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Quality of Life in Patients With Chronic Schizophrenia in Semnan, Iran

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Abstract

Background: Schizophrenia is one of the most common psychiatric disorders and one of the ten leading causes of mental disability. Level of education, family factors and individual culture affect the patients' quality of life.
Objectives: Due to the greater prevalence of this disease and the impact of its symptoms on the one's quality of life, this study was conducted on the people with chronic schizophrenia to determine in which aspects of their quality of life is more likely affected in Semnan, Iran.
Patients and Methods: This descriptive, analytical and cross-sectional study was conducted on 37 patients with non-paranoid schizophrenia. To evaluate their quality of life, the short-form of the questionnaire of world health organization quality of life (WHOQOL-26) was used. Data were analyzed using one-way analysis of variance.
Results: The participants in this study gained the highest quality of life in the domain of physical, environmental and psychological health and social relationships. There was no significant relationship between the different aspects of the quality of life in this study.
Conclusions: It can be concluded that schizophrenia can have an effect on the quality of life. Some items such as family care, early and on time treatment play an important role in increasing the quality of life.

Keywords: Quality of Life, Schizophrenia, Semnan

1. Background

Schizophrenia is one of the most common psychiatric disorders and one of the ten leading causes in mental disability (1). The prevalence of disease among psychiatric disorders has been reported 0.5% - 1% (2). It usually begins at the age of 15 to 25 years and is associated with positive and negative symptoms. The positive symptoms include hallucinations, delusions and disorganized thinking but the negative ones are speech disorders, lack of motivation and lack of pleasure and tending to be alone (3). Schizophrenia affects the quality of life, social activities and work and also education promotion (4).

Although the assessment and treatment in the past was concentrated on reducing the psychological symptoms of the disease among the patients, but recently, their quality of life is of particular importance (5). Schultz and Winstead-Fry (6) believe that quality of life is an absolute subjective and personal understanding based on happiness or satisfaction with the effective factors on the welfare, social, emotional and physical functions which aim to improve or maintain the ability to the best practice and the situation which is possible, despite the inability. Since the quality of life is a subjective experience; so, using a questionnaire completed by the person is useful (7). The results of Tamizi et al.'s study on the relationship between quality of life and coping strategies against schizophrenic patients showed that there was a significant relationship between the scores of quality of life and coping strategies. Also, the quality of life was on the intermediate level (8). Caqueo-Urizar et al. who investigated the quality of life in patients with schizophrenia with ethnic backgrounds in northern Chile concluded that there was a significant relationship between their quality of life with negative symptoms and general psychopathology related to the culture (9). Khodadadi et al. performed a study to compare the quality of life of schizophrenic patients and healthy community in the city of Rasht, Iran. The results showed a significant difference between the quality of life of healthy people and patients with schizophrenia (10). Makara-Studzinska et al. investigated the effects of anxiety and depression on quality of life in patients with schizophrenia in eastern Poland and concluded that more than half of the participants suffered from severe depression and anxiety, which affected

their quality of life (1). Zamzam et al. investigated the factors effective on the quality of life in primary caregivers of schizophrenic patients emphasizing on the clinical social and environmental factors. They found people with higher education and those without medical problems had better quality of life (4). Bayanzadeh et al. (11) began to investigate the quality of life in schizophrenic patients. The results showed that the quality of life in 3.2% of the patients was in average and more than 3.1% of them were low in physical and mental health. Also, none of the demographic variables showed a significant correlation with quality of life. Khankeh et al. (12) investigated the impact of the follow-up care on quality of life in schizophrenic patients discharged from hospital in Hamadan and concluded that the pursuit of nursing care after discharge in patients with chronic psychological problems affect their quality of life, and also it decreases the period of hospitalization and recurrence of disease. Saarni et al. in a study concluded that schizoaffective, bipolar disorder, and then the major depression have the most negative effect on the quality of life (13).

2. Objectives

The quality of life in patients with schizophrenia is one of the major concerns of clinicians (4, 5), which can be effective on determining the fallow-up for response to treatment, the rehabilitation, relapse prevention of disorders and maintenance of the promotion of their family's mental health (14). Due to the importance of the schizophrenia and its effect on quality of life, this study was conducted to determine which aspects of quality of life were affected by the disease. The details of these aspects can be effective in evaluating and treating them. Thus, to identify these aspects of their life containing the problems can be useful in early decision and policy making in rehabilitation.

3. Patients and Methods

This descriptive, analytical and cross-sectional study was conducted non-randomly on patients referred to the psychiatric ward of Kossar hospital in Semnan city, Iran. Inclusion criteria included non-paranoid schizophrenia diagnosed by a psychiatrist, admitting in hospital for one time, having at least 18 years old, literate and was living in Semnan. The family's dissatisfaction of the patient, being in the acute phase of disease, having correlation with other diseases and substances abuse was the exclusion criteria in this study. After obtaining the consent letter and explaining the objectives of the study, the patients were given the world health organization quality of life questionnaire (WHOQOL) with 26 items. The WHOQOL-26 quality of life questionnaire is a short-form of a questionnaire with 100 questions compiled by WHO.

Four-part domains can be calculated individually. The raw score of the physical domain from the whole scores of items 3, 4, 10, 15, 16, 17, 18 and in the psychological domain, items 5, 6, 7, 11, 19, 26 and in the domain of social relations from items 20, 21, 22 and in the environmental domain from the total items 8, 9, 12, 13, 14, 23, 24, 25 are obtained. Each domain is scored from 1 to 5 using the Likert scale. The first two items in the questionnaire are not considered in the score calculation.

Then the scores in each domain according to the version of the 100 items are converted into raw. The higher mean values of the person's score indicated the better quality of life. The Persian translated version of the questionnaire and the reliability of each domain has been reported more than 0.7 (15). After collecting the data, they were analyzed using the SPSS software version 18. Cronbach's alpha in this study, based on 26 items in the questionnaire of quality of life, Cronbach's alpha was 0.876 indicating a good reliability of the questionnaire.

3.1. Checking the Normality and One-Side Variance Analysis

The normality of the data for each variable was calculated by the Shapiro-Wilk test with 95% reliability, and the result showed that all variables had normal distribution. In order to investigate the significant difference between the variables, the one-way analysis of variance was used. Presuppositions were considered of the test of equality of mean and variance in each group and to be normal the traits. In this test, there is a quantitative variable such as domains of quality of life and a qualitative variable that is equal or has more than two traits, such as gender, age, etc. Frequency, mean, standard deviation, range and the significant level of scores were compared using the one-way ANOVA analysis in each study subgroups. As $P < 0.05$ was not obtained in this study, it is concluded that any of these domains is not significant. This means that the hypothesis of equality of the mean and variance in each group is rejected.

3.2. Spearman Correlation Coefficient

In this part, the correlation of variables with each of the domains of quality of life was calculated separately. Since some of the variables are not relative in rating, Spearman correlation coefficient was used.

4. Results

In this study, 37 patients with schizophrenia at the mean age of 37.08 $\pm$ 10.14 participated. Demographic char-

Table 1. Distribution of Sex, Age, Married, Terms of Education, Income, Quality of Life for People With Schizophrenia

Variable	No. (%)
Gender	
Male	29 (78.4)
Female	8 (21.6)
Age, y	
20 - 25	5 (13.5)
26 - 30	7 (18.9)
31 - 35	4 (10.8)
36 - 40	5 (13.5)
41 - 45	10 (27)
46 - 50	4 (10.8)
51 - 55	1 (2.7)
56 - 60	1 (2.7)
Marital status	
Single	9 (24.3)
Married	28 (75.7)
Education level	
Under of diploma	14 (37.8)
Diploma	17 (45.9)
Associate degree	5 (13.5)
Bachelor degree	1 (2.7)
Revenue	
1500000 - 2000000	8 (21.6)
1000000 - 1500000	23 (62.2)
1000000 >	6 (16.2)
The total number of participants	37 (100)

acteristics of them are shown in Table 1. Distribution analysis has been presented in mean, median, standard deviation, minimum and maximum separation of quality of life in a 20 - 40 score and the original version of the world health organization 0 - 100 for 37 participants were calculated for each.

According to Tables 2 and 3, of the participants in this study, the highest average in the area of health, the environment, health, and mental health and social relationships eventually won.

4.1. Cronbach's Alpha

It is based on the quality of life questionnaire with 26 questions, in this study, Cronbach's alpha was 0.876, which indicates good reliability of the questionnaire.

Table 2. Frequency of the First Question of the Quality of Life Questionnaire (Quality)

Statues	No. (%)
Very bad	5 (13.5)
Bad	7 (18.9)
Not bad-not good	11 (29.7)
Good	7 (18.9)
Very good	7 (18.9)
Total	37 (100)

Table 3. Prevalence and Frequency of the Second Question of the Quality of Life Questionnaire (Consent)

Statues	No. (%)
Very satisfied	3 (8.1)
Satisfied	8 (21.6)
Not satisfied	7 (18.9)
Good	10 (27)
Very satisfied	9 (24.3)
Total	37 (100)

4.2. Checking the Normality and Variance Analysis

In normal review of quality of life dominant data, using Shapiro-Wilk with 95% confidence level variables had a normal distribution. So, a significant difference between the one-way analysis of variance was found. Default test in each group and the mean and variance of normal traits were considered. In this test, a quantitative variable and a qualitative variable domains of quality of life that is equal to or more than two, such as gender, age, etc., there. In the following frequency tabulation, mean, standard deviation, a significant level domain were compared using one-way ANOVA analysis of each of the three groups. Because in this study $P < 0.05$ not achieved, the result is not significant in any of the areas. This means that the hypothesis of equality of the mean and variance in each group will be rejected.

4.3. Spearman Correlation Coefficient

In this study the correlation values with each of the domains of quality of life were measured separately. Since the ratings of some of the variables are not relative, Spearman correlation coefficient was used.

The first two questions in the questionnaire, none of the four areas on its own account was calculated.

Table 4. Distribution of Mean, Median, Standard Deviation, Minimum and Maximum Separation of Quality of Life by a 20 - 40 Score Original Version of the World Health Organization

Variable	Mean ± SD	Median (Range)
Physical health	40.12 ± 2.48	43 (7 - 8)
Psychological	12.08 ± 2.90	12 (7 - 19)
Social relationships	10.72 ± 4.1	9 (4 - 20)
Environment	12.21 ± 3.07	12 (6 - 19)

Table 5. Distribution of Mean, Median, Standard Deviation, Minimum and Maximum Quality of Life in a Segregated Area of 100 - 0, the Original Version of the World Health Organization

Variable	Mean ± SD	Median (Range)
Physical health	52.72 ± 15.51	56 (19 - 88)
Psychological	49.75 ± 18.13	50 (19 - 94)
Social relationships	42.02 ± 25.69	31 (0 - 100)
Environment	51.54 ± 19.3	50 (13 - 94)

5. Discussion

In this study, the quality of life of people with schizophrenia was investigated. The factors affecting the quality of life; education, economic condition and gender are discussed and investigated separately by the following parts. The quality of life in patients with schizophrenia did not show any significant relationship with education and other domains except the health and social relations. In the analysis of this assumption, it can be said that by increasing the level of education, the health and the social relations rise. In a study done by my colleagues and me, there was no significant relationship among the demographic characteristics such as age, gender, education and the number of being in hospital, which these findings are consistent with the results of this study (11). In this study, the socioeconomic conditions had no significant impact on the quality of life in patients with schizophrenia. However, WHO believes that they also both experience the stress and suffer the disability for employment and participating in recreational activities (16).

There was no significant relationship between the quality of life and gender among them. Yo and Chan in a study in Hong Kong (Cited in Khodadadi et al. (10)) showed that there was a relationship between lower quality of life and being female, unemployment and a higher frequency of hospitalization. The difference between this study and other studies, which had been done in other countries, may be due to supporting the patients by members of their relatives who often live with family (10). The quality of life in schizophrenic patients is not associated with age. In a study carried out by Forouzandeh et al. showed that there was no significant difference between the two groups of intervention and control ones in terms of age, sex, education, and length of being in hospital in the scores of the quality of life (17). In general, the results of this study can be expressed that the quality of life for patients with schizophrenia is changed with symptoms. This change is various in culture and ethnicity, according to the conditions. For example, participants in this study obtained the highest average in the domain of physical health, environment health, mental health and finally in the social relations. Meanwhile, Khankeh et al. stated that most problems of the patients with schizophrenia in the psycho-social domains are related to feelings of depression and are in connection with people (12). The following studies show that their quality of life is affected by these factors.

Caqueo-Urizar et al. showed the difference between the quality of life in relation to ethnic background. Also, the scales for the assessment of positive symptoms (SAPS), negative symptoms (SANS) and the quality of life questionnaire were used (9). Khodadadi et al. showed a significant difference between the quality of life of healthy people and patients with schizophrenia (10). Khankeh et al. concluded that the pursuit of nursing care after discharge in patients with chronic psychological problems affect the quality of life. Also, it decreases the period of hospitalization and recurrence of disease (12). Saarni et al. concluded that as schizoaffective, bipolar disorder and then the major depression have the most damage on the quality of life (13). Bayanzadeh et al. (11) said that the quality of life in 3.2% of the patients was in average and more than 3.1% of them were low in physical and mental health. Moreover, none of the demographic variables showed a significant correlation with quality of life (11). The findings of this study were consistent with some previous studies. By checking the quality of life and functional domains can identify that in which aspects of quality of life they are more likely to be injured. The results will help to plan in health, treatment and rehabilitation in order to improve the quality of life and reduce the health costs. One of the most important limitations of this study was the limited number of samples in Kossar hospital and also the lack of contribution of some patients and their families in this study led to limitation in sampling. The lack of adequate literacy and the negative symptoms of disorder in some patients prevented the questionnaires to be filled out by them. By relying on the valid resources, it is possible that the dynamic multidimension and complicated structure and the unique and mental nature of individual and also their social condition due to the length of hospital stay and the lack of social relations along with taking the medicine for a long time pre-

Table 6. Distribution of Mean, Median, Standard Deviation, Minimum and Maximum Separation of QOL by a 20 - 40 Score Original Version of the World Health Organization

Variable	N	Physical Health			Psychological			4 - 20 Social Relationships			Environment		
		Mean ± SD	Range	P Value	Mean ± SD	Range	P Value	Mean ± SD	Range	P Value	Mean ± SD	Range	P Value
Gender				0.45			0.72			0.125			0.39
Male	29	12.24 ± 2.66	7 - 18		12.17 ± 3	7 - 19		11.27 ± 4.60	5 - 20		12.44 ± 3.16	6 - 19	
Female	8	13 ± 1.69	10 - 15		11.75 ± 2.7	8 - 15		8.75 ± 3.69	4 - 15		113.7 ± 2.72	7 - 15	
Age, y				0.557			0.885			0.616			0.795
Under 40	21	12.61 ± 2.35	8 - 18		12.14 ± 2.98	8 - 19		10.42 ± 3.81	4 - 15		12.33 ± 3.42	6 - 19	
Upper 40	16	12.12 ± 2.7	7 - 17		12 ± 2.89	7 - 16		11.12 ± 4.54	NA		12.06 ± 2.64	8 - 18	
Marital status				0.922			0.67			0.17			0.46
Single	28	12.42 ± 2.67	7 - 18		11.96 ± 2.71	7.16		11.25 ± 4.19	4 - 20		12.42 ± 3.17	6 - 19	
Married	9	12.33 ± 1.93	9 - 14		12.44 ± 3.60	8 - 19		9.11 ± 3.51	4 - 15		11.55 ± 2.78	7 - 15	
Education				0.92			0.637			0.245			0.229
Under diploma and diploma	14	12.35 ± 2.81	7 - 17		11.78 ± 2.75	7 - 16		9.71 ± 4.28	4 - 20		11.42 ± 2.97	7 - 19	
Upper diploma	23	12.43 ± 2.33	8 - 18		12.26 ± 3.04	8 - 19		11.34 ± 3.94	5 - 20		12.69 ± 3.09	6 - 18	
Revenue				0.45			0.43			0.84			0.38
150000 - 2 million	8	13.125 ± 2.81	8 - 18		11.12 ± 2.98	8 - 15		10.25 ± 3.49	4 - 20		12.12 ± 3.79	6 - 18	
150000 - 1 million	23	12 ± 2.44	7 - 17		13.12 ± 2.31	9 - 15		11.04 ± 4.19	4 - 16		12.65 ± 2.83	8 - 19	
Under 1 million	6	13 ± 1.26	11 - 14		13.16 ± 2.31	7 - 19		10.16 ± 5.03	4 - 20		10.66 ± 2.94	7 - 4	

Table 7. Distribution of Mean, Median, Standard Deviation, Minimum and Maximum Quality of Life in a Segregated Area of the Original WHO Nmrh100 - 0

Variable	N	Physical Health			Psychological			4 - 20 Social Relationships			Environment		
		Mean ± SD	Range	P Value	Mean ± SD	Range	P Value	Mean ± SD	Range	P Value	Mean ± SD	Range	P Value
Gender				0.44			0.125			0.125			0.39
Male	29	51.68 ± 16.63	19 - 88		51.17 ± 18.84	19 - 94		45.44 ± 25.67	6 - 100		53 ± 19.90	13 - 94	
Female	8	65.5 ± 10.56	38 - 69		29.62 ± 23.13	0 - 69		29.62 ± 23.13	0 - 69		46.25 ± 17.069	19 - 69	
Age, y				0.547			0.616			0.616			0.792
Under 40	21	54.09 ± 14.73	25 - 88		10.42 ± 3.81	0 - 100		10.42 ± 3.81	0 - 100		52.28 ± 21.47	13 - 94	
Upper 40	16	50.93 ± 16.81	19 - 81		11.12 ± 4.54	0 - 100		11.12 ± 4.54	0 - 100		50.56 ± 16.67	25 - 88	
Marital status				0.93			0.17			0.17			0.47
Single	28	52.85 ± 16.62	19 - 88		45.28 ± 26.29	0 - 100		45.28 ± 26.29	0 - 100		52.85 ± 19.97	13 - 94	
Married	9	52.33 ± 12.26	31 - 63		31.88 ± 22.04	0 - 69		31.88 ± 22.04	0 - 69		47.44 ± 17.47	19 - 69	
Education				0.96			0.249			0.249			0.227
Under Diploma and diploma	14	52.57 ± 17.50	19 - 81		35.71 ± 26.79	0 - 100		35.17 ± 26.79	0 - 100		46.57 ± 18.70	19 - 94	
Upper diploma	23	52.33 ± 12.26	31 - 63		45.86 ± 24.81	6 - 100		45.86 ± 24.81	6 - 100		54.56 ± 19.43	13 - 88	
Revenue				0.462			0.84			0.84			0.39
150000 - 2 million	8	57.12 ± 20.23	25 - 88		39 ± 22.03	6 - 69		39 ± 22.03	6 - 69		51 ± 23.78	13 - 88	
150000 - 1 million	23	50.21 ± 15.21	19 - 81		44 ± 26.24	0 - 100		44 ± 26.24	0 - 100		21 ± 17.87	25 - 94	
Under 1 million	6	56.50 ± 8.06	44 - 63		38.5 ± 31.58	0 - 75		38.5 ± 31.58	0 - 75		54 ± 18.54	19 - 63	

Table 8. Pearson Correlation Coefficient Between the Variables of Gender, Occupation, Level of Education and Quality of Life by a 20 - 40 Score Original Version of the World Health Organization

Variables	Physical Health	Psychological	4 - 20 Social Relationships	Environment
Gender	0.31	0.70	0.16	0.47
Age, y	0.63	0.91	0.76	0.84
Marital status	0.95	0.83	0.25	0.54
Education	0.87	0.609	0.032	0.14
Revenue	0.96	0.191	0945	0.42

Table 9. Pearson Correlation Coefficient Between the Variables of Gender, Occupation, Level of Education and Quality of Life by Becoming 100 - 0, the Original Version of the World Health Organization

Variables	Physical Health	Psychological	4 - 20 Social Relationships	Environment
Gender	0.312	0.36	0.17	0.48
Age, y	0.63	0.74	0.76	0.84
Marital status	0.96	0.75	0.25	0.54
Education	0.87	0.39	0.032	0.014
Revenue	0.96	0.39	0.945	0.42

vent to achieve the aims of this study. Therefore, it is recommended that similar studies be performed in future by emphasis on the frequent measurements of the changes in quality of life and its dimensions with larger sample sizes. In general, it can be said that schizophrenia and its symptoms play an important role in the individuals' quality of life. Some backgrounds such as family care, early and timely treatment can help enhance the quality of life.

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Footnote

Authors' Contribution: Study concept and design: Mina Sadat Mirshoja and Afsaneh Abri; acquisition of data: Shamsi Jamali and Majid Mir Mohammadkhani; analysis and interpretation of data: Majid Mir mohammadkhani; drafting of the manuscript: Mina Sadat Mirshoja, and Behnaz Behnam; critical revision of the manuscript for important intellectual content and statistical analysis: Majid Mir mohammadkhani; administrative, technical, and material support: Behnaz Behnam; study supervision: Mina Sadat Mirshoja.

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