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Research / Araştırma

Quality of Life and Depression in Schizophrenia Patients Living in a Nursing Home

Hulya Ertekin[1], Mehmet Er[2], Hatice Yardim Ozayhan[2], Sinan Yayla[3], Esra Akyol[4], Basak Sahin[1]

[1]Assist. Prof. Dr., Canakkale Onsekiz Mart University, Faculty of Medicine, Department of Psychiatry, Canakkale - Turkey
[2]Psychiatry Resident, Konya Training and Research Hospital, Department of Psychiatry, Konya - Turkey
[3]Psychiatrist, Corlu State Hospital, Department of Psychiatry, Tekirdag - Turkey
[4]Psychiatrist, Yildirim Beyazit University, Yenimahalle Training and Research Hospital, Department of Psychiatry, Ankara - Turkey

ABSTRACT

Quality of life and depression in schizophrenia patients living in a nursing home

Objective: Nursing homes are seen as alternative housing for patients with schizophrenia. However, it has not yet been established how suitable this accommodation is for schizophrenia patients. First aim of this study is to assess the quality of life and depression level in schizophrenic patients and compare this data with that of patients living with their families. Second aim is to assess factors related to the quality of living and depression state in all participants of this study.

Method: This is a cross-sectional study conducted with patients presenting to the Psychotic Disorders Policlinic of the Beyhekim Psychiatric Clinic of Konya Training and Research Hospital consecutively between December 2012 and May 2013 who had received a diagnosis of schizophrenia according to DSM IV-TR. All participants were administered a sociodemographic data form, Brief Psychiatric Rating Scale (BPRS), Positive and Negative Syndrome Scale (PANSS), Calgary Depression Scale for Schizophrenia (CDSS), and Quality of Life Scale for Schizophrenia Patients (QLSSP).

Results: CDSS scores were found to be significantly increased in schizophrenic patients living in nursing homes. Their QLSSP scores, including interpersonal relations, occupational role, mental symptoms, personal belongings/activity scores, and total scores were statistically significantly low. A significant negative correlation was observed between negative symptom levels and occupational area, mental findings, and the personal belongings/activity areas of quality of life. Between positive symptom levels and quality of life, only scores in the occupational area showed a significant negative correlation. A significant negative correlation between CSDS and QLS was observed in all areas.

Conclusion: Quality of life and depression need to be evaluated in all schizophrenia patients, as they are conditions that significantly affect treatment and prognosis.

Keywords: Depression, quality of life, schizophrenia

ÖZET

Bakımevinde kalan şizofreni hastalarında yaşam kalitesi ve depresyon

Amaç: Bakımevleri şizofreni hastaları için alternatif yaşam alanları olarak görülmektedir. Ancak bu tür yerlerin şizofreni hastaları için ne kadar uygun olduğu sorusu henüz cevaplandırılmamıştır. Bu çalışmanın birinci amacı bakımevlerinde yaşayan şizofreni hastalarının yaşam kalitesini ve depresyon düzeylerini değerlendirmek ve ailesiyle yaşayan hastalarla karşılaştırmaktı. İkinci amacı ise çalışmaya alınan tüm hastaların yaşam kalitesi ve depresyon durumlarıyla ilişkili faktörlerin değerlendirilmesiydi.

Yöntem: Bu çalışma Aralık 2012-Mayıs 2013 tarihleri arasında Konya Eğitim ve Araştırma Hastanesi, Beyhekim Psikiyatri Kliniği, Psikotik Bozukluklar Polikliniğine ardışık olarak başvuran DSM-IV-TR'ye göre şizofreni tanısı alan hastaların katıldığı kesitsel bir çalışmadır. Tüm katılımcılara sosyodemografik veri formu, Kısa Psikiyatrik Değerlendirme Olçeği (KPDÖ), Pozitif ve Negatif Sendrom Ölçeği (PNSÖ), Calgary Şizofrenide Depresyon Olçeği (CŞDÖ), Şizofreni Hastaları için Yaşam Niteliği Ölçeği (YNÖ) uygulandı.

Bulgular: Bakımevinde kalan şizofreni hastalarının CŞDÖ puanları istatistiksel olarak anlamlı yüksek bulundu. Bakımevinde kalan hastaların YNÖ puanları olan; kişiler arası ilişkiler, mesleki rol, ruhsal bulgular ve kişisel eşya/faaliyet puanları ve toplam puanları istatistiksel olarak anlamlı düşüktü. Negatif belirti düzeyi ile yaşam niteliğinin mesleki alan, ruhsal bulgular, kişisel-eşya faaliyet alanları arasında, pozitif belirti düzeyi ile yaşam kalitesinin sadece mesleki alan puanları arasında negatif yönde anlamlı bir bağıntı olduğu görüldü. CŞDÖ ile YNÖ'nin tüm alanları arasında negatif yönde anlamlı bir bağıntı olduğu görüldü

Sonuç: Yaşam kalitesi ve depresyon tüm şizofreni hastalarında değerlendirilmesi gereken, tedavi ve prognozu önemli derecede etkileyen durumlardır.

Anahtar kelimeler: Depresyon, yaşam kalitesi, şizofreni

Address reprint requests to / Yazışma adresi:
Assist. Prof. Dr. Hulya Ertekin
Canakkale Onsekiz Mart University, Faculty of Medicine, Department of Psychiatry, Canakkale - Turkey

Phone / Telefon: +90-286-218-0018

E-mail address / Elektronik posta adresi: hulyares@hotmail.com

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INTRODUCTION

Schizophrenia in all stages frequently manifests with depressive symptoms. In around 60.0% of all patients, depressive symptoms are found during the course of the disease (1). However, negative symptoms seen in schizophrenia and extrapyramidal side effects developing in relation with antipsychotic drugs complicate the diagnosis of depression (2). The detection of depression in schizophrenia patients varies over a wide range (7.0-75.0%), but on average, depression is observed in one out of four patients (3-5). It has been observed that in schizophrenia patients with depression, the suicide risk is elevated, exacerbation of schizophrenia is increased, comorbidities are found more frequently; they are hospitalized more often, their working lives are affected negatively, and their quality of life is lower (6-8).

It has been seen that among the factors relating to the development of depression, family and social support play an important role (9-11). For the treatment of schizophrenia symptoms and particularly of depression, the availability of familiar and social support is an important factor (12). It has been shown recently that therapeutic models for schizophrenia excluding the family are ineffective and insufficient (13,14). While the care for chronic psychiatric patients in our country is mainly provided by their families, some of the patients are looked after in nursing homes. Patient relatives have to deal with the chronic patients' various needs and problems that can continue during their entire lifetime (15). Among those chronic mental diseases, schizophrenia is the one that places the greatest burden on family members. Some of the factors causing this burden on schizophrenic patients' care givers are related to the patient and the disease (age, gender, intensity and type of symptoms, duration of disease, number of episodes, etc.), some depend on the care giver (gender, closeness with patient, personality traits, socioeconomic and cultural characteristics), and some (social support, social stigmatization, quality and accessibility of mental health services) are lying outside the family realm (16). Some families are unable to cope with the problems arising from the care process and place the patient in a nursing home. In addition, patients with no family or whose families abandoned them need to be admitted to nursing homes. These homes are considered alternative living environments for schizophrenic patients. However, it is still not clear how suitable these kinds of places are for patients with schizophrenia (17).

In today's assessment of the success of rehabilitation programs and pharmacotherapy for schizophrenia, quality of life is used as an important measure (18). In addition, the main aim of schizophrenia therapy has gone beyond the reduction of signs and symptoms and prevention of relapse towards a complete rehabilitation of the patient and an increase of life quality (19,20).

From this perspective, our aim is to assess the relation between depression, nursing home accommodation, and quality of life in schizophrenic patients. The first aim of this study was to assess the quality of life and levels of depression in patients living in nursing homes and to compare them with patients living in their families. The second aim was to evaluate the quality of life and factors related to depression in all patients included in this study.

METHOD

This is a cross-sectional study conducted with patients presenting to the Psychotic Disorders Policlinic of the Beyhekim Psychiatric Clinic of Konya Training and Research Hospital consecutively between December 2012 and May 2013. Approval for this study was obtained from the ethics committee of Selçuk University's Faculty of Medicine, and all participants were informed about the study and gave their verbal and written consent. The study sample consisted of patients living in three different nursing homes in the center of the province of Konya, the control group of patients living with their families. Included were patients with a diagnosis of schizophrenia according to DSM IV-TR, of the age of 18 years and above, who were literate, with no known history of organic brain disease, and who did not present a degree of mental

retardation that would hinder the understanding of the tests and the conducting of interviews.

Psychotic disorder was found in 48 of the 85 patients staying in the first of the three nursing homes, in 15 patients of the 50 residents in the second and in 80 of the 125 in the third one. Of the 143 patients with psychotic disorder presenting during our study, 61 were included in the assessment. The study group consisted of 34 of these 61 patients presenting to our policlinic with a psychotic disorder who stayed in a nursing home, whereas the control group included 34 of the 52 patients living with their families. Twenty seven of the patients living in nursing homes and 18 patients living with their families did not fulfill the inclusion criteria for the study and were therefore excluded: of those living in a nursing home, 17 because of mental retardation, 2 for using antidepressants because of a diagnosis of depression, 7 who were being followed with a diagnosis of schizoaffective disorder, 1 with a diagnosis of delirium disorder; of those living with their families, 2 because of mental retardation, 2 for using antidepressants because of a diagnosis of depression, 9 with schizoaffective disorder, and 5 with a diagnosis of delirium disorder.

Measures

All participants were administered a sociodemographic data form and the Brief Psychiatric Rating Scale (BPRS) and the Positive and Negative Syndrome Scale (PANSS) to assess their general psychopathology. The Calgary Depression Scale for Schizophrenia (CDSS) was used to assess depressive symptoms and the Quality of Life Scale for Schizophrenia Patients (QLSSP) to assess the patients' life quality. As all patients were using antipsychotic drugs, the side effects of these drugs were assessed using the Simpson Angus Neuroleptic-induced Movement Disorder Scale (SAS) and the Barnes Akathisia Scale (BAS).

Sociodemographic data form; composed to establish the patients' demographic and clinical characteristics.

Brief Psychiatric Rating Scale (BPRS); used to assess intensity and change of psychotic and some depressive symptoms in schizophrenia and other psychotic disorders, semi-structured, consisting of 18 items. It was developed by Overall et al., measures each item on a scale of 0-6 points, the total result being the sum of all scores. Validity and reliability of the Turkish form have been confirmed (21,22).

Positive and Negative Syndrome Scale (PANSS); developed by Kay et al. (23), semi-structured scale consisting of 30 items with seven-point severity assessment. Of the evaluated items, seven belong to the positive syndrome subscale, seven to the negative syndrome subscale, and the remaining 16 make up the general psychopathology subscale. A study to confirm the validity and reliability of the Turkish version was conducted by Kostakoğlu et al. (24).

Calgary Depression Scale for Schizophrenia (CDSS); used to assess the level and intensity change of depressive symptoms in schizophrenia and psychotic disorder patients (25). It consists of 9 items measured with a Likert-type scale. These items include symptoms of depression, hopelessness, self depreciation, guilty ideas of reference, pathological guilt, morning depression, early wakening, suicide, and observed depression. The minimum score is 0, the maximum score 27. For the Turkish version of this instrument, the cut-off point for schizophrenia with depressive disorder was established as 11/12 (26).

Quality of Life Scale for Schizophrenia Patients (QLSSP); developed by Heinrichs et al. (27) to assess the quality of life for patients in the course and treatment response of schizophrenia. Validity and reliability of the Turkish version were confirmed by Soygur et al. (28) This scale aims at measuring the richness of patients' personal experiences, quality of interpersonal relations, and productivity level of instrumental roles. The instrument uses a semi-structured interview; assessment is provided by the interviewer. The scale assesses 4 sub-dimensions and consists of three sections for each item with 21

questions. The minimum score is 0, the maximum 126. The sub-dimensions are: I- Interpersonal relations, II- Instrumental role, III- Intrapsychic foundations, IV- Common objects and activities (28).

Simpson Angus Neuroleptic-induced Movement Disorder Scale (SAS); semi-structured instrument used to assess involuntary abnormal movements that can develop with the use of antipsychotics and movement disorders such as Parkinsonism and akathisia (29).

Barnes Akathisia Scale (BAS); frequently used instrument to measure akathisia in patients under antipsychotic drug therapy. Minimum score is 0, maximum 14 (30).

Statistical Analysis

Results were analyzed with the SPSS 19.0 for Windows package. For the demographic characteristics, to compare categorical data, Chi-square test was used, for non-categorical data Student's t-test. Correlations between quality of life and clinical and sociodemographic data were assessed by Pearson correlation analysis. A value of $p<0.05$ was defined as statistically significant.

RESULTS

Sociodemographic and Clinical Characteristics

No statistically significant difference was found between schizophrenia patients living in nursing homes and those living with their families regarding age, sex, marital status, duration of education, work history, age at onset of disease, duration of disease, familiar history of psychiatric disease, or history of attempted suicide (Table 1). Among the patients living in nursing homes, the number of hospitalizations was significantly higher (t=2.27, p=0.027) (Table 1). Duration of stay in the nursing home was 14.87±9.37

Table 1: Sociodemographic and clinical characteristics

	Nursing home	Control		
	n (%)	n (%)	χ^2	p
Gender				
Female	10 (29.4)	11 (32.4)	0.06	0.5
Male	24 (70.6)	23 (67.6)		
Marital status				
Unmarried	16 (47.1)	13 (38.2)	4.82	0.09
Married	6 (17.6)	14 (41.2)		
Widowed	12 (35.3)	72 (0.6)		
Occupation history				
Never worked	13 (40.6)	11 (33.3)	4.23	0.37
Working	-	2 (5.1)		
Been working for 5-10 years	18 (52.9)	16 (47.1)		
Retired due to disability	1 (3.1)	4 (12.1)		
Familiar history of mental disorder				
Present	14 (43.8)	16 (47.1)	0.07	0.78
Absent	18 (56.3)	18 (52.9)		
Suicide history				
Present	8 (23.5)	7 (20.6)	0.09	0.77
Absent	26 (76.5)	27 (79.4)		
Depression				
Present	9 (26.4)	2 (5.8)	5.32	0.02*
Absent	25 (73.6)	32 (94.2)		
	Mean±SD	**Mean±SD**	**t**	**p**
Age	43.50±9.24	40.17±11.78	1.29	0.2
Duration of education	6.75±3.03	7.29±3.49	-0.67	0.5
Age at onset of disease	24.37±7.67	23.91±9.04	0.22	0.82
Duration of disease	18.75±9.08	16.26±10.63	1.02	0.82
Number of hospitalizations	7.03±5.91	4.08±4.49	2.27	0.027*

*p<0.05

months. All patients included in this study received treatment with atypical antipsychotics. More than one antipsychotic was used by 50.0% (n=17) of patients in the nursing home and 48.0% (n=16) of those living with their families. 23.5% (n=8) of the patients in the nursing home and 14.7% (n=5) of those living with their families used long-acting depot antipsychotics.

Comparison of Rating Instrument Scores

No statistically significant difference was found between the two groups regarding positive, negative, general, and total BPRS and PANSS scores. However, among schizophrenic patients in nursing homes, CDSS scores were significantly higher, QLSSP subscores for interpersonal relations, instrumental role, intrapsychic foundations, and common objects and activities as well as total scores were significantly lower (Table 2).

Correlation Between Quality of Life, Rating Scores, and Sociodemographic Variables

Assessing the relation between QLSSP scores and clinical evaluation scores, a significant negative correlation was found between the instrumental role subscale scores and PANSS positive scores, between instrumental role, intrapsychic foundations, common objects and activities and total scores and PANSS

Table 2: Comparison of Rating Instrument Scores

	Nursing home Mean (SD)	Control Mean (SD)	t	p
QLSSP interpersonal relations	16.88 (8.46)	25.70 (9.52)	-4.03	<0.001
QLSSP instrumental role	0.55 (2.07)	4.47 (6.18)	-3.49	<0.001
QLSSP intrapsychic foundations	19.14 (6.74)	30.23 (7.84)	-6.24	<0.001
QLSSP common objects and activities	4.41 (2.90)	10.44 (4.71)	-6.35	<0.001
QLSSP total	41.50 (16.78)	69.52 (20.58)	-6.15	<0.001
PANSS positive	11.26 (4.32)	11.05 (3.81)	0.20	0.83
PANSS negative	16.79 (7.16)	14.44 (4.52)	1.61	0.11
PANSS general psychopathology	24.35 (8.62)	23.91 (8.11)	0.21	0.82
PANSS total	53.08 (16.64)	49.73 (14.42)	0.88	0.37
CDSS	7.73 (3.53)	2.85 (2.66)	6.43	<0.001
BPRS	18.23 (10.21)	18.17 (7.98)	0.02	0.97
BAS	0.17 (0.45)	0.18 (0.39)	-0.05	0.95
SAS	0.74 (0.7)	0.97 (0.58)	-2.40	0.138

SD: Standard deviation, Mean: Mean value, QLSSP: Quality of Life Scale for Schizophrenia Patients, PANSS: Positive and Negative Syndrome Scale, CDSS: Calgary Depression Scale for Schizophrenia, BPRS: Brief Psychiatric Rating Scale, BAS: Barnes Akathisia Scale, SAS: Simpson Angus Neuroleptic-induced Movement Disorder Scale

Table 3: Correlation between rating instrument scores and sociodemographic variables

	QLSSP interpersonal relations	QLSSP instrumental role	QLSSP intrapsychic foundations	QLSSP personal objects activities	QLSSP total
PANSS positive	0.08	-0.28*	0.001	-0.17	-0.17
PANSS negative	-0.01	-0.52*	-0.24**	-0.44*	-0.44*
PANSS general psychopathology	0.17	-0.33*	-0.08	-0.21	-0.21
PANSS total	0.11	-0.45*	-0.14	-0.31*	-0.31*
CDSS	-0.46*	-0.37*	-0.53*	-0.50*	-0.58*
BPRS	0.22	-0.20	0.07	-0.06	-0.06
BAS	0.06	-0.12**	0.01	-0.05	-0.05
SAS	0.18	-0.10	0.10	-0.00	-0.00
Age	-0.23**	-0.17	-0.16	-0.27**	-0.22
Duration of education	0.39*	0.15	0.34*	0.21	0.35*
Age at disease onset	-0.06	-0.13	0.11	-0.08	0.06
Duration of disease	-0.22	-0.28**	-0.06	-0.24**	-0.25**

r: correlation coefficient, QLSSP: Quality of Life Scale for Schizophrenia Patients, PANSS: Positive and Negative Syndrome Scale, CDSS: Calgary Depression Scale for Schizophrenia, BPRS: Brief Psychiatric Rating Scale, BAS: Barnes Akathisia Scale, SAS: Simpson Angus Neuroleptic-induced Movement Disorder Scale
*p<0.001, **p<0.05

negative scores, and between instrumental role, personal activity and total scores and PANSS total scores. A significant negative correlation was found between all subscores of QLSSP and CDSS scores. A significant positive correlation was found between interpersonal relations, psychic foundations and total score on QLSSP and duration of education. In addition, a significant negative correlation was found between instrumental role, personal objects-activity and total score on QLSSP and duration of disease (Table 3).

DISCUSSION

The first aim of this study was to assess quality of life and levels of depression in patients living in nursing homes and to compare these data with those of patients living with their families. The second aim following the evaluation of all patients was to research factors related to quality of life and depression.

The results of this study show that according to an evaluation using CDSS, 26.5% of patients living in a nursing home and 5.8% of those living with their families present with depression. While there are many studies researching depression in schizophrenic patients, not many can be found to apply CDSS. To give a few examples for the latter, one study with 67 patients found a depression rate of 30.0% (31), another study including 249 hospitalized patients 36.0% (8), and one study with 71 patients aged 50 and above, 95.0% of whom lived in a nursing home, established a rate of 35.1% (32). The results from these studies are consistent with the depression level we found among patients living in nursing homes. However, according to our study results, the depression rate of schizophrenia patients living with their families was quite low, which indicates that family support and environmental conditions may be important factors in the manifestation of depression in these patients. This observation supports the importance of the family playing a role in psychosocial therapies for schizophrenia patients, as has been emphasized and elaborated recently (12-16).

Quality of life scale scores for schizophrenia patients living in a nursing home have been found significantly lower than for those living with their families. Various studies show the effect of familiar and social support on the quality of life of schizophrenia patients (9-11). Our finding that in an environment like a nursing home, where familiar and social support are limited, the quality of life of schizophrenia patients is reduced is consistent with the literature. However, given that our study did not assess previous disease episodes of patients in nursing homes, it cannot be excluded that the severity in the past might be an effective factor for assessing the patients' current quality of life (e.g. instrumental role, interpersonal relations).

Our results, consistent with the literature, found a correlation between negative and positive symptom levels and quality of life (33,34). A significant negative relation was found between negative symptom level and the quality-of-life areas of instrumental role, mental findings, and personal objects and activities; between positive symptom level and quality of life, only in the instrumental area a significant negative relation was found. Studies with schizophrenia patients report a negative correlation between psychopathology levels and quality of life. Some studies show a negative effect on quality of life only for negative symptoms, others for negative and positive symptoms alike (35-40).

Another important result of our study is the establishment of a significant negative correlation between quality of life and CDSS. Some studies have shown that the presence of depression in schizophrenia patients is one of the most important factors affecting their quality of life (6-8). Consistent with the literature, our study shows that the presence of depression can affect the quality of life negatively. The disease itself as well as comorbid depression may diminish the patients' quality of life.

Our study found a positive relation between duration of education and quality of life. As in our study, a number of works studying quality of life and related factors in schizophrenia patients found a relation between duration of education and quality of

life, whereby with a higher education level the quality of life increased (41-45). As the education level is one of the variables that may affect cognitive functions, it may improve patients' self-care, allow them to perform a number of functions, and thus have a positive impact on the quality of life.

In the past, patients with severe mental disorders such as schizophrenia were only offered inpatient care, and when discharged might not comply with their therapy consistently, suffer a loss of quality of life, lose their still present competencies and be marginalized in society and stigmatized (46). In 2008, the first Public Mental Health Centers (PMHC) in Turkey were opened with the aim to care for patients with severe mental disorders such as schizophrenia. Goal of the PMHCs is to register patients with severe mental diseases living in a specified region centrally, follow them with mobile teams, provide therapy and rehabilitation, and re-integrate them into society (47). Studies have shown that patients followed by PMHCs increase their quality of life and reduce their loss of competencies (48,49). If the activities of the PMHCs provide therapy and rehabilitation for schizophrenia patients, it is conceivable that in future these patients will no longer require accommodation such as nursing homes that currently house more severe schizophrenia patients.

Ours is the first study to research depression and quality of life in schizophrenia patients living in a confined space such as a nursing home. Another important aspect is that the use of schizophrenia patients living with their families as a control group contributes to an evaluation of the role of the family on depression and quality of life in schizophrenia. Given that antidepressants improve symptoms of depression, patients using those drugs were excluded and only patients without a diagnosis of depression were enrolled in the study.

There are some limitations of this study. Most notably, the number of patients participating was low. Included were only patients from nursing homes presenting at our policlinic, and their number was low; thus, our results may not reflect the situation of all patients living in nursing homes. Data need to be confirmed by future studies with larger patient numbers. Another limitation is that we could not follow up the patients longitudinally, though it would be important to reassess them from the perspective of quality of life and factors affecting depression after a longitudinal follow-up.

Finally, quality of life and depression are important states affecting treatment and prognosis, requiring evaluation in all schizophrenia patients. It is necessary, through further studies, to reduce schizophrenia patients' depression, improve their quality of life, facilitate family participation in their therapy, provide them with capabilities to confront problems they encounter, help implement caregiver roles constructively, and eventually to develop new therapy and support programs.

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