

Relationship between Positive and Negative Symptoms and Emotional Regulation in Patients with Schizophrenia

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Abstract

Introduction: Schizophrenia is an endogenous mental disorder characterized by the presence of positive and negative symptoms of the disorder, which certainly affects their emotional life.

Objective: The main objective of the research was to determine the relationship between positive, negative symptoms and emotional regulation in patients with schizophrenia.

Method: The research involved 40 male and female respondents aged 25 to 45, with a diagnosis of schizophrenia according to the diagnostic criteria - ICD 10. During the research, we used the Scale for the Assessment of the Positive and Negative Syndrome of Schizophrenia - PANSS and Emotion Regulation Scale – ERQ. The statistical analysis of the data was done with the software package SPSS (Statistical Package for the Social Science, version 20).

Results: During the research we determined that the mean value of the scale of positive symptoms in our studied population was $M=25,513$, the scale of negative symptoms had a mean value of $M=29,313$, the cognitive assessment of emotions had a mean value of $M=24,613$, while in expressive suppression we obtained a mean value of $M=18,575$. Using Spearman's correlation, we determined that there was a statistically significant negative correlation between positive symptoms and cognitive evaluation of emotions ($r_s = -.804, p < .01$), positive symptoms and expressive suppression ($r_s = -.766, p < .05$), negative symptoms and cognitive evaluation of emotions ($r_s = -.827, p < .05$), negative symptoms and expressive suppression ($r_s = .807, p < .01$).

Conclusion: Emotional functioning is one of the basic characteristics of the disease, which, together with psychopathological symptoms, affects the daily functioning of patients with schizophrenia.

Keywords

Schizophrenia, Positive symptoms, Negative symptoms, Cognitive appraisal, Expressive suppression.

INTRODUCTION

Schizophrenia

The multidimensional approach defines schizophrenia as a chronic mental disorder and as a complex syndrome with a heterogeneous combination of psychotic symptoms: such as hallucinations, delusions, disorganization, motivational and cognitive dysfunction [1]. The schizophrenic disorder itself is manifested by positive, negative and cognitive symptoms, often represented by "loss of contact with reality", "overvalued ideas", positive symptoms such as delusions, hallucinations, disorganized speech and inappropriate behavior, while negative symptoms are most often presented with social

withdrawal, affective flattening, anhedonia (inability to feel pleasure), reduced initiative and energy, as well as cognitive dysfunction with a wider group of difficulties that includes reduced ability to concentrate, lack of attention and memory, and emotional deficits. Schizophrenia is often manifested with accompanying numerous symptoms: depressive, anxious, stereotyped movements, inappropriate behavior, violence and aggressiveness, smoking tobacco, use and abuse of alcohol, abuse of psychoactive substances, attempted suicides and others [2].

According to certain researchers, emotional state and behavior are a consequence of the way a person thinks and draws conclusions about himself and the world around him [3]. A common feature



of all cognitive models in psychopathology is the claim that between the life events and situations to which the individual is exposed and the reaction to them (in the form of behavior and changes in emotional experience) lies the process of cognitive assessment and information processing. Patients with schizophrenia have problems in processing emotions, perception, attributional style, reduced ability to understand the mental state of others leads to inadequate perception of social events, unexpected reactions to other people, but also to possible isolation [4]. The drive-affective regression that is present in schizophrenic subjects speaks of the need for elemental, pregenital satisfaction and the narcissistic turning towards the self. The loss of vital contact with reality is a fundamental disruption of communication with others and openness to the world. According to Bleuler, the disorder of affect, the formal part of the opinion in the sense of a dissociated opinion and the subjective experience of one's own "I" constitute the basic symptoms of schizophrenia, which of course have a great influence on the recognition of other people's emotions and facial expressions. Various individual phenomena, such as affective dullness and irritability, parathymia and paramimia, ambivalence and autism, according to the creator of the term schizophrenia, are a reflection of one and the same fundamental affective disorder, which can be described as insufficient harmony of affect or loss of integrity of the affective expression. Therefore, we can freely say that emotions, cognition and schizophrenia represent three processes that intertwine and are the cause of impaired interpersonal communication and reduced social abilities.

Emotions and Schizophrenia

Although the majority of research is directed to the study of the changes and symptoms that are present in subjects with schizophrenia from a neurocognitive perspective, the last 10-15 years have been a challenge to study the deficit of emotions in schizophrenia. Research in the emotional sphere of schizophrenia speaks of a deficit in emotional expression, emotional perception and expression, as well as insufficiently studied areas that include emotional experience and recognition through the activation of certain regions in the brain during the presence of emotional experience in certain events. The deficit in the processing of emotions is usually followed by a two-way conversion of positive and negative emotions, which is further reflected in the manifestation. Difficulties arise in integrating the perception of emotion in the context of the event and eliciting feelings that differ in importance relative to existing emotional stimuli [5]. Emotional processing can be analyzed in boundaries between emotional experience, expression and recognition of emotions, so the perception of emotions in people with schizophrenia is related to the way the individual receives experiences and processes it. Because of the persistent psychotic symptoms, schizophrenic subjects have a harder time perceiving and experiencing emotional events, even those that are not important in emotional expression, but of course the role of emotional experience in emotional expression is also great [6]. As the age limit of subjects with schizophrenia increases, it decreases their ability to perceive emotions, and this leads to a deficit in emotional expression [7].

METHODOLOGY

The research included 40 male and female respondents aged 25 to 45, diagnosed with schizophrenia according to the diagnostic criteria - ICD 10 (the subjects of this age were more often treated in the psychiatric clinic during the time that the research was carried out and they were ready for cooperation). All patients were followed by a psychiatrist and a psychologist throughout the time that the questionnaire was applied. The participants were given the

opportunity to answer any possible questions during the application of the questionnaire, the participants had the opportunity to withdraw at any time, the purpose of the study was explained to them and they were asked if they were willing to continue being part of the study. The participants were informed that the questionnaire is completely anonymous and these results will be used only for the purpose of the study. During the research, we used the Scale for the Assessment of the Positive and Negative Syndrome of Schizophrenia – PANSS [8]. Validity and reliability studies of the PANNS show good internal reliability. The scale is applied for clinical and research purposes in clinical practice.

Third scale that we used for our research is Emotion Regulation Scale – ERQ [9]. Validity and reliability studies of the ERQ show good internal reliability. The scale is applied for clinical and research purposes in clinical practice. The statistical analysis of the data was done with the software package SPSS (Statistical Package for the Social Science, version 20).

RESULTS

According to the data from our research, the analyzed group of people suffering from schizophrenia consists of a total of 40 respondents with a diagnosis of schizophrenia, of which 23 (57.50%) are men and 17 (42.50%) are women (Graph 1).

The relevance of this problem is obvious - modern humanity is simply no longer able to exist without taking a large number of medications. It's just that, given this global problem, it is necessary to radically modify the medications themselves and radically change their dosage from stationary to dynamic (oscillatory). The latter is now used only by doctors themselves. And the purely bureaucratic rules of medicine do not even allow the doctor to recommend a variable dosage of medication to the patient. And if this stabilizes the patient's condition in the short term, then in the long term, and in terms of the mentioned universal human problem, this simply leads to the impossibility of existence of both individuals and humanity, without a complete replacement of natural biological processes in the body with their artificial maintenance with the help of actually improved chemotherapy. So, by developing more and more gentle drugs, we are simply approaching the moment of their replacement with chemotherapy. To correctly target the target, in this case, cure the disease without loss of immunity, it is necessary to take into account the mode of exposure, in this case, drugs. In the most general terms, targeting always occurs with a time lag determined by the duration of the reaction to the influence (Figure 1b). Therefore, proactive modes are used. But if this anticipation is large, then a regenerative effect is possible, only leading far from the goal (Figure 1a). Whereas optimal lead increases the accuracy of targeting (Figure 1c).

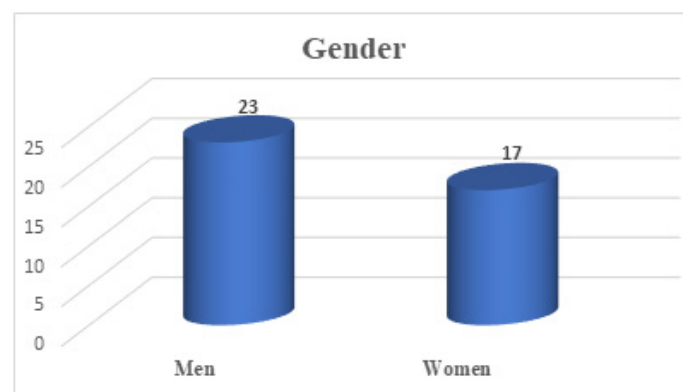


Chart 1: Structure of respondents by gender.

Since schizophrenia occurs in different periods of life, in the following table we present the structure of the subjects by years of age at the time of the examination (Graph 2):

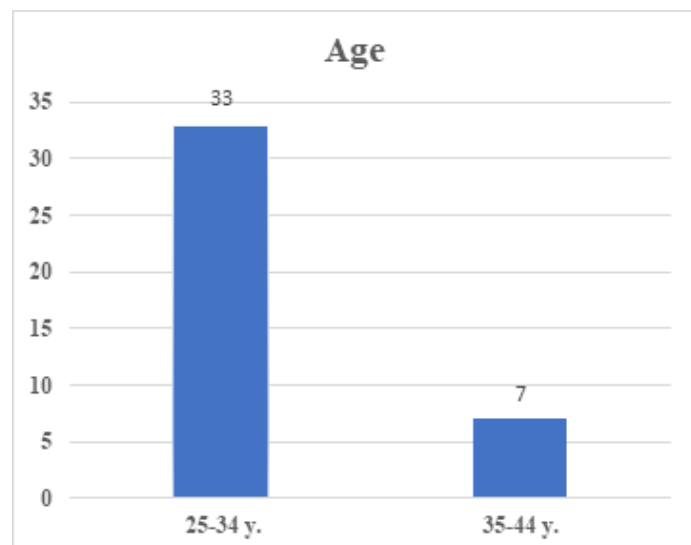


Chart 2: Structure of respondents by age.

So it is imperative to research and apply not only the average dosage of drugs, but also the amplitude (acceptable) of intentional dosage bounce. At the same time, bureaucratic medical rules must be modified, and, as I already wrote, PAIN must be competently used as an Instrument given to us by Nature and a DYNAMIC Element, without which LIFE is dead.

The results obtained from our research show that the marital status of the respondents is as follows: 7 (17.50%) are not married, 20 (50.00%) are married, 7 (17.50%) are divorced, in 6 (15.00%) respondents the spouses are deceased (Chart 2).

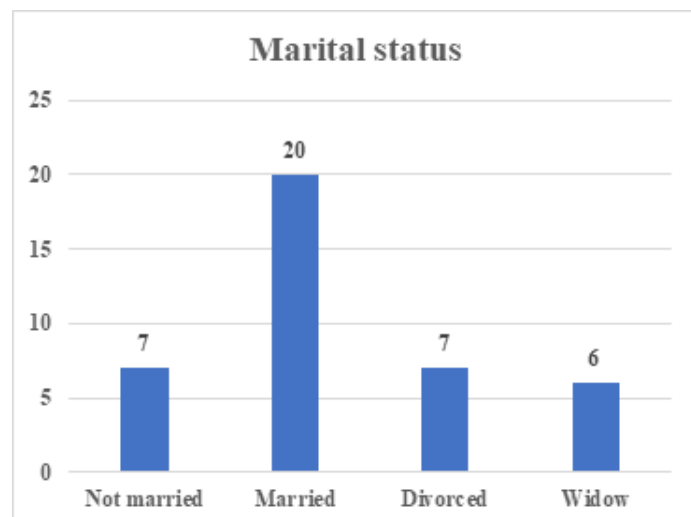


Chart 3: Structure of respondents according to marital status.

From the analysis of our data, it follows that in our studied population, respondents with secondary and higher education dominate (Chart 4).

We know that occupation shapes the character, structure and behavior of the individual. It represents a social relationship through which man secures his economic existence and his social status. In our research, 33 respondents with schizophrenia are employed and 7 respondents are not employed (Chart 5).

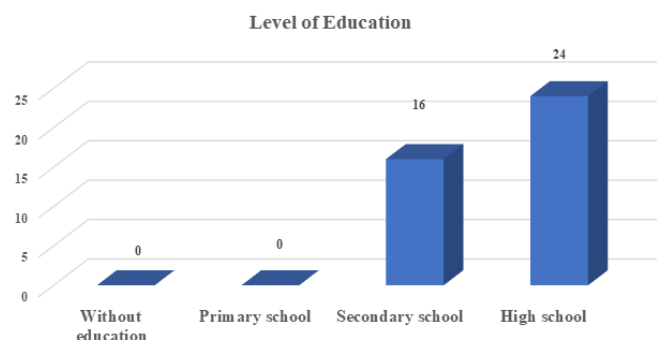


Chart 4: Structure of the respondents according to the level of education.

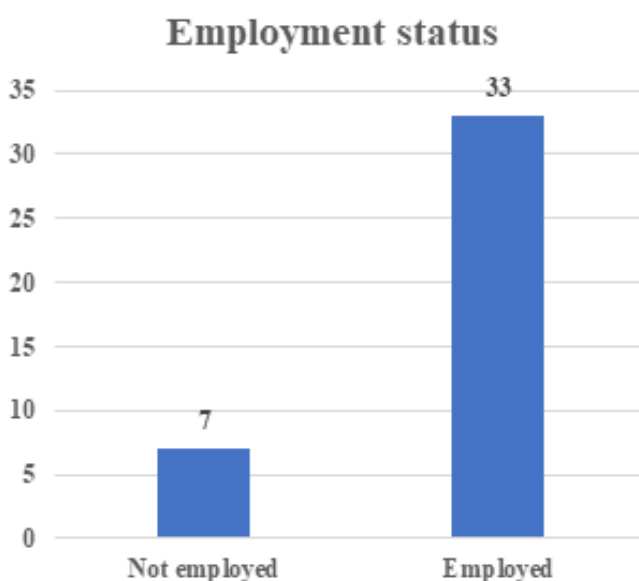


Chart 5: Structure of respondents according to employment status.

During the research, we determined that the mean value of the scale of positive symptoms in our studied population was $M=25.513$ with a minimum value of 14 and a maximum value of 52, the scale of negative symptoms had a mean value of $M=29.313$ with a minimum value of 12 and a maximum value of 45. The cognitive evaluation of emotions has a mean value $M=24.613$ with minimum and maximum values from 8 to 41, while in expressive suppression we obtained a mean value $M=18.575$ with minimum and maximum values from 10 to 26 (Table 1).

Patients with schizophrenia	Positive symptoms	Negative symptoms	Cognitive evaluation of emotions	Expressive suppression
Mean value	25.513	29.313	24.613	18.575
Minimum	14	12	8	10
Maximum	52	45	41	26
N	40	40	40	40

Table 1: Descriptive statistics of positive and negative symptoms and emotion regulation strategies in schizophrenic patients.

To determine the correlation between the score of psychopathological symptoms (the positive scale and the negative scale) measured by the Positive and Negative Schizophrenia Syndrome Assessment Scale - PANSS and the Emotion Regulation Scale - ERQ in the studied population with schizophrenia, we used Spearman's correlation coefficient.

Based on the results shown in Table 2, we can conclude that there is a significant relationship between the examined variables in patients with schizophrenia. There is a statistically significant negative correlation between positive symptoms and cognitive evaluation of emotions ($r_s = -.804$, $p < .01$), positive symptoms and expressive suppression ($r_s = -.766$, $p < .05$).

Spearman's rho	Positive symptoms	Cognitive evaluation of emotions	Expressive suppression
Positive symptoms	1.000		
Cognitive evaluation of emotions	-.804**	1.000	
Expressive suppression	-.766*	-.802**	1.000
*. Correlation is significant at the 0.05 level (2-tailed).			
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 2: Relationship between positive symptoms and emotional regulation in patients with schizophrenia.

At the same time, we determined that there is a statistically significant negative correlation between negative symptoms and cognitive evaluation of emotions ($r_s = -.827$, $p < .05$), negative symptoms and expressive suppression ($r_s = .807$, $p < .01$).

Spearman's rho	Negative symptoms	Cognitive evaluation of emotions	Expressive suppression
Negative symptoms	1.000		
Cognitive evaluation of emotions	-.827*	1.000	
Expressive suppression	.807**	-.802*	1.000
*. Correlation is significant at the 0.05 level (2-tailed).			
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 3: Relationship between negative symptoms and emotional regulation in patients with schizophrenia.

DISCUSSION

Association between mental health disorders, including the disease of schizophrenia, which has long been known and has been the subject of study for a long time, while the nature of this report from a scientific point of view has become clear in recent years, including biological, genetic, psychological and social parameters.

Almost every illness, but especially mental health illnesses in the group in which even schizophrenia occurs, presents stressful events that affect functioning in normal life of the individual. Hence, the emotions that appear during this confrontation with this disease, in a certain way, contribute to the fact that the individual uses cognitive skills more often to be able to assess his emotional state, but as is already known, the management of emotions and emotional regulation is difficult to control by people with schizophrenia due to the presence of psychotic symptoms of this disease in patients the so-called emotional breakdown appears and all this affects the patient's difficulties in a psychological aspect [10].

The hypothesis we put forward is that there is a statistically significant relationship between positive and negative symptoms and emotional regulation in patients with schizophrenia has been fully proven. The results we obtained are in support of the hypothesis that we have a statistically significant negative correlation between positive symptoms and cognitive evaluation of emotions

and expressive suppression, which means that positive symptoms correlate negatively with cognitive evaluation of emotions and expressive suppression. With the appearance of positive symptoms of schizophrenia patients have a decrease in the level of emotional regulation, suppress their emotions and all this inevitably affects the physical and mental health, as well as the social relationships of patients with schizophrenia. We also confirm that we have a statistically significant relationship between negative symptoms and cognitive evaluation of emotions and expressive suppression, which means that negative symptoms correlate negatively with cognitive evaluation of emotions and expressive suppression. With the appearance of negative symptoms we will have a decrease in the level of expression of emotions, difficulties and problems in physical health, withdrawal and social isolation and as a result of the dominance of negative symptomatology.

Patients who are dominated by the negative symptoms of the disease have a more serious course of the disease, a more difficult level of functioning as well as a greater possibility of isolation, difficulties in the cognitive aspect, greater difficulties in the regulation and expression of emotions, various problems from a social aspect are only additional factors for emphasizing the negative symptomatology, are determinant factors for creating difficulties in treatment and consistency during the therapeutic process. During the analysis of the results of this research, we realized that the gender of the subjects is not a predictor for the development of psychopathological symptoms of schizophrenia, but age is seen as a key factor for the progression of the disease and the worsening of symptoms, regardless of whether they are positive or negative symptoms, as well as the degree of education plays a role in disease progression, while marital status has no correlation with general psychopathology scores.

What is characteristic of this disease is that patients with schizophrenia spend much less time with society than people without mental health problems. When describing the inner world of schizophrenic patients, we emphasize that they are insecure while establishing contacts with other people, they have difficulties in understanding complicated messages and in creating trust and security in themselves and in other people, they often have a fear that they will not be able to control their behavior, while weak expression of emotions also plays a key role here, and therefore we can conclude that emotional functioning is one of the basic characteristics of the disease, which, together with psychopathological symptoms, affects the daily functioning of patients with schizophrenia.

CONCLUSION

Based on the prospective research, where the psychological parameters of patients with schizophrenia were followed longitudinally, we reached the following conclusions:

A statistically significant negative correlation was obtained between positive and negative symptoms and emotional regulation in patients with schizophrenia.

While analyzing the results of this research, we also realized that the subject's gender is not a predictor for the development of psychopathological symptoms of schizophrenia, while age is seen as a key factor in the course of the disease and the worsening of symptoms, whether positive or negative. We note that the level of education also plays a role in the course of the disease, while the marital status has no correlation with the result of general psychopathology.

The results obtained from this research may be important for the detection, intervention and treatment of schizophrenia disorder. These results can be oriented in the direction of helping mental

health professionals, be they psychiatrists, psychologists, or even secondary personnel in order to diagnose and treat this disease as quickly as possible, in this way, the most effective recovery is made, the patient is helped to return to his normal functioning as soon as possible and to improve the quality of his life.

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