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Are the Patients with Schizophrenia Who Have Case Managers in Community Mental Health Centers Happier?

Toplum Ruh Sağlığı Merkezlerinde Vaka Yöneticiliği Yapılan Şizofreni Hastaları Daha Mutlu mu?

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ABSTRACT

When talking about recovery for schizophrenia patients, the absence of symptoms is satisfied and the concept of happiness is generally ignored. In our study, we aimed to compare the happiness levels of patients with schizophrenia who were followed up by the community mental health center (CMHC) and had case managers, and those with schizophrenia in remission who were followed only by the outpatient clinic and at the same time we compare the expression of emotion, which is thought to affect this happiness, the level of support perceived by the patient and the quality of life. Patients with schizophrenia who had regular CMHC follow-up for at least 1 year and had a case manager (CM) (n:100) and were in remission for at least 3 months (n:100) who were followed up in the outpatient clinic were included in the study. Subjective Happiness Scale (SHS), Perceived Available Support Scale (PASS), Quality of Life Scale (QLS), Level of Expressed Emotion Scale (LEES) were applied to both groups. SHS, PASS, LEES, QLS scores were statistically significantly different in the group with CM. A negative correlation was found between the subscales showing the Level of Expression of Emotion and SHS scores. A positive correlation was found between QLS and PASS scores and SHS scores. In the case of VY, it was determined that PASS scores had a mediating effect on SHS scores, but QLS scores did not have a mediating effect. It was determined that the levels of intrusiveness, emotional response and tolerance/expectation, which are subscales of LEES, had a mediating effect on SHS scores, but the levels of attitude towards illness did not have a mediating effect. For people with schizophrenia, happiness is an often overlooked concept when talking about recovery. In our study, we evaluated the effect of case management within the scope of CMHC service and found that it had a positive effect on the happiness of patients with schizophrenia.

Keywords: Perceived support, happiness, schizophrenia, community mental health center, quality of life

ÖZ

Şizofreni hastaları için iyileşmeden bahsedilirken belirtilerin olmaması ile yetinilmiş ve mutluluk kavramı genelde göz ardı edilmiştir. Çalışmamızda toplum ruh sağlığı merkezi (TRSM) tarafından takip edilip vaka yöneticisi olan şizofreni hastaları ile sadece poliklinik takibi yapılan remisyondaki şizofreni hastalarının mutluluk düzeylerini ve bu mutluluğu etkilediği düşünülen duygu dışavurumu, hastanın algıladığı destek düzeyi ve yaşam niteliğini karşılaştırmayı amaçladık. En az 1 yıldır düzenli TRSM takibi yapılan ve vaka yöneticisi (VY) olan (n:100) ve poliklinik takibi yapılan en az 3 aydır remisyonda olan (n:100) şizofreni hastaları çalışmaya alındı. Her iki gruba Öznel Mutluluk Ölçeği (ÖMÖ), Algılanan Elde Edilebilir Destek Ölçeği (AEEDÖ), Yaşam Niteliği Ölçeği (YNÖ), Duygu Dışavurum Düzeyi Ölçeği (DDDÖ) uygulandı. ÖMÖ, AEEDÖ, DDDÖ, YNÖ puanları VY olan grupta istatistiki olarak anlamlı farklıydı. Duygu Dışavurum Düzeyini gösteren alt ölçekler ile ÖMÖ puanları arasında negatif korelasyon saptandı. YNÖ ve AEEDÖ puanları ile ÖMÖ puanları arasında ise pozitif korelasyon saptandı. VY olması durumunda AEEDÖ puanlarının ÖMÖ puanları üzerinde aracı bir etkisi olduğu; YNÖ puanlarının aracı bir etkisi olmadığı saptandı. DDDÖ alt ölçekleri olan müdahalecilik, duygusal tepki ve hoşgörü/beklenti düzeylerinin ÖMÖ puanları üzerinde aracı bir etkiye sahip olduğu; hastalığa karşı tutum düzeylerinin aracı etkiye sahip olmadığı saptandı. Şizofreni hastaları için iyileşmeden bahsederken genelde mutluluk göz ardı edilen bir kavramdır. Bu çalışmada TRSM hizmeti kapsamındaki vaka yöneticiliğinin etkisini değerlendirdik ve şizofreni hastalarının mutluluğuna olumlu etkisi olduğunu saptanmıştır.

Anahtar sözcükler: Algılanan destek, mutluluk, şizofreni, toplum ruh sağlığı merkezi, yaşam niteliği

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Introduction

When talking about recovery for patients with schizophrenia, the absence of symptoms usually comes to mind. However, the decline in cognitive domains, the fact that their functionality is not at the previous level, and the lack of goals and motivation change their lives at least as much as having positive symptoms. Studies on recovery in patients with schizophrenia have reported that 20-30% of patients can lead a life close to normal, approximately 20-30% continue to experience mild symptoms, and 40-60% have significant impairments caused by the disease in their entire lives (Sadock et al. 2016). Although there is evidence of recovery, many patients are unable to regain their previous health due to disability in various domains. The fact that patients see themselves in a very drastically different period from the pre-disease era leads them to be unhappy. The absence of symptoms for patients with schizophrenia is usually considered sufficient by the patient's relatives and doctors, and as psychiatry professionals, the concept of happiness in schizophrenia has been little studied. As much as the genetic and character traits of the person are a factor in happiness, social relationships, social activities, economic status, relationships with family and spouse, self-actualization, purpose in life, and the absence of events that are considered negative in life are also important for ensuring happiness (Doğan 2013, Steptoe 2019).

With the concept of community-based mental health, Community Mental Health Centers (CMHC), where case management is also on the agenda, aim to go beyond the symptomatic recovery of patients (Çiçekoğlu and Duran 2018). This concept gives the patient the opportunity to shape his/her own life, even with this disease, by asking what he/she wants and what will make him/her happy, instead of living with the decisions made by others by considering his/her best interests instead of him/her in a stigmatizing way (Harpur 2012). Case management aims to provide individual-specific solutions to the patient in a holistic manner. In line with the goals of the case management practices implemented in CMHC, the environment in which the person is in constant interaction is closely monitored and observed through home visits. The course of the disease and the factors that trigger exacerbation are discussed and the patient is supported by providing trainings on how to support the family in order to include the patient in social life. They are helped to realize themselves by ensuring their communication with social welfare institutions, continuing their education life or acquiring a profession, supporting them to have a professional role. By cooperating with job placement institutions, they are provided with jobs, thereby increasing their functionality and maximizing their economic welfare. In order to make this multifaceted assessment, case management, which can use the limited resources on the agenda in an individualized way, is becoming more and more important every day. In a study examining the effect of case management on schizophrenia patients, the patients in the case management group in CMHC had lower clinical symptom scale scores and higher social functioning and quality of life scale scores than the patients followed by the psychiatry outpatient clinic (Aydın 2016). However, the impact on happiness levels for schizophrenia patients has not been noted.

The pursuit of happiness has been recognized as a basic human need by the United Nations (UN News Centre, 2015). Studies have reported that patients with schizophrenia have lower levels of happiness than healthy controls (Buckland et al. 2013, Palmer et al. 2014, Fervaha et al. 2016). There is a limited number of studies exploring methods to respond to this basic need. It is believed that case management, which is on the agenda in CMHC operations that evaluate and support the patient in multiple ways, will positively affect the happiness levels of these individuals and that the present study will contribute to this field.

The aim of our study was to compare the happiness levels of schizophrenia patients who were followed up at CMHCs by a case manager and schizophrenia patients in remission who were only followed up at outpatient clinics, and in addition to this, to compare the family or caregiver emotional expression, the level of support perceived by the patient and the quality of life, which are assumed to have an effect on their happiness.

Method

This study was conducted with patients who were followed up by Erzurum Regional Training and Research Hospital Community Mental Health Center (CMHC) and diagnosed with schizophrenia according to DSM-5. Ethics Committee of Erzurum Regional Training and Research Hospital approved the study on 16.05.2022 with decision number 2022/06-47. Written informed consent was obtained from the patients that they agreed to participate in the study. Each patient was diagnosed by a psychiatrist. Case management is practiced in our institution by 1 psychiatrist, 1 psychologist, 1 occupational therapist, 1 social worker and 2 nurses. Two groups were formed as case manager (CM) and non-case manager (NC) from patients who had been case managed for at least 1 year and patients who were only followed up in outpatient clinics. The data of the groups were compared.

Sample

Schizophrenia patients with CM who had regular CMHC follow-up for at least 1 year and who had the same number of outpatient clinic follow-ups, who had been in remission for at least 3 months (Clinical global impression severity score of 4 and below, improvement score of 3 and below), who did not have any organic disease diagnosis, who were between the ages of 18-60, and who did not have mental retardation were included in the study.

Measures

Sociodemographic Information Form

This questionnaire was designed to assess sociodemographic information (such as age, gender, employment status) and disease duration of the study participants.

Clinical Global Impression Scale

This scale was developed by Guy (1976) to enable the clinician to record the clinician's impression of a patient's functioning before and after the initiation of treatment and has three dimensions. The first dimension assesses the severity of the disease, the second dimension assesses improvement and the third dimension assesses the severity of drug side effects. In our study, the first two dimensions of the scale were used. The first part (Clinical Global Impression-Disease Severity) is evaluated from 1 (normal, not ill) to 7 points (most severely ill) according to the severity of the disease at the time the scale was filled out. The second part (Clinical Global Impression - Improvement) assesses how much the patient has changed since the beginning of the study on a scale of 1 (much improved) to 7 (much worsened).

Subjective Happiness Scale (SHS)

The scale was developed by Lyubomirsky and Lepper (1999). It was created on a 7-point Likert scale. The score range of the scale varies between 4 and 28 points. The high scores of the individual from the scale indicate that the happiness coefficient is also high. The scale was adapted into Turkish by Akın and Satıcı (2011).

Perceived Available Support Scale (PASS)

The scale developed by Schulz and Schwarzer (2003) consists of 8 items. It consists of two subscales: emotional support and instrumental support. Cronbach's alpha value for the scale was calculated as 0.83. Turkish validity and reliability studies were conducted by Kapıkıran (2010).

Quality of Life Scale for Schizophrenia Patients (QLS)

The scale was developed by Heinrich et al. (1984) to assess the richness of personal experiences, quality of interpersonal relationships, productivity in occupational roles and daily activities of patients with schizophrenia. The higher scores in the scale reflect high quality of life and good or intact adjustment. It has four dimensions: intrapsychic foundations; interpersonal relations; instrumental role functioning and common objects and activities. The Turkish validity and reliability study of the scale was conducted by Soygür in 2000.

Level of Emotion Expression Scale (LEES)

This scale was developed by Cole and Kazarian (1988). This scale, which examines the attitudes of relatives towards the patient, has 4 subscales: intrusiveness, emotional response, attitude toward illness and tolerance/expectation. The scale was adapted into Turkish and a validity and reliability study was conducted (Berksun et al. 1993). This scale is a self-assessment tool developed to understand the emotional atmosphere between a person who is important to the patient and the patient and to rate some characteristics of the relationship. It is administered to patients and items are marked in a true-false format, taking into account the relationship with the key relative in the last three months.

Statistical Analysis

Statistical analysis was performed with SPSS 26.0 computer program. Kolmogorov Simirnov test was used to determine conformity with the assumption of normal distribution. Data were presented as mean (mean), standard deviation (SD), percentage (%) and number (n). Parametric test conditions were not met in the data. Chi-square test for categorical variables and Mann-Whitney U test for numerical variables were used to compare the sociodemographic data of the groups. Mann-Whitney U test was applied to compare scale scores according

to case manager and CMHC participation status. Pearson correlation analysis was performed for the correlation analysis of the SHS score with the QLS, PASS and LEES scores. Mann-Whitney U test was used to compare the SHS scores of the patients according to gender, marital status, whether they had children or not, and Kruskal Wallis H test was used to compare the SHS scores according to employment status. Pearson correlation analysis was performed to evaluate the correlation between SHS scores and disease duration and education duration. SHS scores according to case manager status were evaluated by Regression Analysis Enter model. The significance level of the indirect effects in the path model created to determine the relationships between the scales was tested with the structural equation modeling bootstrapping method. Path coefficients (β) related to the model were calculated. Statistical significance level was set at p<0.05.

Results

There were 117 patients enrolled in the CMHC, where their follow-up was maintained regularly for 1 year and case management was performed. Of these, 8 patients were over 60 years of age, 4 patients refused to participate in the study, and 5 patients could not be included in the study because they did not meet the remission criteria. Sociodemographic and clinical characteristics of the groups are shown in Table 1.

Table 1. Sociodemographic and clinical characteristics of the groups (n=100)

	With CM	**Without CM**	**p**
Age (mean±SD)	39.98±9.32	40.54±8.63	p:0.688 z:-0.402
Gender (female, %)	32,. %32	21, %21	p:0.078 χ2:3.106
Marital Status (married n,%)	36. %36	40, %40	p:0.560 χ2:0.340
Child Status (having children n, %)	36, %36	57, %57	p:0.311 χ2:1.025
Year of Education (mean±SD)	8.48 ± 3.955	8.82 ± 3.421	p:0.376 z:-0.885
Duration of Disorder (years mean±SD)	11.60± 5.121	11.46± 5.153	p:0.610 z:-0.510

SD: Standard Deviation; CM: Case Manager; n: Number; %: Percentage

The study was completed with 100 patients with schizophrenia who were able to be regularly case managed for 1 year and 100 patients with schizophrenia who were followed up from the outpatient clinic. Of the 100 patients who had case managers, 32 patients participated in occupational therapy at least once a week. The 16 patients who did not participate in occupational therapy were patients who were placed in regular employment through the Disabled Public Personnel Selection Examination or the Employment Agency or through their relatives and had a regular job. Six of them were university students and 9 were patients who worked irregularly in between. In the patient group without a case manager, 3 patients had a regular job and 23 had irregular jobs in between.

Table 2. Mean and standard deviation values of scale scores per group

	With CM (mean±SD)	**Without CM (mean±SD)**	**p**
SHS score	20.9±4.02	9.92±3.37	p <0.001 z:-8.284
PASS score	26.78±4.85	15.62±3.71	p <0.001 z:-7.858
Emotional Support	13.08±2.89	7.84±2.37	p <0.001 z:-6.943
Instrumental Support	13.7±2.38	7.78±1.50	p <0.001 z:-8.181
LEES score			
Intrusiveness	5.72±2.33	8.78±2.80	p <0.001 z:-4.774
Emotional Response	3.1±2.82	6.5±1.50	p <0.001 z:-6.440
Attitude towards illness	1.7551±1.51	2.62±1.72	p :0.001 z:-3.306
Tolerance and Expectation	2.28±2.89	3.78±1.23	p <0.001 z:-4.368
QLS score	78.68±21.17	29.58±12.34	p <0.001 z:-7.911
Interpersonal Relationships	26.98±9.38	8.22±3.98	p <0.001 z:-7.702
Instrumental Role	14.2±5.11	4.24±3.61	p <0.001 z:-7.607
Intrapsychic Foundations	28.22±7.60	13.34±4.59	p <0.001 z:-7.454
Common objects and activities	8.92±2.74	3.78±1.47	p <0.001 z:-7.718

PASS: Perceived Available Support Scale; LEES: Level of Emotion Expression Scale; SHS: Subjective Happiness Scale; QLS: Quality of Life Scale; SD:Standart deviation; CM: Case Manager

SHS scores were evaluated according to demographic data without dividing into groups. SHS scores were significantly higher in women than in men (p:0.003, z:-2.975). The difference in SHS scores according to marital status and having children was not statistically significant (p values: p:0.765, p:0.655, respectively). When the SHS scores were evaluated according to employment status (not working, working irregularly, student, working regularly), regular employees' SHS scores were statistically significantly higher than irregular employees and non-employees (p values p:0.002, p:0.017, respectively), while there was no significant difference compared to

students (p:0,993). SHS scores were significantly higher in those with lower education level (p:0.005 r:-0.198). A statistically significant positive correlation was noted between the duration of the disease and the SHS scores (p:0.018 r:0.167).

Table 3. Pearson correlation analysis of SHS scores with PASS, LEES and QLS scores

	SHS scores	
	R	p
PASS score	0.856	p<0.001
Emotional Support	0.790	
Instrumental Support	0.869	
LEES score		
Intrusiveness	-0.525	
Emotional Response	-0.567	
Attitude toward illness	-0.274	
Tolerance and Expectation	-0.260	
QLS score	0.784	
Interpersonal Relationships	0.725	
Instrumental Role	0.746	
Intrapsychic Foundations	0.761	
•Common objects and activities	0.792	

PASS: Perceived Available Support Scale; LEES: Level of Emotion Expression Scale; SHS: Subjective Happiness Scale; QLS: Quality of Life Scale

SHS, LEES, PASS, QLS scores were statistically significantly different in the group with a case manager (p<0.001) (Table 2). In the case manager group, there was no statistically significant difference between the groups when the SHS scores were evaluated for those who participated in occupational therapy at the CMHC at least once a week and those who did not (p:0.765 z:-0.298).

Table 4. Regression model of SHS scores according to having or not having a case manager

	B	S.E.	p	OR	%95 Confidence Intervals	
					Min	Max
SHS score	0.687	0.108	<0.001	1.988	1.609	2.455
Constant	-10.227	1.606	<0.001	.000		

B: Estimated slope coefficient; OR Odds Ratio; SHS Subjective Happiness Scale; SE: Standard error of the estimated slope coefficient

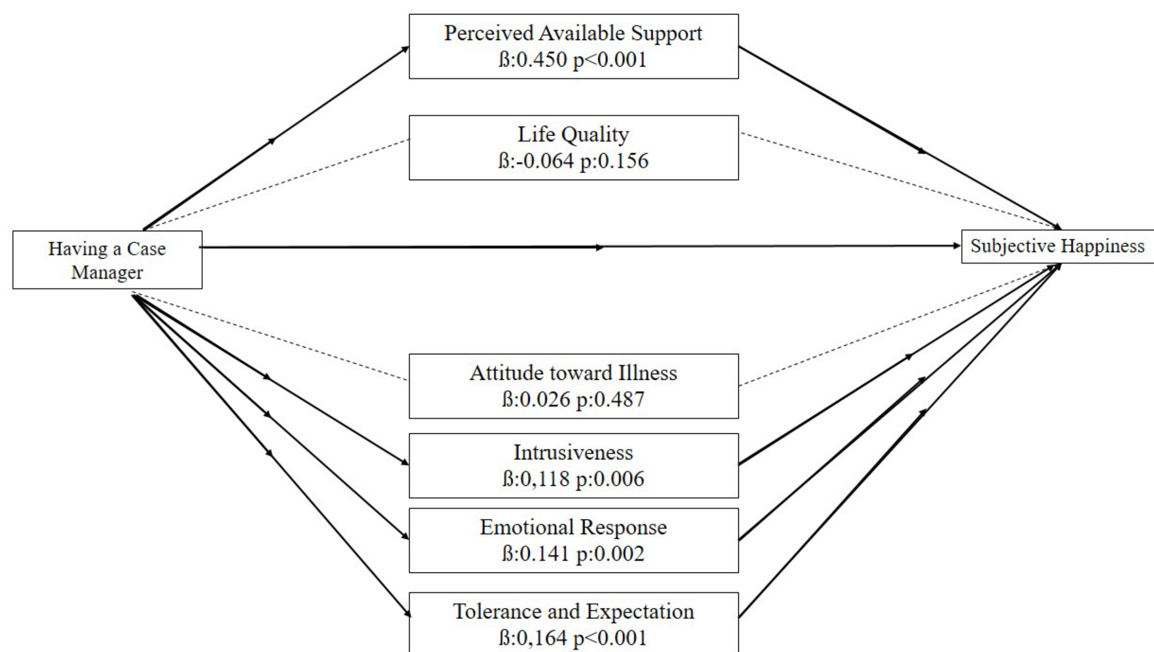

Figure 1. Path analysis of mediating effects on subjective happiness

A solid line ( ) indicates a mediating effect and a dashed line ( ) indicates no mediating effect.

Correlation analysis was performed between the scores of the SHS and the scores of PASS, LEES, and QLS (Table 3). The subscales indicating the level of emotional expression were evaluated one by one. A negative correlation was found between the scores indicating the "level of intrusiveness", "level of emotional reaction", "negative attitudes toward illness", and "level of expectation" of the patients' relatives to the patients and the scores of the SHS. A positive correlation was found between the scores of the QLS and AEED and the SHS scores. According to the results of the regression analysis enter model, those who had a CM were 1.988 times higher than those who did not (OR=1.988 (1,609-2,455); $p<0.001$) (Table 4).

In the path analysis, in the presence of CM, PASS scores had a mediating effect on SHS scores (ß coefficient: 0.453 $p<0.001$). However, in the same situation, there was no mediating effect of the QLS scores on the SHS scores (ß:-0,064 p:0,156). According to this model, the mediating effect of the LEES scores on the SHS in case of CM was also evaluated (Figure 1). The levels of intrusiveness, emotional response, and tolerance/expectancy, which are subscales of the LEES, have a mediating effect on the SHS scores (p values and ß coefficients: 0.006, 0.002, <0.001 and 0.118, 0.141, 0.164, respectively), but the levels of attitude toward illness did not have this mediating effect (p:0.487 ß:0.026).

Discussion

Treatment for schizophrenia patients is primarily aimed at eliminating symptoms. However, this treatment process cannot meet the full recovery needs of schizophrenia patients. This is because within the scope of full recovery of schizophrenia patients; there are also goals such as happiness, self-sustaining life, finding solutions to problems and finding resources to get support. In order for all these goals to be realized, taking an active role in their personal treatment process and being hopeful for the future are considered to be important factors for schizophrenia patients. Studies have revealed that schizophrenia patients with high levels of happiness have better treatment compliance, longer remission periods, fewer relapses and better coping skills (Meyer et al. 2012, Saperia et al. 2018). Therefore, studies to increase the happiness level of schizophrenia patients gain importance.

Happiness can be evaluated in individuals with the concepts of feeling subjectively good and being satisfied with the life they live, but for the concept of happiness in schizophrenia; adaptation to the disease, quality of life, functionality, ability to exist in social life and the patient's ability to reach the potential for independence should also be considered (Agid et al. 2012). This potential for independence and quality of life increases with the patient's ability to use support resources. In adaptation to the disease, the patient's family's approach to the patient, their expectations from the patient and their attitudes towards the disease play a crucial role. Each of these contributes to the patient's happiness at least as much as the absence of symptoms.

In the present study, by working as a case manager at the CMHC, we wanted to observe whether we had a positive impact on the happiness levels of patients with schizophrenia. We assumed that by including them in the treatment process, not by making decisions for them, but by making plans about their lives together with them, they could realize themselves better and therefore be happier. Increasing the support they receive in this process and regulating the perspective of their families on themselves and their illness may have a positive effect on the concept of happiness, which is neglected for schizophrenia patients.

The results of our study showed that the happiness levels of the patients who were case-managed in CMHC were higher. The case manager provides oversight of the patient's clinical and social functioning. It increases the patient's independence by supporting the patient in obtaining and renewing social security benefits, professional development, budget structuring and money management, providing adequate accommodation options, and access to medical treatment opportunities other than psychiatry. This in turn, we thought, would enable the patient to have a more positive outlook on life and live happier. In a systematic review study by Dieterich et al. (2017), case management reduced hospitalization, increased the rate of interaction with health professionals and improved social functioning in patients with serious mental disorders. Although there is no study reporting the effect of case management on happiness, there is a correlation with the present study in terms of supporting the contribution of case management to the patient.

Patients' quality of life levels and perceived support, which we anticipated to be related to happiness levels, were also higher in patients with case managers compared to those without case managers. A case manager is a professional responsible for establishing a connection with healthcare providers (Townsend and Morgan 2017). The case manager identifies the needs of the individual and develops a care plan. They implement these care plan interventions together with the patient and monitor the patient's progress within this plan (Çam et al. 2019). When necessary, it provides patient-based environmental interventions such as individual psychotherapy, social skills training, psychoeducation, connecting with resources that the patient can benefit

from, supporting his/her relationship with family and other close environment, supporting him/her to gain social networks, facilitating his/her application to doctors and hospitals. They also formulate crisis plans for periods of relapse together with the patient while the patient is in remission (Çoker 2021). In this context, the finding that the perceived support level and quality of life of a patient with case management is significantly higher than those without case management supports our study hypothesis.

Case managers also have constant contact with the family. This contact both supports the families with the psychological education provided and enables them to share their observations about the patient with us. This activity can be done in the form of inviting families to the institution for trainings and interviews, as well as evaluating the patient directly at home and in the family environment through home visits. As a result of our work with the families of the patients, the families who had case managers had lower levels of emotional expression. In other words, the families of these patients were more lenient towards the patient in terms of intrusiveness, had a better knowledge of the patient's boundaries, were more tolerant towards the patient, had expectations to the extent that they did not overwhelm the patient and were able to show more proportional emotional reactions. It has been reported in many studies that psychological education interventions for families have a positive impact on families and patients and provide healthy improvements in family functions, that family members are more tolerant towards each other and their patients with these interventions, that emotional expression levels decrease (Giron et al. 2010), and that they have positive effects on the social domains of patients (Lyman et al. 2014). The results of the current study also support these findings.

When happiness levels were examined according to presence of case management and CMHC participation, no significant difference was found. Because participation in CMHC occupational therapies is provided by the joint decision of the case managers and the patient. CMHC occupational therapies may not be necessary for a patient who have friends and a work environment outside CMHC. In fact, the ultimate goal of care plans for schizophrenia patients is to ensure that the patient has an environment of his/her own and learns to make his/her own contacts when he/she is alone. Some of our patients who did not attend CMHC occupational therapies had a regular job or were students, or were actively involved in their families at home and were happy to spend time with them. In this case, participation in CMHC occupational therapies is only one of the ways used in case management for the benefit of the patient. It is more valuable in case management to work to provide an environment where the patient can be happy outside the CMHC. For this reason, presence or absence of a case manager rather than participation in CMHC occupational therapies was expected to affect happiness levels.

Happiness is a state that is affected by many factors arising from both the individual and his/her environment. These include the support the patient can receive and the attitude of the family towards the patient. In a review study by Jeste et al. (2015), family dynamics had a significant impact on the happiness of psychiatric patients. In another study by Jeste et al. (2017), Social support and the family's attitude towards the patient constituted a key point in the happiness levels of schizophrenia patients. A parallel relationship between family support and happiness level has been shown in the relevant literature, and as family support increases, the level of happiness will increase (Şahin and Şahin Altun 2020). A negative correlation was also found in our study between the SHS scores of schizophrenia patients and the LEES scores reflecting the negative reactions of the families towards the patient. Patients whose case managers were in constant communication with their families and whose families were included in trainings were found to have higher SHS scores.

There was a correlation between the scores of the QLS, which we used in our study to evaluate the quality of interpersonal relationships, productivity, daily activities and use of possessions, and the happiness levels of the patients. Establishing high-quality interpersonal relationships leads to positive emotions such as satisfaction and happiness. Several studies in the literature support this finding. Baytemir (2016) reported that competence in interpersonal relationships predicted subjective well-being. In a study conducted by Hallgren et al. (2020) to illustrate the effect of activation during the day on depression, mild and moderate-to-vigorous physical activity was associated with a decrease in depressive symptoms, as well as 30 minutes of mental activity (such as attending a meeting, knitting, sewing or working in an office) per day reduced depressive symptoms.

In the present study, happiness levels were analyzed not only in terms of demographic data. Women were found to have higher scores on the SHS than men in this study. Numerous previous studies on this topic have reported that women are happier than men. While Bal and Gülcan (2014) attributed this to the fact that women are more social and have a positive quality of life, Çirkin and Göksel (2016) explained this situation with the fact that women's reactions to both positive and negative situations are more pronounced than men. As women experience both happiness and unhappiness at a considerably more intense level, it is interpreted that this leads to a higher level of happiness than men. While there are some studies indicating the opposite (Akın and Şentürk 2012), there are also studies showing that the level of happiness is not different between men and women (Akyüz

et al. 2017). This difference between the studies may be due to the population groups studied. In order to reach a clear conclusion, large-scale studies should be conducted to include mediating variables that may have an effect on this relationship.

Happiness levels of the patients decreased as the level of education increased in the present study. There are studies suggesting that the level of happiness decreases as the level of education increases, while there are also studies supporting the contrary. In a supportive study, this finding was attributed to the fact that an individual's expectations from life increase as his/her education level increases and this results in unhappiness when the expectations are not realized (Akın and Şentürk 2012). In another study confirming the opposite, increasing education level was reported to positively affect the level of happiness as it leads to an increase in income level (Çirkin and Göksel 2016). In a study conducted by Cunado and Gracia (2012), they showed that higher educational level increases the level of happiness when it is associated with employment and high income, while the level of education alone has no effect on happiness. Therefore, although there are cases where increasing the level of education positively affects happiness, happiness is likely to decrease due to the stress caused by the employment problems experienced as a result of the education received.

Those who had a regular job in this study were found to have higher levels of happiness than those who worked irregularly and those who were not employed. A previous study reported that being employed has an increasing effect on the happiness levels of individuals (Akay and Timur 2017). We presumed that going to a job on a regular basis makes the individual feel valuable and creates a feeling of being worthwhile, which positively influences the happiness levels of the individual, while constantly changing jobs may negatively affect the individuals' happiness levels because of the disruption of continuity in life and the creation of an insecure environment.

Being married or single did not affect happiness levels in the current study. Turkish Statistical Institute survey published in 2019 reported that married individuals were happier than single individuals. In earlier studies, married individuals were stated to be happier than single individuals due to the fulfillment of the need for a sense of belonging (Akın and Şentürk 2012, Çirkin and Göksel 2016). Since the functionality level of our population in our study was decreased due to their diseases and marriage is a factor that increases responsibility, we thought that happiness levels may not have been found to be higher in married individuals.

Having children did not appear to have any influence on the level of happiness in this study. In one study, people who had children were more likely to have higher levels of happiness (Çelebi and Çelebi̇ 2020). This was attributed to the strengthening of marital ties and therefore had a positive effect. However, in another study, an inverse correlation was found between the number of children and happiness levels (Çirkin and Göksel 2016). In our sample, due to the inverse effects of the burden of having children on happiness, having children did not affect the level of happiness, just like being married, which may be one of the reasons why having children did not affect the level of happiness.

SHS scores increased as the duration of illness increased in the present study. Although previous studies have not compared the duration of illness with subjective happiness levels, contrary to our findings, depressive symptoms have been associated with an increase in the duration of illness in patients diagnosed with schizophrenia, but the level of insight and medication compliance have also increased (Sağlam Aykut 2017). Hajiyeva et al. (2022) reported that neurocognitive impairment increased with the duration of the disease and accordingly, quality of life decreased. Furthermore, in our study, happiness levels were shown to be affected not only by the losses caused by the disease itself, but also by the attitudes of their families and caregivers towards them. Ceylan and Çilli (2015) in their study revealed that feelings of shame and guilt in family members decreased as the duration of illness increased in schizophrenia. In another study on caregivers of schizophrenia patients, the emotional expression of caregivers approached healthy levels as the duration of the illness increased. This was interpreted as a sign that the reactions of the families were becoming healthier as they learned how to cope with the disease over time (Arslantaş et al. 2009). SHS scores may have increased due to factors such as the inability of patients to reach their previous functionality in the first years of their illness, higher reactions of families, and the fact that it is more difficult to be accepted by the environment in the first times. Similarly, as the duration of the disease prolongs, the SHS scores may have been higher in our study due to the increase in adaptation to this disorder by the patient himself/herself and his/her environment.

Conclusion

Happiness is a general concept that is affected by many factors in a person's life. Therefore, more comprehensive studies on this subject, especially for schizophrenia patients, will be instructive. In this study, we tried to evaluate the effect of case management within CMHC service and detected its positive effect on the happiness

of schizophrenia patients. However, multicenter and longitudinal studies may provide clearer results on this issue. We believe that the current study can be a guide for prospective studies that will compare the periods before and after the assignment of case managers to patients who attend CMHC and do not have case managers.

With the transition to community-based services in psychiatry, case management services should be expanded to facilitate the use of these services within the available resources, with the continuation of the follow-up, treatment and rehabilitation of patients outside the hospital. Increasing the use of case management will contribute greatly to individuals with mental health disorders receiving the care and treatment they deserve.

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