (2) adaptation and implementation of sociocultural patterns defining behavior appropriate for women and men, attitudes and expectations, called the gender role [1–3]. The issue of gender identity in schizophrenia, after a period of

increased interest in the 1970s, is disproportionately scarce in relation to the gender dimension in human life. According to Nasser et al. [4], the dominance of neurobiological perspective in schizophrenia research has led to the neglect of the role of sociocultural factors in the understanding of the image and experience of this illness. On the one hand, this gap makes it often difficult to see how people with schizophrenia experience themselves in the context of gender and the importance of gender for their functioning. As stated by Sajatovic et al. [5, p. 96]: "Perhaps in relation to deep and pervasive stigmatization of mental illness, men and women with schizophrenia often appear 'genderless' insofar as mental illness itself is perceived to eclipse other factors in identity". On the other hand, the gender stereotypes may distort the clinical assessment of behaviors, resulting in a greater tendency to pathologize functioning of patients presenting non-compliance with them. Clarification of the complex role of gender in illness processes is an important research direction that would increase understanding of the complexity of symptoms and the subjective experience of schizophrenia [4, 6]. Lewine [7, 8] pointed out the necessity of distinguishing between two ways of understanding gender in the study of schizophrenia, i.e., between the demographic category of the biological gender, that is, being a woman or a man ('sex') and the specificity of gender attributes, that is, femininity and masculinity ('gender'). According to him, this distinction does not include the initial assumptions about the nature of gender differences, while providing a dimension that allows for more accurate examination of them. The review is based on searches for the term 'schizophrenia' in conjunction with 'gender identity', 'gender identification', 'core gender identity', and 'gender role' in PubMed, PsycNET, and Google Scholar search engines. Searches were made twice: in November 2016 and February 2017. Articles available in English and Polish were taken into account.

Core gender identity in schizophrenia

Internal conviction about belonging to specific gender is generally determined at the age of 2–3 years and exhibit immutability in the course of life [2, 3]. Arieti [as cited in: 4] states that one of the relatively common characteristics of self-image among people with schizophrenia was uncertainty about gender identity during childhood. LaTorre [1] noted that this identity component is difficult to investigate directly because it is largely based on unconscious factors. He pointed, however, to the possibility of assessing gender identity in schizophrenia by examining the patient's body image, due to the close relationship between the two constructs. Research on this subject, often conducted using projective methods (especially different forms of human figure drawing), contained numerous methodological shortcomings and their results were inconsistent and difficult to interpret. The basic source of knowledge about the core gender identity in schizophrenia are reports on the problems of patients in this area.

The literature provides data on slightly more frequent occurrence of gender dysphoria in patients with schizophrenia than in the general population [9–11]. Precise estimation of the incidence of this phenomenon, however, may cause difficulties due to frequent not taking treatment of gender dysphoria or non-disclosure of the problem, as well as common belief among the clinicians about the mutual exclusion of these two units. Less than 5% of patients with schizophrenia take steps to surgically adapt the body to the experienced gender [12]. Studies in patients treated for gender dysphoria have shown varying, but often higher than expected, rates of schizophrenia among them [9, 13–17]. The coexistence of schizophrenia and gender dysphoria is a particularly problematic situation because of their mutual interactions, which hampers proper diagnostic and clinical management [18–20], as well as the occurrence of positive symptoms unpleasant for patients [21–23] and an increased risk of self-castration or suicide [18, 24–26].

Patients are more likely to experience positive symptoms of sex change taking different variants (not belonging to their own sex, gender neutrality, simultaneous belonging to both sexes, belonging to the opposite sex) [19, 24, 27–29]. These types of symptoms may be considered as delusional misidentification syndrome [28]. Positive symptoms of sex change can affect up to 25% of the patients at some point in their lives [19, 30, 31].

Inquiring the specifics of gender identity in schizophrenia it is also worth to refer to studies on schizoid and schizotypal traits among people with gender dysphoria. Significant increase in schizotypal symptoms has been demonstrated in adults who have been diagnosed with sexual and gender identity disorders during adolescence [32] and the co-existence of gender dysphoria and schizoid personality [33]. Also, studies using the Minnesota Multiphasic Personality Inventory (MMPI) among patients with gender dysphoria revealed higher scores on a schizophrenia scale (Sc), but this regularity often concerned patients untreated hormonally or functioning incompatible with experienced gender [34, 35]. In a study by Finney et al. [36], it was noted that in most cases, people applying for a sex reassignment surgery were not perceived as psychotic in a direct interview, though such tendencies were suggested by MMPI results analysis. Elevated Sc scale scores may therefore not necessarily be the result of the personality specificity of transgender patients as their isolation as a result of social stigmatization.

The issue of core gender identity in schizophrenia is still poorly understood and needs to be verified in studies. It would be particularly useful to include gender identity in longitudinal psychiatric morbidity studies conducted in large groups from the early stages of development. However, it is necessary to develop an appropriate methodology.

Gender role in schizophrenia

LaTorre [1] distinguished three components of the gender role: (1) gender-role adoption, (2) gender-role preference, and (3) gender-role ability. Based on a review of the studies on these components in schizophrenia conducted to the mid-1970s, he stated that despite the varied methodology and the frequent ambiguity of the findings, studies suggest a specific 'weakening' of the gender role, at least in some patients.

The dimensions of femininity and masculinity in people with schizophrenia

Research on the adoption and implementation of gender patterns among people with schizophrenia have been taken in an attempt to identify another dimension of psychopathology in them, as then discrepancies between stereotypical gender traits and behaviors and biological sex were interpreted in this way. For example, in analysis of recordings of family interaction in 67 young adults diagnosed with schizophrenia and 56 persons without this diagnosis, it was estimated that schizophrenic men indicated more social withdrawal, lower activity and lower levels of dominant behaviors, while schizophrenic women were more active and dominant than women in the control group [37].

The change of perspective took place in the 1970s, with Bem's conception that assumes that high intensity of both female and male characteristics is the most adaptable and therefore the most conducive to mental health. The first studies using the Bem Sex Role Inventory (BSRI) among schizophrenic patients showed higher scores on femininity and suggested their association with duration of treatment and worsening of mental functioning [1, 4]. LaTorre and Piper [38] showed lower scores on a scale of masculinity in the BRSI in long-term hospitalized men with schizophrenia, while this regularity is not observed in the group of women, as well as lower scores on a scale of femininity among schizophrenic women newly admitted to hospital, what was not noted among the newly admitted male patients. Based on the scores in the Terman-Miles Attitude-Interest Analysis Test, an adequate knowledge of gender was found among patients newly admitted to hospital and knowledge more typical of women was found among the long-term hospitalized patients. The scores in the Role Preference Test indicated a tendency to prefer gender roles appropriate for the opposite sex. These data were not consistent with the results in the Embedded Figures Test and the Mf scale in the MMPI, which showed no specific of gender identity in patients with schizophrenia. According to LaTorre [1], causes of gender role specific observed among patients should be seen not so much in psychiatric hospitalization, or in its duration, but in the progression of the illness itself. Nasser et al. [4], commenting on the association between poorer mental functioning of the patients and the higher rate of characteristics considered to be typically feminine, indicate the unclear nature of this relationship due to the stereotypical perception

of passivity permanently embedded in the functioning of chronically ill persons as more feminine.

Also more recent studies confirm some divergences between cultural demands and gender roles in people with schizophrenia. In a study of 90 patients with schizophrenia and schizoaffective disorders, using the BSRI, Sajatovic et al. [5] demonstrated that patients of both sexes obtained scores in terms of traits traditionally associated with the male role at a lower level than assumed by the normative expectations specific to their gender. Tsirigotis and Gruszczyński [39] studied 78 people with schizophrenia with selected scales of the MMPI stating a stronger identification with the traditional social role related to gender than in the healthy control group. However, the patients revealed a lesser extent of the characteristics commonly referred to as 'masculine' (firmness, initiative and expansion). 25.64% of the patients answered diagnostically to statements regarding the disturbances in the area of gender identity.

The data suggest that patients with schizophrenia may have lower rates of traits considered typical for their gender or higher rates of characteristics typical of the opposite sex. This attribute should be considered in terms of interpersonal differentiation and does not represent any form of mental pathology itself. It may, however, limit the adaptability of patients and make it difficult for them to meet social requirements.

The impact of gender role on the functioning of people with schizophrenia

Research exploring the sex differences in schizophrenia suggest higher rates of premorbid functioning, later onset and fewer symptoms of illness, more frequent being in a relationship and having children, and better professional and social functioning in women, and in men worse adaptation before and after the onset of illness, increased incidence of antisocial behavior and substance abuse [5, 40–49]. These differences may be explained, apart from biological factors, by the varied ways of perceiving patients and the expectations expressed towards them. Andia et al. [45] showed that with an even level of symptoms and neurocognitive functioning (Evaluated on the basis of the Halstead-Reitan Neuropsychological Battery and the Wechsler Adult Intelligence Scale (WAIS)), women may experience less adverse interpersonal and psychosocial consequences of schizophrenia. Great importance in translating these differences is attributed to earlier onset in men. The fact whether the illness occurs during adolescence or after reaching adulthood can actually significantly modify mental, relational or socio-occupational functioning. However, given the greater premorbid maladaptation in males, the age of illness onset may not be a factor itself [43]. Lewine [8] indicated that sex, but not gender, (as measured by the Mf scale in the MMPI) was a significant predictor of the age of first hospitalization among patients with schizophrenia and schizoaffective disorder (earlier hospitalization in men), even when controlled for the severity of the illness. Biological female sex and higher Mf scores in men and lower in women, interpreted as adopting more typical

female social roles, predicted better neuropsychological function (including language, executive function, verbal memory, spatial memory, visual perception, concentration, and motor speed) regardless of education, age or severity of the illness. Mueser et al. [46] proving better social skills of women with schizophrenia measured by role playing test highlighted that they are not simply the result of different perspectives in evaluating the behavior of women and men as they used standardized behavioral criteria. They emphasized, however, that women may experience less social stigma and greater tolerance for the illness, which in part may have a beneficial effect on their social competence.

The gender differentiation in the perception of patients may modify their treatment outcomes. Salokangas and Stengård [47] found more pessimistic predictions about the future functioning in schizophrenic men, which, as assessed 2 years later, turned out to be correct and consistent with psychiatrists' predictions. In the study of Haas et al. [41], 92 patients were divided into two groups which were treated with pharmacological therapy together with other therapeutic interactions. In one of these groups inpatient family intervention (IFI) was additionally applied. After 18 months, a superior response to the inclusion of IFI was observed in female patients – better clinical outcomes in terms of both symptoms severity and functioning. In contrast, in male patients who underwent the IFI, worsening in both mentioned dimensions was observed. Gender differences in family attitudes towards patients have also been reported. Treatment with IFI was associated with less critical attitudes in follow-up among female patients' families, while among men's families less critical attitudes were associated with treatment without IFI. Seeman [50] also pointed to the role of socioculturally conditioned family attitudes towards schizophrenic patients, indicating that in the case of men the basic concerns of relatives are related mainly to sexual impulsivity, aggressive behavior, alcohol and drug use and lack of activity, while in women concerns are focused on promiscuous behavior, unwanted pregnancy, experience of sexual abuse, physical health, hygiene, interpersonal relationships, and parenting. Seeman observed that in families of schizophrenic men a greater sense of guilt may occur, which is associated with an earlier onset of illness in men, that is, before the patient leaves his family home. In women, responsibility for their health may be easier assigned to other factors.

Nasser et al. [4] state that the manifestation of more feminine role in schizophrenic men seems to have more negative consequences to them than to women who manifest more masculine role because the gender role pressure is greater in relation to men. Men with schizophrenia may be, however, less able to perform activities associated with the normative gender role than women sharing the same diagnosis. The resulting impasse is not accompanied by the possibility of neutralizing it through the social support. Men with schizophrenia may experience significant problems in taking on the normative role of the initiator in building dyadic relationships effec-

tively, which is more likely to condemn them to solitude. In contrast, a greater ease in creating relationships is seen in schizophrenic women, for whom a more passive role in this context is expected. These factors can largely be attributed to lower probability of being in the relationship and lower rates of having offspring among men with schizophrenia [1].

More restrictive social and occupational requirements for men can translate into unrealistic expectations of their adaptation after the onset of illness, as well as worse emotional atmosphere in their families [41, 50]. Support from relatives, including involvement in the treatment process, may interfere with messages postulating the avoidance of dependency and emotional expression by men. Schizophrenic women, on the other hand, may be more likely to accept help from relatives because of the greater permission for the woman to depend on the family [4, 41]. In addition, a better social functioning of women, both before and after the onset of symptoms, gives the opportunity to interact more effectively with relatives. More often reported substance abuse and antisocial behavior among men with schizophrenia may in turn translate into poorer overall functioning of families, and therefore their lower support capacity [41].

The verification of the issue of adaptation and implementation of gender roles in schizophrenia conducted so far has been based on observational data, which does not allow to draw causal conclusions. Most of the reports come from trials with inadequate sizes. Methods for measuring various aspects of gender role may require revision because they were constructed on the basis of sociocultural gender patterns, which are subject of intense changes. Investigations in this matter also demand a reference to the intercultural context.

Relationship between schizophrenia and gender identity difficulties

Based on the available reports, it can be assumed that schizophrenia is associated with a certain degree of difficulty in forming and expressing a broadly understood gender identity. LaTorre [1] rightly points out that problems in this sphere are not specific to people with schizophrenia and should not be assumed to be a direct cause of schizophrenia. The potential links between schizophrenia and identity difficulties can be explained by four hypothetical mechanisms.

I. Identity difficulties as a stressor contributing to the onset of schizophrenia

LaTorre [1], referring to the model of vulnerability-stress, suggests that ‘gender-identity confusion’ may be a major stressor that increases the probability of developing schizophrenia in predisposed individuals. In his opinion, confusion is a source of numerous and overlapping stresses in the lives of people unable to deal with them effectively. He sees it’s sources in the inhibition of formation of identity

in accordance with the biological sex as a result of growing up in a disturbed family system inadequately providing appropriate patterns and information on gender. Subsequently, a person may experience significant difficulties in adopting patterns that are present in the areas of functioning outside the family. Identity difficulties may be more problematic for boys, which may be related to an earlier onset of the illness [1, 4]. The author also speculates that more severe gender identity problems are associated with poorer premorbid adaptation as well as increased severity of symptoms and chronicity of the illness [1].

II. Identity difficulties as a result of schizophrenia

In opposition to perceiving the important role of identity difficulties in the etiopathogenesis of schizophrenia, it can be assumed that they are a result of the illness itself. The change of perception of reality, triggered by the psychotic process, may also affect one's self-image in mental, bodily, and social dimensions. For some patients, this may result in positive symptoms regarding sex change. Also the influence of schizophrenia on patients' lives in the form of disadaptation in the areas of self-reliance, professional activity and social relationships as well as treatment, often associated with hospitalizations, can significantly alter the realization of gender patterns.

III. Shared neurobiological background of schizophrenia and gender dysphoria

Rajkumar [9] pointed out the grounds for recognizing both schizophrenia and gender dysphoria as neurodevelopmental disorders. In his opinion, previous neurobiological studies involving brain imaging, finger length ratio analysis and handedness showed significant similarities between schizophrenia and gender dysphoria groups, suggesting linking these states to changes in cerebral sexual dimorphism and cerebral lateralization. As a potential common causative mechanism, he mentions disorders of sex hormone concentrations during fetal development and decreased concentration of the brain-derived neurotrophic factor (BDNF). He also draws attention to the possible role of toxoplasmosis infection seen as one of the risk factors for schizophrenia which at the same time may affect fetal masculinization.

IV. The effect of schizophrenia-specific deficits of mental function on gender identity

The last of the presumed mechanisms is related to the specificity of mental development of prepsychotic individuals. Perhaps, a well-documented in these cases deficits of cognitive, emotional and social functioning also impair the processes involved in the shapeing of gender identity. These include processes that involve the ability to recognize and adopt sociocultural gender transmissions, and to establish relationships

with significant persons (e.g., parents or siblings) or interact with peer group of both the same and opposite sex. In this context, Rajkumar [9] refers to the reports of deficits in 'empathizing' (which is a preferred mode of interaction among women and potentially easier identification with men preferring interaction in 'systemizing' mode) in people with female-to-male gender dysphoria. Although these relationships were related to the association of gender dysphoria with autistic features, according to his opinion, in this way one can clearly explain the schizoid or schizophrenic characteristics observed in individuals with gender dysphoria.

Conclusions

1. Available data suggest a relationship between schizophrenia and difficulties in the development and realization of various aspects of gender identity.
2. Their nature needs to be further explored, i.e., whether identity difficulties play a role in the etiopathogenesis of schizophrenia, appear secondary to the psychotic process and to changes caused by the illness or co-occur with psychotic disorders.
3. There is also a need for empirical verification of the specificity of the relationship between core gender identity and gender role in the context of schizophrenia as well as the relationship between gender identity and other aspects of sexuality of schizophrenic patients.

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