Does the Duration of the Illness Affect the Severity of Negative Symptoms of Schizophrenia?

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ABSTRACT

Background: The negative symptoms of schizophrenia are less known aspects of the illness although they often mark its course and outcome. Negative symptoms refer to loss of function, and they are associated with poor outcomes. It is considered that they are more prominent with the longer duration of illness. Objective: To determine the negative symptoms in the patients with schizophrenia with regard to the duration of illness. Methods: A cross-sectional study was conducted in 60 consecutive outpatients with schizophrenia. Two groups were formed regarding the duration of illness (≤2 years, and >3 years). The negative symptoms were established with the Brief Negative Symptom Assessment – BNSA. Results: Average score of negative symptoms in the group with the shorter duration of illness was 8.37±2.94, and in the group with longer duration was 10.73±2.86. Independent Samples Test was significant p=0.003, t=2.367, and therefore the difference between scores on BNSA within groups was significant. Moderate size effect was found (p = 0.69). Conclusion: Negative symptoms of schizophrenia are more prominent with the longer duration of illness.

Keywords: Schizophrenia, negative symptoms, duration of illness.

1. BACKGROUND

Schizophrenia is a chronic psychiatric disease characterized by positive and negative symptoms, affective symptoms and cognitive deficits. Negative symptoms according to DSM-5 (Diagnostic and Statistical Manual of Mental Disorders) include avolition, alogia and affective flattening, and are included in a schizophrenia definition. Others as anhedonia are associated symptoms (1). Positive symptoms, the most dramatic feature of schizophrenia, mainly prevail in the acute phase of illness while negative symptoms are more prominent in psychosis remission phases. In the past, negative symptoms dimension of the illness remained neglected as antipsychotic treatment showed success in treating schizophrenia positive symptoms (2, 3-11). Clinically relevant negative symptoms that need treatment occur in 60% of schizophrenia patients (12, 13) and can occur in every phase of the illness (14).

It has been indicated by the current concept that negative symptoms may appear years earlier and are considered as a better functional outcome predictor than positive ones (4). Severity of the schizophrenia negative symptoms has been consistently linked to worse functional outcomes in areas such as impaired occupational and academic performance, household integration, social functioning, participation in activities, and quality of life (11). Findings suggest that negative symptoms may be a course target for early treatment intervention (10). The long-term course of negative symptoms is unclear. Kaplan and Sadock's Synopsis of Psychiatry describes that residual negative symptoms tend to increase during the course of the illness (15). Some studies reported the relative stability of symptoms over time, while others reported that negative symptoms could fluctuate or be reversible (5-10).

2. OBJECTIVE

The aim of our research was to identify if the negative symptoms were more prominent with the longer duration of illness.
3. MATERIAL AND METHODS

A cross-sectional study was conducted in 60 consecutive outpatients with stable remission of schizophrenia at the Clinic of Psychiatry of the University Clinical Center Tuzla, Bosnia and Herzegovina. The subjects were adult patients with schizophrenia of both sexes (29.95 ± 7.44 years), with different disease duration according to which two groups were formed: patients in the first psychotic episode and total disease duration up to 2 years who were hospitalized once or never, and patients with multiple psychotic exacerbations and disease duration longer than 3 years who were treated two or more times in the hospital. The average duration of the disease was 5.5 years (1.5–7 years). The following general and clinical data were collected: age, sex, marital status, level of personal education, employment status, length of psychiatric treatment in years, number of hospitalizations in psychiatric institutions, smoking habit and number of cigarettes in daily consumption, age at onset, and pharmacotherapy. The negative symptoms were determined using the Brief Negative Symptom Assessment – BNSA. The scale assesses: prolonged response time (alogy measure), emotions–unchanging facial expression, empty expressionless face (flattened affect measure), reduced social urges (asociality measure), nurturing, and hygiene (amotivation measure). The severity of symptoms is rated from 1 (normal) to 6 (severe). The information was taken from a patient, escort, mental health professional or medical records.

4. RESULTS

The average value of the summation scale for negative symptoms (BNSA) of the whole sample was 9.55 ± 3.11.

The Kolmogorov-Smirnov test with Lilliefors significance correction was significant (p = 0.014) and tells us about positively asymmetric age distribution, and the shape of the distribution was directed to the right (Skewness 0.095). The median distribution was 9, the modal value of the distribution was 12 points. The lowest value was 4 and the highest 17 points. Analysis of the distribution of the same scale (BNSA) by patient groups established an asymmetric distribution for disease duration over a three year period, but the more sensitive Shapiro-Wilk test was insignificant for both groups. The Kolmogorov-Smirnov test with Lilliefors significance correction had no significance (p = 0.10) for SCH <2 years and p = 0.20 for SCH >3 years. Levene’s Test for Equality of Variances was not significant (F 0.055, p = 0.815). The test of independent samples was significant p = 0.003, t=2.367, df=58, and the difference in the score of the BNSA scale by groups related to the duration of the disease was significant.

The average value of the score summation scale of negative BNSA symptoms in the group with the shorter disease duration (SCH≤2 years) was 8.37 ± 2.94, and in the second group with the longer disease duration was 10.73 ± 2.86 years. The mean value of differentiation here was –2.36 which were the smaller values on average in the shorter disease duration. A significant difference was observed in this parameter between the groups, and the value of the Cohen d coefficient (d 0.69) tells us about the moderate...
magnitude of the influence according to the reference criterion. The point biserial coefficient of association r = 0.38, and the squared correlation coefficient (r²) thus gave a relative value of 14.7% of the explained variance of BNSA by patient groups.

The observed a statistically significant difference in BNSA had moderate practical implications.

5. DISCUSSION

In the follow-up study published in 2015, negative symptoms showed lesser variations during the 10-year mark (5). The results of the study that followed 98 schizophrenic patients in the period between 18 and 30 months indicated that negative symptoms became more stable during that time frame (6, 7). Older research done in 1985 showed that negative symptoms were persistent during a steady stream of time, although there was a remission tendency (8). Furthermore, in the older prospective study from 1994, all positive and negative symptoms decreased at the end of the 10-year mark (9). Research conducted by Ventura et al. showed that early negative symptoms were stable during the first outpatient year, they were predictors of everyday functioning after 12 months, and they were predictors of negative symptoms eight years later. Despite the high level of stability, negative symptoms fluctuated at the subcause of patients, and those findings point that negative symptoms can be important for early interventions that are intended to promote recovery (10).

6. CONCLUSION

Our study showed that in the group of patients with longer illness duration, negative symptoms were more intensive. It suggests that there is a relation between negative symptom intensity and illness duration and that the relationship is linearly positive, and the association is stronger in the group of subjects with longer disease duration. This magnitude of impact has moderate practical implications.

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