

Original Article

Perceived self-compassion and self-esteem as self-evaluation constructs in patients with schizophrenia spectrum disorders, non-psychotic and healthy people: a comparative study based on group and gender differences

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Abstract

This study aimed to investigate the levels of self-compassion and self-esteem as a self-evaluation in patients with psychotic disorders, non-psychotic disorders, and normal people. In this causal-comparative study, 60 psychotic, 60 non-psychotic patients and 140 students were selected via convenience sampling method. Using Rosenberg's Self-Esteem Scale and Self-Compassion Scale (SCS), they were compared. Results showed that the level of self-esteem significantly differs between patients with schizophrenia spectrum disorders and normal people and also between non-psychotic disorders and normal people. The level of self-esteem in patients with schizophrenia spectrum disorders and non-psychotic patients was lower than in healthy individuals. Gender differences were not significant. However, the interaction effects of three groups of schizophrenic patients, non-psychotic patients, and healthy people, and two genders (3x2) were significant. Based on the results, the level of self-compassion in patients with schizophrenia spectrum disorders and non-psychotic patients was lower than in healthy people. Gender differences were not significant. However, the interaction effects of three groups of schizophrenic patients, non-psychotic patients, and healthy people, and two genders (3x2) were significant. The findings indicated that patients with schizophrenia showed low levels of self-compassion and self-esteem; therefore, it is essential to implement targeted treatment methods aimed at enhancing self-compassion and self-esteem in this population.

Keywords

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Self-evaluation
Schizophrenia
Gender

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Introduction

To understand how people with chronic diseases such as schizophrenia cope with their disease and society, it seems necessary to know the mental aspects of mental disorders. Kraepelin, Bleuler, and Sullivan have all studied how schizophrenia spectrum disorders affect the "self" of individuals (Heshmati, 2010). Despite the growing interest in cognitive functions in the clinical field, attention to mental experiences in schizophrenia seems obvious (Raballo et al., 2021). One of the mental aspects raised in schizophrenia spectrum disorders is self-esteem. In the research history, the term "respect" has had several definitions based on various theoretical perspectives (such as psychodynamic, cognitive-behavioral, social psychology, and humanistic psychology). William James defines self-respect as the ratio of a person's successes to their intentions, therefore, to increase his self-esteem, a person must either increase his successes or reduce his

expectations. Self-esteem is an aspect of self-concept and refers to the overall evaluation of one's attitudes and characteristics (Heshmati et al., 2021). Rosenberg (1979) believes that self-esteem is a motivational characteristic and people try to achieve it and avoid self-humiliation. These definitions show that self-esteem itself is not a fixed trait, but rather a dynamic state that fluctuates based on one's achievements and expectations. Studies related to schizophrenia have shown that the severity of symptoms in this disorder affects mental experiences related to self and especially self-respect (Burgin et al., 2022; Raballo et al., 2021). Decreasing self-esteem is one of the hypotheses raised in studies related to mental illnesses (Hamidi et al., 2023). Many studies have investigated the relationship between self-esteem in mental illnesses (Harari et al., 2023), especially in schizophrenia spectrum disorders. There is research evidence showing low self-esteem in these patients (Chen et al., 2023; Gerymski & Szelağ, 2023). In the research of

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(Sun et al., 2023), it was found that most psychotic individuals, particularly those with schizophrenia studied had low self-esteem. The results of this research showed that low self-esteem is an important characteristic in people with treatment-resistant delusions. Low self-esteem may be one of the factors of delirium formation by showing people's feeling of deprivation from the social world and therefore having a goal directed at others. On the other hand, some research evidence shows that delusions and hallucinations (Logoń et al., 2024) can increase people's self-esteem through attributions and blaming. In other words, intrapsychic factors may determine the content of delusions and hallucinations. Ghanem et al. (2023) believe that self-esteem is more stable than delusions and may continuously affect the content of psychiatric symptoms. Together, these factors lead to the point that self-respect is a potential target in the treatment and care of individuals with schizophrenia. Fond et al. (2023) by examining the research evidence related to self-esteem in schizophrenia spectrum disorders believe that self-esteem is low in these patients. On the other hand, there are studies that have shown that patients with schizophrenia spectrum disorders have a high level of self-esteem (Logoń et al., 2024). Therefore, researchers have not reached a significant agreement regarding the role of self-esteem in individuals with schizophrenia. On the other hand, although extensive research has been done in our country regarding the characteristics, etiology, and treatment of psychotic disorders and especially schizophrenia spectrum disorders and various psychological variables have been researched on them, looking at the literature of this, we recognize the absence of self-esteem as a potentially significant variable in this disorder and its role in the severity of symptoms in these patients.

Originally, (Neff, 2003) proposed the concept of self-compassion. He defined self-compassion as a multifaceted construct that includes three main components: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus overidentification. When individuals exhibit kindness towards themselves in the face of painful experiences, incompetence, or failure, they refrain from self-criticism and blame. Instead, they respond with warmth and compassion. Individuals who possess self-compassion recognize that they are not flawless and understand that making mistakes is a natural aspect of being human (Daneshvar et al. 2022; Ahmadi & Mirmohamadi, 2024; Mohamadi et al., 2024). They acknowledge that facing challenges is a common experience among all people. Self-compassion necessitates the management of negative emotions, ensuring that distressing feelings are neither repressed nor amplified, but rather acknowledged as experiences occurring in the present moment (Heshmati & Pellerone, 2018).

In the classic literature of psychiatry, self and problems of self-experience have been emphasized as the main features of schizophrenia spectrum disorders, but this has been neglected in recent research, as contemporary

pathology focuses on observable symptoms rather than underlying psychological factors. Interestingly, this is in contrast to the history of schizophrenia studies. From the beginning of the study of schizophrenia, the study of the self has played a central role. Although there has always been controversy about various aspects of schizophrenia, such as its etiology and symptomatology, there has been a broad agreement that disturbances in self-experience are a universal characteristic of individuals with schizophrenia. For example, Bleuler (1930) indicated that individuals diagnosed with schizophrenia exhibit issues concerning the self, manifested through self-disturbance, diminished agency, and a reduced capacity to control their thoughts. Despite the importance of self-related constructs such as self-compassion in the etiology, diagnosis, and treatment of patients with schizophrenia spectrum disorders, there has been no study that examines the importance of self-compassion levels in these patients. Studies that have been conducted have focused more on the mediating role of self-compassion in the relationship between childhood events and psychotic symptoms, such as the study by Richardson et al. (2023), which showed that self-compassion mediates the relationship between childhood sexual trauma and psychotic symptoms. Additionally, some studies have examined the role of self-compassion in acute episodes of psychosis following a depressive episode (Hardman et al., 2023).

Thus, among self-related constructs, two basic constructs that are associated with the pathology and treatment of psychological disorders, namely self-esteem and self-compassion, are not clear in patients with psychotic disorders compared to other psychiatric patients and normal individuals, as well as gender differences between these three groups. On one hand, as mentioned in the related literature, the levels of self-compassion in patients with schizophrenia spectrum disorders have not been investigated in any research, and the difference in its levels in these patients compared to other psychiatric patients and their gender differences in this regard are not clear. On the other hand, although some studies have shown low levels of self-esteem in patients with schizophrenia spectrum disorders, the findings in this regard are contradictory, and the extent of this important variable in individuals with psychotic disorders compared to other psychiatric patients and healthy individuals, as well as their gender differences, remains unclear. Also, culturally, there is no research in Iran that examines self-related constructs in these patients. Accordingly, in the present study, we seek to examine the following four hypotheses:

- 1- The levels of self-compassion in patients with schizophrenia spectrum disorders are lower than other psychiatric patients and healthy individuals.
- 2- The levels of self-esteem in patients with schizophrenia spectrum disorders are lower than other psychiatric patients and normal individuals.
- 3- There is a difference in the levels of self-compassion between the two genders in the three study groups.
- 4- There is a difference in the levels of self-esteem between the two genders in the three study groups.

Method

Participants

This is a causal-comparative and retrospective study. Among all outpatients and inpatients (men and women) suffering from schizophrenic and non-psychotic spectrum disorders referred to the psychiatric departments of Mostafa Khomeini and Hazrat Rasool (Akram) hospitals in Tehran, 60 psychotic patients and 60 non-psychotic patients and 140 healthy people of Tehran University students who were matched with each other in terms of some demographic variables (age, gender, occupation, literacy and marital status) were selected using the convenience sampling method and compared. For implementation, these centers were visited and the files of patients with schizophrenia spectrum disorders and psychiatric patients with non-psychotic disorders were studied. The criterion for selecting people in the patient group is to suffer from schizophrenia spectrum disorders (in this research, patients with schizophrenia spectrum disorders are those who have received a diagnosis of schizophrenia spectrum disorders, i.e. all patients with paranoid, disturbed, and other types of schizophrenia) and people with non-schizophrenic disorders. Psychotic (non-psychotic disorders in this research means all psychiatric disorders except psychotic disorders) based on the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) and was conducted by a psychiatrist using a diagnostic interview. If the condition of a patient is acute and serious, they are removed from the list of subjects, and in the case of other patients, only those who had received a definitive diagnosis were included and are out of medical emergency and have recovered relatively and are volunteers and were willing to answer questions.

Instrument

Self-Compassion Scale (SCS):

This scale is one of the most widely used tools for measuring self-compassion in healthy and ill individuals. The SCS consists of 26 items and is scored on a Likert scale from 1 (seldom) to 5 (almost always). Higher scores indicate higher levels of self-compassion. Various studies have shown that the SCS has good concurrent, convergent, and discriminant validity and has excellent test-retest reliability (Neff, 2003; Neff et al., 2007). Neff (2003) reported the Cronbach's alpha coefficient of the original version of this scale to be 0.92. Also, in another study, Neff and his colleagues tested this scale in Thailand, the United States, and Taiwan, and found Cronbach's alpha coefficients for each of these countries to be 0.87, 0.95, and 0.89, respectively. Also, the correlation coefficient between this scale and Rosenberg's self-esteem scale was 0.58 (Ghorbani et al., 2010). Alpha cronbach coefficients for the subscales and the total score of this scale were reported in the range of 0/65 - 0/92 on one Iranian sample (Basharpoor, 2014).

Rosenberg's Self-Esteem Scale (RSES):

It is a one-dimensional tool that is derived from the concept of the cognitive phenomenon of self-esteem and measures the subject's overall perception of self-worth. This scale consists of 10 items, each of which refers to self-respect and self-acceptance, and they are scored on a 4-point Likert scale from 1 (completely disagree) to 4 (completely agree). Items 1, 3, 4, 7, and 10 are scored positively and items 8, 6, 5, 2 and 9 are scored negatively. Matsuura et al. (2009) reported the alpha coefficient of this scale as 79%, and Martín-Albo et al. (2007) confirmed the one-dimensional structure of Jordan (2020) in terms of psychometric properties and showed that the internal consistency and correlation of the test-retest and its reliability is good and evidence has been provided that support the construct validity of this scale. In the research of Ghorbani et al. (2010), the correlation coefficient between this scale and the Cohesive Self-Identity Scale in Iranian samples was reported as $r = 0.56$ ($M = 2.58$, $SD = 0.72$).

Procedure

The selected subjects were taught how to answer the questions and they were asked to read the questions carefully and choose the desired answers according to their characteristics and not to leave a question unanswered as much as possible. Participants were informed that their participation was voluntary and that they could withdraw at any time. They were provided with information about the research and signed an informed consent form. The principle of confidentiality was upheld, ensuring that the questionnaires remained anonymous and that no individual responses were disclosed during the course of this investigation. Statistical analyses were run by SPSS (v.22.0). First, missing data (0.04 % of responses to individual items) were imputed using the expectation-maximization algorithm (Tabachnick et al., 2013). Descriptive statistics such as the mean and standard deviation of the sample were acquired. Univariate analyses of variance (ANOVA) were conducted to determine whether there was a significant difference between groups, gender, and the interaction effect of gender and group in self-compassion and self-esteem. The data were checked for outliers. No significant outliers were detected. In addition, data normality and skewness were evaluated using the Kolmogorov-Smirnov test for normality. The homogeneity of variance was examined using Levene's test. The Alpha level was set at $p < 0.05$.

Results

Table (1) showed that patients with schizophrenia spectrum disorders had the lowest mean of self-esteem. The mean of self-esteem in psychiatric patients with non-psychotic disorders was also lower than in healthy people. In the group of patients with psychotic disorders, the mean self-esteem of women and men was almost the same, in the group of non-psychotic patients, men were more than

women, and in healthy people, women were more than men. In addition, patients with schizophrenia spectrum disorders had the lowest level of self-compassion. The level of self-compassion in patients with non-psychotic disorders was also lower than in healthy people. Similarly, the level

of self-compassion in women and men with schizophrenia was almost the same, in the groups of non-psychotic and healthy people, men had higher self-compassion than women.

Table 1. Mean and standard deviation of the studied groups in the self-esteem variable

	Group	Schizophrenia		Non-psychotic		Healthy people	
		M	SD	M	SD	M	SD
Self-esteem	Woman	19.31	9.73	16.02	6.20	28.60	14.70
	Man	19.93	8.09	20.33	8.10	25.01	8.48
Self-compassion	Woman	21.01	10.02	24.13	7.18	33.12	7.13
	Man	21.16	9.87	26.02	9.09	35.18	9.19

Table 2 showed that variances in self-esteem and self-compassion were equal across the studied groups. Results showed that the assumption of homogeneity of

variances was confirmed to investigate the differences between the studied groups.

Table 2. Levine's test to check the homogeneity of the variance of the groups

	Sig.	F	df _r	df _v
Perceived self-esteem	0.485	0.896	254	5
Self-compassion	0.12	1.73	254	5

Table 3. Analysis of variance test results in the studied groups

Dependent variable	Independent variable	SS	Df	MS	F	Sig.	group comparison	MD	Sig.
Self-esteem	Group	3851.97	2	1925.98	17.98	0.001	1<2	2.28	0.449
							1<3	7.20	0.001
							2<3	9.49	0.001
	Gender	10.27	1	10.27	0.096	0.76			
	gender×group	628.21	2	314.11	2.93	0.05			
Self-compassion	Group	3918.09	2	1959.04	18.39	0.001	1<2	5.8	0.12
							1<3	14.01	0.000
							2<3	8.2	0.004
	Gender	12.81	1	12.81	0.123	0.61			
	gender×group	653	2	326.5	3.12	0.047			

Table 3 showed significant differences in self-esteem ($F=17.98$, $p<0.001$), in three groups of patients with schizophrenia, non-psychotic disorders and healthy people. Tukey's test showed that there was a significant difference between patients with schizophrenia spectrum disorders and normal people ($p<0.001$) and patients with non-psychotic disorders and normal people ($p<0.001$) in the variable of self-esteem. The differences between patients with schizophrenia spectrum disorders and non-psychotic patients were not significant. Examining the mean showed that self-esteem was lowest among patients with schizophrenia spectrum disorders, followed by patients with non-psychotic disorders, with healthy individuals showing the highest levels. Examining the differences between men and women in the variable of self-esteem showed that the differences ($F=0.096$, $P>0.001$) were not significant. This means that the mean of self-esteem in three groups of patients with schizophrenia spectrum disorders, non-psychotic and healthy people had no significant difference between men and women. The interaction effects of three groups of schizophrenic patients, non-psychotic patients, and healthy people, and two genders (3×2) were significant ($F=2.93$, $P<0.05$). This means that when the factor of gender was interactively placed

next to the factor of the group, it affected the self-esteem of the people.

The findings showed that three groups of patients with psychotic, non-psychotic disorders, and normal people have a significant difference in the self-compassion variable ($F=18.39$, $p<0.001$). Further investigations and Tukey's test show that among these three groups, there are low levels of self-compassion among patients with psychotic disorders, and among patients with non-psychotic disorders, it is lower than normal people.

An analysis of gender differences showed no significant difference in self-compassion between men and women ($F=0.123$, $p<0.61$). The interaction effects of three groups of schizophrenic patients, non-psychotic patients and healthy people and two genders (3×2) were significant ($F=3.12$, $p<0.047$). This means that when the factor of gender was interactively placed next to the factor of the group, it affects the self-compassion of the people.

Discussion

The present study aimed to investigate self-compassion and self-esteem as aspects of self-view in patients with schizophrenia spectrum disorders, non-psychotic patients, and normal people. The findings showed that

the level of self-esteem in patients with schizophrenia spectrum disorders is lower than in non-psychotic patients, and in non-individuals with schizophrenia it is lower than in healthy individuals. In other words, the amount of self-esteem in schizophrenic people was lower than in the other two groups, and this point shows that self-esteem as a mental construct is effective in psychotic disorders especially schizophrenia. This finding is in line with the findings of [Suman et al. \(2023\)](#); [Daemen et al. \(2023\)](#); and [Barbalat et al. \(2024\)](#) are in line. Self-esteem involves trusting in one's ability to think and in one's right to be successful, happy, valuable, and expressing needs and desires. With high self-esteem, we will be more likely to face problems, but in conditions of low self-esteem, the possibility of giving up or at least not using all our strength is more likely ([Heshmati et al., 2024](#)).

Self-esteem has a very close relationship with a person's mental image of himself as well as the way he adapts. This means that a positive image of one's body causes a person to feel valuable, and conversely, the mental image that has been changed in any way leads to changes in the amount of valuable feeling. Illness, treatments, or related complications lead to a change in mental image and especially self-esteem, and this is much more obvious in chronic diseases due to their long and unpredictable nature.

[Suman et al. \(2023\)](#) showed that individuals with psychotic disorders have lower self-esteem compared to healthy people. In line with this finding, in the research of [Daemen et al. \(2023\)](#), it was found that low self-esteem is one of the major and pervasive problems in schizophrenia spectrum disorders and other psychotic disorders. The results of [Barrowclough et al. \(2003\)](#) research showed that self-esteem in schizophrenic people has a weak relationship with demographic variables, instead, self-esteem is strongly associated with clinical and mental variables such as labeling these people.

One explanation for these findings is that criticism is a key factor in reducing self-esteem in individuals with schizophrenia. For example, in the research of [Werner et al. \(2008\)](#), it was found that there is a relationship between labeling, self-esteem and age in schizophrenic people. The label of schizophrenia for these individuals leads to a diminished sense of self-esteem among them. People with high insight had confirmed self-label beliefs had low self-esteem and hope, and had fewer interpersonal relationships than people with high insight who rejected self-label beliefs. Low self-esteem and hope increase people's vulnerability to labels.

Another significant factor in reducing self-esteem among individuals with schizophrenia is social isolation and withdrawal from interpersonal relationships. In support of this finding, the research results of [Barrowclough et al. \(2003\)](#) showed that isolation and being away from society is one of the factors of reducing self-esteem in schizophrenic people. As the above research showed, having at least one close friend was a positive and strong predictor of self-esteem in

schizophrenic people. Therefore, by improving interpersonal relationships and expanding communication with people around you, you can increase self-esteem among these people.

The findings showed a significant interaction effect between group and gender. Considering the averages, it can be said that the self-esteem levels of women in the two groups of patients are low and its level is high in healthy women compared to men. [Gilligan \(2013\)](#), a developmental psychologist, offers the following hypothesis to explain the difference in self-esteem: a man first determines his identity and then looks for close relationships; A woman follows the reverse process, first establishing social relationships and then developing her identity. [Gilligan \(2013\)](#) has conducted research to find a relationship between the perceptions of adult women and the perceptions of adolescent girls. The results show that, in general, 11-year-old girls still maintain their self-confidence: in their relationships, they still express what they like and what they don't like, and they are confident in their strength and frankness. Around 15 to 16 years old, the young girl says more and more: I don't know, I don't know, I don't know. Gilligan hypothesizes that in adolescence, girls begin to doubt the worthiness of their inner beliefs, feelings, and commitments in meaningful relationships. A young girl, at the age of 11, asserts herself and says what she thinks, but after two or three years, she gradually fears the rejection and anger of others, and as a result, she keeps her thoughts hidden and tends to suppress autonomy. On the other hand, schizophrenic patients are weaker and more fragile. Therefore, it can be said that more emotional repression in women and the fragility of schizophrenic people lead to the low self-esteem of these people.

The results indicated that individuals diagnosed with schizophrenia spectrum disorders exhibit a lower level of self-compassion compared to those without psychotic conditions, while non-psychotic patients also demonstrate lower self-esteem than healthy individuals. The level of self-compassion among individuals with schizophrenia was found to be lower than that of the other two groups. This observation indicates that self-compassion, as a psychological construct, plays a significant role in psychotic disorders, particularly in the context of schizophrenia.

Currently, little research has investigated self-compassion levels in individuals diagnosed with psychotic spectrum disorders. Consequently, this study has contributed a novel discovery to the existing body of literature. [Richardson et al. \(2023\)](#) showed that self-compassion mediates the link between childhood sexual abuse and both paranoia and psychotic symptoms in adulthood. Additionally, another study indicated that self-criticism, but not self-compassion, is associated with psychotic-like experiences (PLEs) endorsement, suggesting they are separate factors with different relationships to PLEs.

In explaining this finding, it can be said that given that patients with schizophrenia spectrum disorders have a

fragmented self and identity confusion, firstly they cannot find an integrated view of themselves and secondly, they lose the ability to communicate with themselves. These patients have not been able to separate themselves from significant others, especially the mother, during early development, so they suffer from a state called undifferentiated self. The concept of differentiation expresses the degree of an individual's ability to think realistically about emotionally charged issues in the family. According to Bowen's theory, differentiation occurs in two dimensions: intrapsychic and interpsychic. At the intrapsychic level, differentiation includes the individual's ability to thoughtfully examine situations, be fully aware of personal emotions and feelings, and have rational reasons or effective experiences related to situational needs. Bowen believes that the level of differentiation of an individual grows within the family of origin, is strongly influenced by the dynamics and interactions between family members, and affects the individual's future life (Calatrava et al., 2022). According to Bowen's theory, self-differentiation includes emotional and cognitive separation, as well as independence from others, and individuals gain an understanding of their identity during the process of individuation. Therefore, this differentiation from the original family enables them to accept responsibility for their thoughts, feelings, perceptions, and actions. In other words, a differentiated individual has the ability to deal with life's issues and problems logically and can prevent dealing with issues emotionally. On the contrary, people with a low level of differentiation have higher anxiety and a greater fusion between their cognition and emotions, and experience emotional tensions in their relationships with others (Murdock et al., 2023). Thus, due to the severe lack of differentiation in schizophrenia patients compared to other psychiatric patients and normal individuals, they do not gain sufficient understanding of their internal psychological processes. However, compassion requires integrity, self-knowledge, and acceptance.

The results indicated a significant interactive effect of the group on gender. Analyzing the means reveals that the self-compassion levels among women in both patient groups were low, whereas healthy men exhibited higher levels of self-compassion in comparison to women. This comparison has not been investigated previously in the literature and therefore adds to the research base on the differences in self-compassion among non-psychotic patients and healthy individuals. Considering some studies (Yu et al., 2024), it can be said that women are other-oriented and prefer the needs of others over their own. Self-compassion is the focus of a compassionate feeling towards oneself, as well as attention and care for oneself in the face of painful experiences, and it means accepting emotions, kindness, and care for oneself, and adopting a non-judgmental attitude towards personal failures (Heshmati & Caltabiano, 2020). This is while women are more caring for others and seek to satisfy the desires of their loved ones. On the other hand, being other-oriented, along

with the psychological disturbances of patients with psychiatric disorders, makes these people more vulnerable. Thus, based on such logic, the high levels of self-centeredness in men and its low levels in women with psychological disorders can be justified.

Conclusion

According to the findings of this research, self-compassion and self-esteem can be important risk factors for patients with schizophrenia disorders. In this sense, people who have low levels of self-compassion and self-esteem are more isolated and have high symptom severity, and on the other hand, Individuals with schizophrenia who have high levels of self-compassion and self-esteem may experience more unfavorable outcomes than those with lower levels. On the other hand, considering that the low levels of self-compassion and self-esteem in schizophrenic people can increase the severity of the illness of these people and make the course and prognosis of the disease unfavorable, it is necessary to evaluate and diagnose self-compassion and self-esteem in these people and use psychological interventions to increase self-esteem. Self-esteem and self-compassion are very important because increasing these variables leads to positive results of treatment and thus a more favorable course and prognosis.

As Barrowclough et al. (2003) 's research showed, that having interpersonal relationships and communication with others is a positive and strong predictor of self-esteem in schizophrenic people. Therefore, by increasing interpersonal relationships and social interactions in these people, especially in the early stages of the disease, it is possible to reduce the severity of symptoms, better adapt to the disease, improve social functioning, and increase life satisfaction in these patients. As Lecomte et al. (1999) showed, the use of programs that increase self-esteem in schizophrenic people significantly reduces the intensity of delirium in these people compared to the control group.

Among other treatments used to enhance self-esteem in individuals with schizophrenia are the force-oriented approach and the case management model (Berg and Rani, 2005). By using this type of intervention program, it is possible to improve the results of the rehabilitation and recovery process in these people. As well as Self-compassion may also be an important transdiagnostic candidate target in therapy to mitigate psychotic symptoms in both clinical and non-clinical groups. Either way, psychological interventions (where needed) could target self-criticism and may be important in assessing psychosis risk.

Since variables such as drug consumption and disease severity were not controlled in this study due to the nature of the study (retrospective), there is a possibility that other factors may have influenced the research findings. Therefore, the generalization of these research findings should be done with caution. On the other hand, because in this study only patients with schizophrenia spectrum disorders were used and they

were compared with all non-psychotic psychiatric patients, the findings of this study cannot be generalized to a specific group of patients with psychotic disorders. Based on this, it is suggested to use another group of patients with psychotic disorders such as schizoaffective disorder or delusional disorder in future research and compare that group with another class of psychotic disorders.

Also, considering the importance of mental constructs such as self-compassion and self-esteem in schizophrenic patients, it is suggested that in future research, other factors involved in self-compassion and self-esteem in these patients and subsequent treatment programs to enhance these components in individuals with schizophrenia.

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Disclosure Statement

The authors confirm the absence of any conflict related to financial interests, relationships with organizations or individuals involved in the research in any way, and the interrelations of the co-authors.

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