

The association of quality of life with mental status and sociodemographic data in schizophrenic patients

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Summary

Aim. The aim of this study was to assess the mental status and sociodemographic data as well as their influence on the quality of life in schizophrenic patients.

Methods. SF-36, Soc-29, CDS, PANSS, AIS and sociodemographic questionnaire were given to a cohort of 64 subjects who participated in this study (28 female, 36 male), with age range of 21-58 (Mean 33.4 ± 10.8). Questionnaires were administered to all patients in partly-remission or remission time.

Results. Patients showed significant positive correlation of summary scales of PCS and MCS with SOC and AIS and negative correlation with depression symptoms estimated by CDS. There were no significant differences in MCS and sociodemographic factors. The values of the PCS were negatively associated with the number of hospitalisations, disease duration time and negative syndromes estimated by PANSS-N.

Conclusions. Sense of coherence, acceptance of illness and depressive syndromes influence quality of life.

Key words: schizophrenia, quality of life, sociodemographic data

Introduction

Over the past two decades, research on quality of life have become an important factor in assessing the functioning of patients, both in the conduct of clinical studies as well as in the therapeutic process [1]. Although there is still no uniform definition of quality of life, it is assumed that it is determined by components such as coping with daily activities, physical health, awareness of success, a sense of satisfaction, the level of aspirations and expectations, the level of fulfilling of needs, social relations [2–5].

Schizophrenia is a disease of a chronic course and may have a significant impact on all of the above components of quality of life. Repeated periods of exacerbation and remission, numerous hospitalizations, increasing negative symptoms, the need for constant medication make the patients exposed to the effects of prolonged and severe stress. They are often helpless in the face of recurrent disease, have a sense of lack of control over what happens to them during the occurrence of psychotic symptoms, have difficulties in fulfilling social roles [3]. As a consequence of these processes, the level of quality of life in the subjective assessment of patients with a diagnosis of schizophrenia is lower than in the general population, and often lower than of people with other psychiatric disorders. Although some authors have shown in their studies that patients with a diagnosis of eating disorders were characterized by a lower quality of life than patients with schizophrenia [6].

The aim of the study was to evaluate selected psychological and sociodemographic factors that can determine the quality of life of patients with schizophrenia.

Material

The research involved 64 patients (28 females and 36 males) aged 21 to 58 years, mean age 33.40 ± 10.79 years. The studies was carried out in the Mental Health Outpatient Clinic and Department of Clinical Psychiatry in Tarnowskie Góry. All subjects were in total or partial remission of symptoms so that their condition allowed them to participate in the survey.

Method

For the evaluation of the examined parameters the following psychometric questionnaires were used:

1. Short Form (36) Health Survey (Quality of Life Scale SF-36) by J. E. Ware in the Polish language version (with the prior written consent of the author). This is a generic scale that allows for comparison of the quality of life of patients with various diseases. This scale contains 36 questions on eight areas of life: bodily pain (BP), physical functioning (PF), role limitations because of physical health problems (RP), role limitations because of emotional problems (RE), mental health (MH), social functioning (SF), vitality (VT), general health (GH), and two summary subscales including overall functioning in the physical (Physical Component Summary – PCS) and mental (Mental Component Summary - MCS) dimensions.

After applying the appropriate conversion formula the result on the point scale of 0 to 100 points is obtained in each of the domains. The higher the achieved results, the better the health status [7, 8].

2. For the assessment of the sense of coherence the Polish adaptation of the Antonovsky's Orientation to Life Questionnaire (SOC-29) was used. The questionnaire consists of 29 questions the allow for the estimation on a point scale the level of sense of coherence and its dimensions: Comprehensibility (C) (Pol. PZR); Manageability

(Ma) (Pol. PZ); Meaningfulness (Me) (Pol. PS). Total scoring of all three subscales gives a general sense of coherence. Obtaining a high result indicates a strong sense of coherence [9, 10].

3. Assessment of mental status was done with the Positive and Negative Syndrome Scale (PANSS), which consists of three subscales including positive symptoms assessment (P), negative symptoms assessment (N), and the general scale (G). The range of points for the whole scale is between 30 and 210 [11].

4. Intensity of depressive symptoms was assessed with the Calgary Depression Scale (CDS). This scale has been constructed as a tool specifically designed to evaluate depressive symptoms in schizophrenia, and consists of nine items evaluated in the scoring from 0 to 3 points [12, 13].

5. Moreover, the Acceptance of Illness Scale (AIS) by Felton et al compiled by Z. Juczyński was used. The scale consists of 8 statements expressing certain difficulties and limitations caused by the illness, it ranges from 8 to 40 points. A low score indicates lack of acceptance and of adjustment to the illness, and a strong sense of mental discomfort. On the other hand, a high result indicates own acceptance of the condition which manifests itself in a lack of negative emotions associated with the illness [14].

6. Socio-demographic data were collected using a socio-demographic data questionnaire developed by the authors. Statistical analysis of data was performed using multiple regression test. The level of significance assumed as statistically significant was $p < 0.05$.

Results

Assessment of the studied population

Of all the respondents 5 patients lived alone, functioning without the help of closest family, only 16 people remained in partner relationships, the other were of free status, but lived with their families, especially with parents. The most common comorbidities were hypertension and hypothyroidism (19% of patients), in the remaining respondents there was no coexisting disease. Eighteen people remained professionally active. The duration of the disease in individual patients in the studied group ranged from 1 to 26 years (mean 9.59 ± 8.49) and the number of hospitalization was 0-22 (mean 5.45 ± 5.49). 4 respondents reported higher education level, 32 – secondary, others had occupational or primary education. The mean BMI score in the studied group was 28.81 ± 4.66 . Most of the participants received atypical drugs, such as: risperidone, olanzapine, qetiapne, amisulpride, aripiprazole. Several people were treated with combined therapy, in addition to atypical drugs also taking older generation drugs, mainly perphenazine, pernazinum, haloperidol. Patients have reported side effects such as hands shaking, acathisia, sleepiness, weight gain. Only 6 people not reported any side effects.

Quality of Life (SF-36)

In the assessment with SF-36 scale the mean scores obtained in the PCS subscale were 42.91 ± 11.94 points and in MCS subscale 35.26 ± 10.81 points.

Sense of coherence (SOC-29)

The SOC mean score in the studied group was 31.40 ± 110.037 points, and in particular subscales PZR – 36.71 ± 11.16 points, PZ – 38.25 ± 13.01 points, PS – 35.42 ± 11.08 points.

Depression (CDS)

The mean score on the Calgary Depression Scale (CDS) achieved by the patients was 4.12 ± 2.92 points

Symptoms of schizophrenia (PANSS)

In the PANSS scale the participants obtained 70.89 ± 16.71 points. Mean scores in the respective subscales were: in the positive symptoms subscale 15.03 ± 5.88 points, negative – 30.28 ± 8.04 points and in the general subscale 25.57 ± 8.29 points.

Acceptance of the illness (AIS)

In the AIS patients obtained from 8 to 34 points, with the mean result 18.00 ± 9.01 points.

The influence of the examined parameters on quality of life

In order to reduce the number of statistical calculations in the analysis of quality of life and of the examined parameters, only the summary scores of the SF-36 scale in the PCS subscales (quality of life related to the functioning in the physical dimension) and the MCS (quality of life associated with mental state) were taken into account.

In the performed analyzes negative correlation between the assessment of the quality of life in the PCS subscale with the result of the measurement of negative symptoms (PANNS-N) and the number of years of illness and number of hospitalizations was indicated. There was no correlation found between the result in MCS subscale and the following factors: age, gender, education, professional activity, social support, comorbidity of schizophrenia with other diseases, the number of years of illness, number of hospitalizations, the occurrence of side effects of the medication and the severity of symptoms in the PANSS scale. However, negative correlation was indicated between the results of the two subscales of SF-36 (MCS and PCS) and the score of Calgary Depression Scale (CDS) with the positive correlation with the results achieved in the questionnaire on sense of coherence (SOC) and in the acceptance of illness scale (AIS). The results are shown in Table 1

Table 1. The relationship of quality of life measured by PCS and MCS subscales of the SF-36 scale with the selected parameters characterizing the studied group

Variables	Results of the quality of life scale SF-36			
	Subscale PCS		Subscale MCS	
	Beta	p	Beta	p
Age	-0.15	0.47	0.32	0.06
Marital status	2.00	0.27	2.42	0.35
Education	-7.41	0.07	0.25	0.95
Professional activity	6.15	0.21	-0.86	0.85
Years of illness	-0.58	0.02	0.29	0.2
Number of hospitalizations	-1.37	0.0001	-0.53	0.14
Side effects of the medications	3.33	0.71	13.18	0.09
Comorbidity of other diseases	-8.83	0.1	-0.40	0.94
Severity of symptoms PANSS	-0.16	0.23	-0.1	0.42
Positive symptoms PANSS-P	-0.29	0.46	-0.42	0.25
Negative symptoms PANSS-N	-0.88	0.0001	-0.07	0.79
General symptoms PANSS-G	0.30	0.25	-0.12	0.61
Sense of coherence SOC	0.23	0.0001	0.15	0.01
Acceptance of the illness AIS	1.20	0.0001	0.90	0.006
Depressive symptoms CDS	-2.12	0.002	-1.80	0.04
Body mass index BMI	-0.99	0.06	0.15	0.75

(p – value of the significance level, Beta – regression coefficient)

Discussion

In numerous studies conducted so far on the quality of life of patients suffering from schizophrenia, the focus was on various factors that affect the results of the assessment of quality of life, such as demographic variables, clinical ones (assessment of mental status, duration of illness, treatment, number of hospitalizations, type of drugs used), level of social functioning (social activity, performed social roles, employment), attitudes towards the disease, forms of therapy and care. [5] In the following study a negative relationship between the duration of illness in years and the number of hospitalizations and the physical dimension of quality of life (PCS) was indicated. However, there was found no effect of any of the sociodemographic variables on the mental component of quality of life (MCS). Similar results were obtained by Chądzyńska et al. In the studies carried out by them none of these factors affected the quality of life [5]. In turn, Jarema et al in their studies found a negative correlation between quality of life and the age of patients and duration of hospitalization [15, 16, 17], and positive correlation between the assessment of quality of life and education [18], whereas the impact of side effects of neuroleptics on the assessment of the quality of life was not

found, as in the present study. Perhaps this is due to the fact that most of the patients who took part in our study had taken atypical drugs and did not have intensified side effects [16, 18]. However, Yamauchi et al in their studies demonstrated the correlation between quality of life and extrapyramidal symptoms [19]. In our study BMI affected neither the physical dimension (PCS) nor the mental one (MCS) of the quality of life, although the relationship with the physical dimension was close to statistically significant value ($p = 0.06$). Strassing et al reported in their study the effect of BMI on the physical component of quality of life [20]. Perhaps this is due to the fact that the average BMI of patients who participated in the mentioned above study was 32.8 ± 7.8 , and the value was higher than that achieved in our study patients (28 ± 4.66). Some authors emphasize that socio-demographic factors have little effect on quality of life, while psychopathological symptoms can significantly affect the assessment of the quality of life [21, 22]. In our study only negative symptoms assessed with PANSS Negative Syndrome Scale negatively affected physical dimension of quality of life. The studies by Chądzyńska demonstrated the impact of general symptoms assessed with PANSS on the quality of life [5, 15]. In Yamauchi studies both positive and negative symptoms correlated with the assessment of quality of life [19]. It should be noted that the assessment of the quality of life done by the patients is in fact their subjective impression and in the course of our research patients were in a state of at least partial remission of symptoms, so perhaps this is the reason for association of negative symptom, which are more difficult to respond to treatment and are often more settled and unpleasant for the patient, with quality of life. However, a significant impact on quality of life in both physical and mental dimension had a sense of coherence and the degree of acceptance of the disease. The influence of the personality variable which is sense of coherence on the intensity of psychopathological symptoms and on the assessment of the quality of life also demonstrated in their research Bengtsson-Tops and Hansson [23]. They also concluded that factors such as better social support and psycho-education may improve the level of understanding of the world and symptoms and make the events more understandable and predictable. The above-mentioned components of feeling of coherence affect its overall value, which in turn affects the assessment of the of the quality of life.

Each chronic disease significantly affects the current way of life, threatens the core values, human life and health, the performance of current social roles, and the possessed conception of the world and identity. The process of adaptation to the disease is regarded as a re-adaptation to a new situation. The search for sense and meaning of the disease, as well as its causes and impact on patient's life fosters the belief that we can influence the events, and thus control over life. Only those who are able to treat the disease as a challenge can make an effort to struggle with it, and this promotes the activity aimed to regain health. Lack of these skills leads to negative emotions, disappointment, dissatisfaction and may cause symptoms of depression [24]. Greater degree of acceptance of the disease may have a significant impact on the assessment of quality of life, just as it can be affected by depressive symptoms. Patients exhibiting depressive symptoms achieved lower scores in both the physical (PCS) and mental (MCS) functioning scales. Poorer quality of life among depressed patients also de-

monstrated in their studies other authors [15, 19, 25]. Depressive symptoms, just like the psychotic symptoms or the negative ones, can strongly influence the quality of life of patients with schizophrenia [15].

Conclusions

1. The assessment of the quality of life among patients with schizophrenia may be affected by such factors as the degree of acceptance of the illness, sense of coherence, and the presence of depressive symptoms.
2. Measures to improve the level of acceptance of the illness, strengthening the sense of coherence and treatment of depressive symptoms may improve the quality of life of patients with schizophrenia.

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