

The Relationship between Treatment Adherence, Social Support and Recovery Status of Patients Receiving Psychiatric Treatment

Psikiyatri Tedavisi Alan Hastaların Tedaviye Uyumluları ile Algıladıkları Sosyal Destek ve İyileşme Durumları Arasındaki İlişki

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ABSTRACT

Objective: This research was performed to determine the correlations and effective factors for treatment adherence with perceived social support and the recovery status of psychiatric patients receiving outpatient treatment.

Materials and Methods: This study was descriptive, cross-sectional, and relational. Data collection tools used were the 'Patient Information Form', 'Morisky Medication-taking Adherence Scale (MMAS-4)', 'Recovery Assessment Scale (RAS)', and the 'Multidimensional Scale of Perceived Social Support (MSPSS)'.

Results: Of the participants, 22.3% had low treatment adherence. There were statistically significant correlations between the treatment adherence scale with the RAS personal confidence and hope, RAS willingness to ask for help subscales, and RAS total points between all dimensions of the multidimensional perceived social support scale and all dimensions of the RAS ($p<0.05$). The diagnosis was determined to affect treatment adherence points ($F=5.041$, $p<0.05$). RAS total points had a negative effect on treatment adherence ($\beta=-0.011$; $p<0.050$) but a positive effect on MSPSS points ($\beta=0.447$; $p<0.001$).

Conclusion: In the study, it was found that as recovery status increased, the patient's adherence to treatment decreased, and as the perceived social support increased, the level of recovery (RAS) increased.

Keywords: Mental disease, perceived social support, recovery, treatment adherence

ÖZ

Amaç: Bu araştırma, ayaktan tedavi gören psikiyatri hastalarının iyileşme durumlarının algıladıkları sosyal destek ve tedaviye uyumluları ile ilişkisini ve etkileyen faktörleri belirlemek amacıyla yapılmıştır.

Materyal ve Metot: Bu çalışma, tanımlayıcı, kesitsel ve ilişkisel tipte bir araştırmadır. Veri toplamak için 'Hasta Bilgi Formu', 'Morisky İlaç Uyumu Ölçeği (MMAS-4)', 'İyileşme Değerlendirme Ölçeği (RAS)' ve 'Çok Boyutlu Algılanan Sosyal Destek Ölçeği (MSPSS)' kullanıldı.

Bulgular: Katılımcıların %22,3'ünün tedavi uyumu düşüktü. Tedaviye uyum ölçeği ile RAS kişisel güven ve umut, RAS yardım isteme istekliliği ve RAS toplam puanları arasında; çok boyutlu algılanan sosyal destek ölçeğinin tüm boyutları ile RAS'ın tüm alt boyutları arasında istatistiksel olarak anlamlı ilişkiler bulundu ($p<0,05$) ve tanının tedaviye uyum puanlarını etkilediği belirlendi ($F=5,041$, $p<0,05$). RAS toplam puanlarının tedaviye uyum üzerinde olumsuz bir etkisi vardı ($\beta=-0,011$; $p<0,050$). RAS toplam puanları MSPSS puanları üzerinde olumlu bir etkiye sahipti ($\beta=0,447$; $p<0,001$).

Sonuç: Çalışmada, iyileşme durumu arttıkça hastaların tedaviye uyumunun azaldığı ve algılanan sosyal destek arttıkça iyileşme düzeyinin arttığı bulunmuştur.

Anahtar Kelimeler: Algılanan sosyal destek, iyileşme, ruhsal hastalık, tedaviye uyum

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INTRODUCTION

Non-adherence to drug treatment, a common problem in medicine, directly affects cognitive functions in psychiatric patients,^{1,2} lack of insight into psychiatric disease, stigma, concomitant substance abuse, and social isolation.³ It was shown that at least one-third of psychiatric patients with treatment-resistant profiles have poor treatment adherence, and the drug level in the blood is at subtherapeutic levels.^{4,5} Non-adherence to both antipsychotic and antidepressant medication use causes increased hospital admission rates with recurrence (increased 5.2 times for bipolar disorder), worsening of symptoms, higher rates of suicide, negative economic/social/health outcomes, and increased care costs.^{6,7} After patients begin treatment, the rate of missed appointments is reported to be 12-60%. In the group not adhering to treatment, 28% applied to the emergency service, which was determined to cost the health sector 100 billion dollars.⁶ Studies show that 1/3 of psychiatric patients have at least one readmission during the follow-up period (within 90 days after discharge).^{8,9}

The traditional understanding of psychiatry has been approaching mental illness by reducing the importance of patient experiences. However, patient experiences embody the disease, explain the patient's reality and coping routes, and ensure disease control.^{10,11}

Recovery does not just involve assessing reduced symptoms, recurrence, or hospitalisation rates. It also includes defining the patient's perspective and subjective experiences related to the disease.^{12,13} In recent years, recovery-focused practices have shaped mental health services.¹⁴ Pharmacological treatment, which is an important factor contributing to the recovery of psychiatric patients, can lead to treatment non-adherence, poor treatment outcomes, and poor care outcomes if not considered together with other effective factors. However, techniques used to identify factors affecting adherence and improve treatment adherence remain at the level of pragmatic recommendations for clinical practice.¹⁵ The number of studies focusing on patient-related and subjective factors affecting the adherence of psychiatric patients to treatment is quite limited.

Therefore, this study aimed to investigate the relationship between perceived social support, recovery levels, and treatment adherence of psychiatric patients.

MATERIALS AND METHODS

Ethical Approval: In this study, before starting the study, institutional permission was obtained from Tokat Gaziosmanpaşa University Faculty of Medicine Dean's Office (Date: 28.08.2018, Decision No:18-KAEK-192), and ethical approval for the

study was obtained from the Ethics Committee of Tokat Gaziosmanpaşa University Ethics Committee (Date: 05.12.2018, Decision No: 18-KAEK-192/626).

Design: This research had a descriptive, cross-sectional, and correlational design.

Setting and Sample: The research universe comprised 58.814 patients attending Tokat Dr Cevdet Aykan Mental Health and Diseases Hospital psychiatry outpatient clinic between 22 November 2017 and 22 November 2018. The sample of the research comprised patients attending Tokat Dr Cevdet Aykan Mental Health and Diseases Hospital psychiatry outpatient clinic between 22 November 2018 and 10 May 2019. The study sample consisted of 139 patients who applied to the outpatient psychiatry clinic of this mental health hospital between these dates. Post-hoc power analysis determined that with a 0.05 significance level and 95% confidence interval, the power of the study should be 0.80 (correlation $H_1=0.238$, lower critical $r=-0.159$, upper critical $r=0.159$, power 0.80). The sample ($n=139$) was determined to be adequate for this value.

Inclusion Criteria for the Research: Receiving outpatient psychiatric treatment for at least three weeks or more, not being in the acute period of the disease, being conscious, having no problems with speech and comprehension, being 18 years or older, having no developmental intellectual disorder, dementia, amnesia or other cognitive disorder, and accepting participation in the research.

Data Collection Tools: Data were collected during face-to-face interviews between the researcher and the patient. Preliminary interviews were held with identified patients. Patients abiding by the inclusion criteria were given information about the study and provided consent. Collection of data used the 'Patient Information Form', 'Morisky Medication-taking Adherence Scale (MMAS-4)', 'Recovery Assessment Scale (RAS)' and the 'Multidimensional Scale of Perceived Social Support (MSPSS)'.

Patient Information Form: This was prepared by the researchers in line with the literature and comprised 10 questions about socio-demographic information and 9 questions about clinical information.^{6,7}

Morisky Medication-taking Adherence Scale (MMAS-4): The validity and reliability study of this scale, which was created by Morisky, Levine, and Green in 1986 (Cronbach $\alpha=0.61$), was conducted by Yılmaz in 2004 in Turkey, and the Cronbach alpha reliability coefficient was found to be 0.52.¹⁶ Permission was obtained from the author to use the scale.

Recovery Assessment Scale (RAS): The Recovery Assessment Scale was developed containing 41

items and was revised by Corrigan et al.¹⁷ to include 24 items in 5 subscales. The Turkish validity was performed by Güler.¹⁸ The dimensions of the scale were identified to have Cronbach alpha values from 0.74 to 0.87. The subdimensions are ‘personal confidence and hope’, ‘willingness to ask for help’, ‘goal and success orientation’, ‘dependency on others, and ‘no domination by symptoms.’ In this study, the Cronbach alpha values for the subscales varied from 0.76 to 0.89, with a total Cronbach alpha value of 0.94. Permission was obtained from the author for the use of the scale.

The Multidimensional Scale of Perceived Social Support (MSPSS): This was developed by Zimet et al. in 1988 and adapted to Turkish by Eker and Arkar.¹⁹ It is a diverse scale that individuals with low educational levels can understand. The scale comprises 3 subdimensions and has a 7-point Likert style. Eker et al. found that the total Cronbach alpha coefficient for the perceived social support scale was 0.89, with Cronbach alpha coefficients for the subscales varying from 0.85 to 0.92. In this study, the Cronbach α reliability coefficients for the subscales were 0.88-0.90, while the Cronbach α reliability coefficient for the whole scale was 0.91. Permission

was obtained from the author to use the scale.

Statistical Analysis: Data were analysed with IBM SPSS V23. Conformity to normal distribution was evaluated by Kolmogorov-Smirnov and Shapiro-Wilk tests. Parametric tests were used if the data fit the normal distribution, and non-parametric tests were used if the data did not fit the normal distribution. Spearman's rho correlation coefficient was used to examine the relationship between non-normally distributed scale scores. One-way MANOVA was used to investigate the factors affecting total scale scores, and the Bonferroni test was used for multiple comparisons. One-way analysis of variance was used to compare the MSPSS and ISS total scores according to treatment adherence classes. Analysis results are presented as mean \pm standard deviation. The significance level was taken as $p < 0.05$.

RESULTS

Among participants, 63.3% were male, 43.9% were single, 55.4% were primary education graduates, and 80.6% did not work. Of the participants, 56.1% had a mood disorder diagnosis, and 22.3% had low treatment adherence (MMAS-4) (Table 1).

Table 1. Frequency distribution of categorical variables.

Demographic Information	n (%)	
Sex	Female	51 (36.7)
	Male	88 (63.3)
Marital status	Married	44 (31.7)
	Single	61 (43.9)
	Divorced	34 (24.4)
	Widowed	9 (6.5)
Education status	Literate	14 (10.1)
	Primary Education	77 (55.3)
	High School	34 (24.5)
	University	14 (10.1)
Working situation	Working	27 (19.4)
	Not working	112 (80.6)
Social security	Yes	104 (74.8)
	No	35 (25.2)
Taking medication	Taking without help	94 (67.6)
	Taking with help	40 (28.8)
	Not taking medications	5 (3.6)
	Attending follow-ups regularly	20 (14.5)
Time to go to follow-ups	When s/he feels bad	71 (50.7)
	When s/he is guided by the family	26 (18.9)
	Other	22 (15.9)
Adherence class (MMAS-4)	High adherence to treatment	43 (30.9)
	Moderate adherence to treatment	65 (46.8)
	Low adherence to treatment	31 (22.3)
Additional disease	Yes	47 (33.8)
	No	92 (66.2)
Diagnostic class	Psychotic disorder	78 (56.1)
	Mood Disorder	46 (33.1)
	Anxiety disorder	7 (5.0)
	Substance abuse	5 (3.6)
	Personality Disorder	3 (2.2)
Income status	Income is less than expenses	50 (36.2)
	Income is equal to expenses	76 (55.1)
	Income is more than expenses	13 (8.7)

Table 1. Continue.

How many times a day does she/he take medication	3 and less	41 (29.5)
	4 and above	98 (70.5)
Demographic information and scales		Mean±SD
	Age	41.9±13.2
	Number of children	2.8±2.2
	MSPSS	53.4±21.5
	RAS	85.2±20.8
	MMAS-4	1.5±1.3

The mean points for adherence to treatment (MMAS-4), MPSS, and RAS according to sociodemographic features and multivariate analysis results related to scale points are given in Table 2.

Table 2. Multivariate analysis results for MMAS-4, MSPSS, and RAS scores according to sociodemographic characteristics.

Demographic Information		Treatment adherence (MMAS-4)	MSPSS total	RAS total
Sex	Female (n=51)	1.49 ± 1.29	58.12 ± 20.76	91.73 ± 17.51
	Male (n=88)	1.44 ± 1.27	50.70 ± 21.55	81.45 ± 21.64
	F; p	F=0.416; p=0.520	F=2.101; p=0.150	F=7.333; p=0.008
	Partial eta squared	0.003	0.017	0.057
Marital status	Married (n=44)	1.20 ± 1.23	59.39 ± 20.61	90.20 ± 18.26
	Single (n=61)	1.57 ± 1.22	50.54 ± 20.54	83.66 ± 22.39
	Divorced (n=34)	1.59 ± 1.40	50.88 ± 23.25	81.59 ± 20.12
	F; p	F=1.692; p=0.189	F=1.089; p=0.340	F=2.034; p=0.135
	Partial eta squared	0.027	0.018	0.033
Education status	Literate (n=14)	2.14 ± 1.29	52.50 ± 14.98	81.71 ± 17.67
	Primary Education (n=77)	1.53 ± 1.27	54.83 ± 22.39	86.14 ± 19.83
	High School (n=34)	1.09 ± 1.19	52.59 ± 19.75	84.15 ± 23.87
	University (n=14)	1.29 ± 1.20	48.64 ± 26.79	86.29 ± 22.24
	F; p	F= 2.844; p=0.041	F=0.114; p=0.952	F= 0.864; p=0.462
	Partial eta squared	0.066	0.003	0.021
Time to go to follow-ups	Attending follow-ups regularly (n=20)	1.70 ± 1.17	42.15 ± 23.90	88.10 ± 17.02
	When s/he feels bad (n=70)	1.49 ± 1.22	53.86 ± 18.92	84.01 ± 21.63
	When guided by the family (n=26)	1.27 ± 1.28	58.65 ± 24.14	87.58 ± 22.04
	Other (n=22)	1.45 ± 1.50	56.55 ± 21.84	84.91 ± 19.97
	F; p	F=0.247; p=0.864	F=1.685; p=0.174	F=1.130; p=0.340
	Partial eta squared	0.006	0.040	0.027
Income status	Income is less than expenses (n=50)	1.48 ± 1.30	50.52 ± 21.40	84.54 ± 21.12
	Income is equal to expenses (n=76)	1.45 ± 1.28	56.22 ± 20.94	85.34 ± 21.36
	Income is more than expenses (n=12)	1.42 ± 1.24	50.67 ± 23.56	89.25 ± 15.51
	F; p	F= 0.056; p=0.946	F=0.736; p=0.481	F=0.012; p=0.988
	Partial eta squared	0.001	0.012	0.000
Additional disease	Yes (n=47)	1.51 ± 1.38	51.36 ± 23.30	84.74 ± 20.40
	No (n=92)	1.43 ± 1.22	54.48 ± 20.55	85.47 ± 21.05
	F; p	F=0.104; p=0.748	F=1.048; p=0.308	F= 0.126; p=0.723
	Partial eta squared	0.001	0.009	0.001
How many times a day does s/he take medication	3 and less (n=41)	1.44 ± 1.29	54.02 ± 21.61	87.71 ± 19.52
	4 and above (n=98)	1.47 ± 1.27	53.17 ± 21.54	84.18 ± 21.27
	F; p	F=0.045; p=0.832	F=0.185; p=0.668	F=0.205; p=0.652
	Partial eta squared	0.000	0.002	0.002
Diagnostic class	Psychotic disorder (n=78)	1.26 ± 1.20 ^a	50.88 ± 21.85	82.05 ± 20.09
	Mood disorder (n=46)	1.52 ± 1.31 ^{ab}	55.41 ± 20.64	91.22 ± 19.67
	Other (n=15)	2.33 ± 1.18 ^b	60.53 ± 21.31	83.33 ± 24.64
	F; p	F=5.041; p=0.008	F=0.808; p=0.448	F=1.125; p=0.328
	Partial eta squared	0.077	0.013	0.018

a-b: There is no difference between groups with the same letter; *: multiple comparisons were made with the Bonferroni test. 1R²: 0.156; Adjusted R² = 0.051; 2 R²: 0.134; Adjusted; R²: 0.026. 3R²: 0.140; Adjusted R²: 0.033; F1: One-way analysis of variance test statistic.

Correlations related to the MMAS-4, RAS, and MSPSS scales are given in Table 3. Data investigating the mediating role of MSPSS total points in the effect of RAS total points on treatment adherence points (MMAS-4) are given in Ta-

ble 4. RAS total points had a negative effect on treatment adherence (MMAS-4 ($\beta = -0.011$; $p < 0.050$). The path coefficient between MSPSS points and treatment adherence (MMAS-4) was not found to be significant ($p > 0.050$).

Table 3. Relationships between scale scores.

		Multidimensional Perceived Social Support Scale (MSPSS)					Recovery Assessment Scale (RAS)				
		MMAS-4	Family ¹	Friend ¹	Special friend ¹	Total	Orientalion toward goal and success ²	Confidence and hope ²	Trust the people around ²	Coping with symptoms ²	Seeking help ²
MSPSS family	r	-0.158	-	-	-	-	-	-	-	-	-
	p	0.063	-	-	-	-	-	-	-	-	-
MSPSS friend	r	-0.121	0.450**	-	-	-	-	-	-	-	
	p	0.156	0.000	-	-	-	-	-	-	-	
MSPSS special person	r	0.031*	0.425**	0.621**	-	-	-	-	-	-	
	p	0.718	0.000	0.000	-	-	-	-	-	-	
MSPSS total	r	-0.085	0.700**	0.856**	0.863**	-	-	-	-	-	
	p	0.319	0.000	0.000	0.000	-	-	-	-	-	
RAS Orientation toward goal and success	r	-0.066	0.249*	0.249*	0.333**	0.331**	-	-	-	-	
	p	0.441	0.003	0.003	0.000	0.000	-	-	-	-	
RAS Confidence and hope	r	-0.238*	0.354**	0.406**	0.421**	0.474**	0.658**	-	-	-	
	p	0.087	0.000	0.000	0.000	0.000	0.000	-	-	-	
RAS Trust the people around	r	-0.146	0.362**	0.488**	0.381**	0.493**	0.543**	0.730**	-	-	
	p	0.087	0.000	0.000	0.000	0.000	0.000	0.000	-	-	
RAS Coping with symptoms	r	-0.130	0.251*	0.311**	0.326**	0.351**	0.452**	0.639**	0.537**	-	
	p	0.128	0.003	0.000	0.000	0.000	0.000	0.000	0.000	-	
RAS Seek help	r	-0.171*	0.243*	0.314**	0.217*	0.297**	0.472**	0.584**	0.635**	0.458**	
	p	0.045	0.004	0.000	0.010	0.000	0.000	0.000	0.000	0.000	
RAS total	r	-0.186*	0.379**	0.465**	0.450**	0.517**	0.770**	0.932**	0.838**	0.717**	
	p	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

r: Spearman's rho correlation coefficient; 1: sub-dimensions of the multidimensional perceived social support scale; 2: sub-dimensions of the recovery and evaluation scale; **: $p < 0.001$, * $p < 0.05$.

Table 4. Investigation of the mediating role of MSPSS total score in the effect of RAS total score on MMAS-4 score.

	MMAS-4		RAS total score	
	β	SH	β	SH
RAS total	-0.011**	0.005	0.447*	0.079
R ²	0.033	-	0.187	-
RAS total score	-0.010***	0.006	-	-
MSPSS total score	-0.002***	0.005	-	-
R ²	0.034	-	-	-
Indirect effect	-0.001 (-0.006; 0.005)***		-	-

*: $p < 0.001$; **: $p < 0.05$; ***: $p > 0.050$; Prediction (%95CI).

Data investigating the mediating role of RAS total points in the effect of MSPSS total points on treatment adherence points (MMAS-4) are given in Table 5. MSPSS total points positively affected RAS total points ($\beta = 0.418$; $p < 0.001$). When RAS total

points are investigated as mediating variables, the direct effect of MSPSS total points on treatment adherence points (MMAS-4) did not reach statistical significance ($p > 0.050$), but its indirect effect was significant ($p < 0.05$).

Table 5. Examination of the mediating role of RAS total score in the effect of MSPSS total score on treatment adherence score.

	MMAS-4		RAS total score	
	β	SH	β	SH
MSPSS total score	-0.006***	0.005	0.418*	0.074
R ²	0.010	-	0.187	-
MSPSS total score	-0.002***	0.005	-	-
RAS total score	-0.010***	0.006	-	-
R ²	0.034	-	-	-
Indirect effect	-0.004 (-0.011; 0.001)**		-	-

*: $p < 0,001$; **: $p < 0,05$; ***: $p > 0,050$; Guess (%95CI).

DISCUSSION AND CONCLUSION

The findings obtained because of the research were discussed considering the literature data. In this study, 5 diagnosis groups (psychotic disorder, mood disorder, anxiety disorder, substance abuse, personality disorder) were examined. Advanced analyses determined significant differences in adherence to treatment (MMAS-4) based on diagnosis and recovery level (RAS) based on sex ($p < 0,05$). Similarly, in a study conducted with schizophrenia patients on the same subject, it was reported that individuals with high cognitive insight had low drug adherence.²⁰ Again, in a study in which 332 patients from 6 diagnostic categories (substance abuse disorders, schizophrenia, bipolar disorders, depressive disorders, anxiety disorders, and personality disorders) were followed, a significant negative relationship was found between self-stigma and adherence to treatment. It was determined that self-stigmatization was also positively related to the severity of the disorders and negatively related to adherence to treatment.²¹ However, some studies in the literature found the opposite results. In a study conducted to examine the relationship between treatment adherence and hope levels of forensic psychiatry patients with violent behaviour, a highly significant positive relationship was found between the score and adherence to treatment for the sub-dimensions of the Herth hope scale “positive readiness and expectation”, “the bond between themselves and those around them” subscales, and total score ($p < 0,001$).²² Findings from this study and findings from studies in the literature show that treatment adherence may differ according to the severity of symptoms, diagnosis, and sex in participating patients.

In this study, 69.1% of psychiatric patients did not adhere to treatment (in varying numbers/levels (MMAS-4)). In a study, 50% of major depression patients stopped taking the prescribed antidepressants within 3 months. It was determined that 33% of schizophrenia patients were non-adherent, and the other third did not use any medication. In patients with bipolar disorder, adherence was measured as low as 35%.²³ In a study conducted to evaluate the

drug adherence rate in a group of schizophrenia patients, 68.8% of the patients were non-adherent to antipsychotic drugs, while 31.2% of them were adherent.¹ In a study conducted with patients with bipolar disorder, drug non-adherence rates ranged from 20% to 60%.⁷ Contrary to these findings, for long-term psychiatric illnesses, individuals were found to take only about 50% of the prescribed drugs.²⁴ This study and studies in the literature show that most psychiatric patients have low adherence to treatment.

In this study, advanced analyses determined that perceived social support (MSPSS) affected treatment adherence (MMAS-4) indirectly ($p < 0,05$). A study on the topic determined that only 21.5% of patients had good medication adherence, and there was a statistically significant correlation between perceived social support and medication adherence.⁶ A study on the same topic found that the perceived social support of those complying with treatment significantly differed from those who did not comply with treatment ($p < 0,05$). Those adhering to treatment took lower numbers of medications by a significant degree, remembered more efficiently, and experienced fewer psychiatric symptoms ($p < 0,01$).¹ Again, in the literature, coping with disease and control beliefs related to health and social support were reported as positive indicators in schizophrenia patients.²⁵ A study conducted with 324 psychiatric patients found a significant positive correlation between MSPSS and treatment adherence ($p < 0,05$).²⁶ These findings indicate that directly or indirectly perceived support measured with MSPSS affects treatment adherence.

In this study, the recovery levels (RAS) of patients were above average (85.2 ± 20.8), with the highest points for the ‘personal confidence and hope’ (31.7 ± 8.5) subdimension and lowest points for the ‘coping with symptoms’ (9.9 ± 3.3) subdimension. Most patients ($n=70$) went to doctor’s appointments when they felt bad, and there was a significant negative correlation between RAS (recovery level) and treatment adherence (MMAS-4) ($p < 0,05$). Advanced analyses found a negative effect of RAS total

points on treatment adherence ($\beta=-0.011$; $p<0.050$). A study using MMAS-4 determined that 39.35% of patients did not adhere to treatment, 42.3% of the patients not complying with treatment did not take medications at the correct dose and correct time, 35.3% did not pay attention, 29.3% stopped medication when they recovered, and 17.3% stopped medication when the disease worsened.⁵ These findings show that the results of this study contrast with some studies in the literature.

An advanced degree of significant correlation was found between recovery level (RAS) and social support received from family and friends in MSPSS ($p<0.01$). Advanced analyses found a positive effect of RAS total points on MSPSS points. A study performed over 12 months with psychiatric patients in Zurich investigated the possible effects of perceived social support on rehospitalisation rates and psychopathology and determined that lack of social support increased psychopathologic disorder and repeated hospitalisation ($p<0.05$).²⁷ In a study conducted to determine the drug adherence of patients hospitalised in a psychiatry clinic and their relationship with social support, there was a statistically significant positive and weak relationship between friend support and drug adherence ($p<0.001$).²⁸ Again, in a study conducted with 176 schizophrenic patients, both perceived social support subscales and total scores had statistically significant (≤ 0.001) relationships with recovery.²⁹ These findings show that perceived social support is effective in the emotional recovery of patients.

In conclusion, personal confidence, hope, and willingness to ask for help were correlated with patients' treatment adherence (MMAS-4) and recovery level (RAS) was correlated with perceived social support, and each affected the other. Recovery was found to be affected by sex, while treatment adherence (MMAS-4) was affected by the diagnosis. Recovery level had a negative effect on treatment adherence, while perceived social support had a positive impact on recovery. In addition, the results of this study cannot be generalised since it was conducted only in a public hospital and was done by self-report, and these are the study's limitations.

Ethics Committee Approval: Before starting the study, institutional permission was obtained from Tokat Gaziosmanpaşa University, Faculty of Medicine, Dean's Office (Date: 28.08.2018, Decision No: 18-KAEK-192) and ethical approval for the study was obtained from the Ethics Committee of Tokat Gaziosmanpaşa University, Ethics Committee (Date: 05.12.2018, Decision No: 18-KAEK-192/626). The study was conducted following the Declaration of Helsinki.

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