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Impact of Psychoeducation Applied to The Spouses of Bipolar Patients on Their Emotional Expression, Stigmatization, and Loneliness Levels

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Abstract

Objective: Bipolar disorder (BD) is a serious burden for patients and family members due to recurrent mood episodes, hospitalizations, and loss of productivity. The goal of this study is to examine how psychoeducation affected the caregivers of bipolar patients' levels of emotional expression, stigmatization, loneliness, and mood symptoms.

Method: This research is a quasi-experimental intervention study applied as a pretest-posttest design with a control group. The study included 20 patients with bipolar diagnosis and 20 caregiver spouses who were followed up in our outpatient clinic. Participants were divided into 2 groups as study and control group. The spouses in the control group were interviewed only to evaluate their situation. The study group received a 6-session (15 hours) psychoeducation intervention. We administered the Emotion Expression Scale (EES), Self-Stigma Inventory for Families(SSI-F), UCLA Loneliness Scale (UCLA-LS), and DASS-21 Scale to the spouses of bipolar patients in the study and control groups before and after the psychoeducation program

Results: The mean age of the spouses in the study group was 43.4±7.04 years, the mean age of the spouses in the control group was 39±8.29 years and all of them were female. There was no significant difference between the mean scores of the SSI-F, DASS-21 and EES scales of the spouses in the study and control groups before the training ($p>0.05$). After the psychoeducation program was applied to the spouses in the intervention group, a significant decrease was observed in the SSI-F, EES, and DASS-21 scores ($p<0.001$, $p<0.001$, $p=002$, $p=001$, respectively). Although there was a decrease in UCLA-AS scores, it was not significant ($p=.061$)

Conclusion: Our study observed a significant decrease in the stigmatization, emotional expression, depression, and anxiety scores of the patients' spouses who participated in the intervention. Based on this result, it may be recommended to continue psychoeducation systematically in clinical practice.

Keyword: Bipolar disorder, stigmatization, emotional expression, loneliness, stress, depression, and anxiety

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INTRODUCTION

Bipolar disorder (BD) is a chronic psychiatric illness characterized by recurrent depressive, manic, or hypomanic episodes, affecting approximately 1% of the population (1). Psychotropic drugs play a central role in the disease's treatment. However, despite regular treatment, approximately half of the patients continue to experience mood symptoms, which negatively affect functioning and quality of life (2,3). Relatives play a central role in referring bipolar patients to health services, ensuring regular follow-up, and supporting patients' compliance with treatment (4). In this respect, bipolar disorder ranks third in Europe among the illnesses that cause the greatest family burden (5). Caregivers often report high levels of subjective burden (feelings of guilt, anger, anxiety, and stress) and objective burden (time and finances) (6,7). Such feelings developed towards patients are defined as expressed emotions (EE). Emotional expression is defined as "criticism of the patient, presence or absence of hostility towards the patient, evaluation of closeness to the patient, excessive altruism and interventionism of relatives in their relations with the patient, and inability to separate their inner world from that of the patient" (8). Research indicates that a high level of emotional expression among family members may contribute to the onset of mental illness and is closely associated with the prognosis and relapse of the illness (9).

Stigmatization is another common social challenge that bipolar individuals face. Stigmatization is the disrespectful labeling or attribution of shameful and discrediting characteristics by society because an individual is seen as outside the criteria that society considers "normal"(10). Moreover, family members are aware that social stigmatization and devaluation affect not only their patients but also themselves (11). This awareness causes some family members to struggle and become stronger, but it also causes others to internalize stigmatization and stigmatize themselves (12). To avoid stigmatization, patients' relatives use various strategies. While some relatives conceal their mental disorders, others avoid socializing with family and friends (11). A recent study reported that families of people with serious mental illness experience rejection, avoidance, disrespect, and mistreatment in interpersonal communication and daily life because of their relationship with the sick family member (13). This situation leads to shame, a feeling of inadequacy, an increase in negative thoughts, a decrease in self-worth, and the avoidance of social relationships

in patients and their relatives. This circumstance causes the patient's relatives to lose social support and become eventually lonely (14).

We recognize the necessity of supporting caregivers, given their essential role in the treatment process and the critical emotional support they supply in bipolar disorder (4). This view is supported by the study reporting that caregivers experience depression when they do not receive adequate social support (13). In this context, health professionals should support caregivers to identify caregiver challenges and provide culturally compatible care. Research on group-based psychoeducation for caregivers alone is limited, despite widespread recommendations for group educational programs as a useful strategy to support and inform caregivers. According to one study, psychoeducation improved caregivers' communication with their patients, decreased their emotional expressions, and lessened their sense of burden and difficulties (15).

The goal of this study is to examine how psychoeducation affected the caregivers of bipolar patients' levels of emotional expression, stigmatization, loneliness, and mood symptoms.

Hypotheses

Primary: Applying psychoeducation to the spouses of bipolar patients lessens their feelings of stigma and loneliness.

Secondary: Psychoeducation reduces anxiety and depression levels as it strengthens coping skills during periods of illness.

METHODS

Study Design and Population

This research is a quasi-experimental intervention study applied as a pretest-posttest design with a control group.

In order to form the sample group for our study, a list of relatives of patients who were followed up in the psychiatry outpatient clinic with a diagnosis of BD, who were in remission for at least one year, and who continued to care for the patient as primary caregivers was prepared. We selected female spouses of bipolar patients aged between 18 and 45 years from the list. We used the Cohen sample size tables to determine the number needed for the study. Accordingly, 14 subjects were proposed to test the research hypothesis with a Type I error probability of less than 0.05 and to show a moderate effect with a power of 0.80. Of the thirty spouses of bipolar patients on our list, we assigned twenty people who agreed to participate in our study to the experimental and control groups by lottery. Since two of the ten caregivers in the control group withdrew from the study, the study was conducted with eighteen patients and their caregiver spouses. We determined the inclusion criteria for caregivers as being between the ages of 18 and 45, having the mental capacity to follow the study's instructions, being able to

understand the questions asked, not having hearing or vision problems, and continuing the patient's care as a primary caregiver for at least one year.

The non-interventional studies ethics committee of the Kırıkkale University Faculty of Medicine granted permission for the study.

After obtaining the necessary permissions for the research, the "Expressed Emotion Scale", "Self-Stigma Inventory for Families", "UCLA Loneliness Scale" and "DASS-21" were applied to the spouses of bipolar patients in the intervention and control groups before psychoeducation. We applied a standard and structured psychoeducation program to the intervention group, and only conducted interviews with the control group to assess their status. We implemented the psychoeducation program twice a week in 60–90-minute sessions, with a fifteen-minute break in between. Psychoeducation was applied to ten caregivers in a total of 6 sessions (15 hours). During the psychoeducation, a psychiatrist and a social worker educated the patients' spouses about the disease, how to anticipate attack symptoms, how to intervene during attack periods, how to use and manage medications, how to cope with problems, how to train social skills, how to manage stress, and how to provide social support and social rights. After psychoeducation, the "Emotion Expression Scale", Self-Stigma Inventory for Families", ”UCLA Loneliness Scale" and "DASS 21” Scale" were applied to the intervention group.

Data Collection

Sociodemographic Data Form: This form asks about the patient's age, gender, marital status, educational status, employment status, and presence of psychiatric illness in their spouses.

Expressed Emotion Scale (EES): The development of this tool aimed to evaluate the negative emotional attitudes and behaviors of relatives towards patients. The validity study for our country was conducted by Berksun. The scale, which consists of 41 questions, features subscales for criticality/hostility and over-interference-protective-caring-interventionism. Higher scores obtained from the scale mean that emotional expression is high. Cronbach alpha reliability coefficient of the scale is 0.89 (16, 17).

Self-Stigma Inventory for Families (SSI-F): Yildiz et al. developed the SSI-F, a self-report measure, to assess the stigmatized family members of schizophrenia patients. It is a 14-item self-assessment scale with a 3-factor structure (concealed devaluation, social disengagement, and disease concealment). Higher scores indicate greater self-stigmatization. Since there is no Turkish self-stigma scale for the families of BD patients, we used the SSI-F for this group as well. The Cronbach’s alpha coefficient of the scale was 0.88 (18).

UCLA Loneliness Scale: There are a total of 20 items on the four-point Likert-type scale, 10 of which are straight and the remaining 10 reversed. Each item on the scale presents a situation that reflects a feeling or thought about social relations, and evaluates how frequently the individual experiences this situation. In scoring, items containing positive statements (1,4,5,5,6,9,10,15,16,19,20) are often scored as appropriate=1, sometimes appropriate=2, rarely appropriate=3, never appropriate=4, and items containing negative statements (2,3,7,7,8,11,12,13,14,17,18) are scored in the opposite way as often appropriate=4, sometimes appropriate=3, rarely appropriate=2, never appropriate=1. The individual's total scale score is obtained by summing the scores obtained from all items. As the score increases, the level of loneliness increases.

Depression-Anxiety-Stress Scale (DASS-21): The scale, abbreviated DAS-42, is used to measure anxiety, depression and stress. Sarıçam et al. conducted the validity and reliability study for Turkey. This scale is a 4-point Likert-type scale and consists of seven questions each measuring 'depression, stress and anxiety dimensions'. An individual's score of 5 points and above from the depression sub-dimension, 4 points and above from anxiety, and 8 points and above from stress indicates that he/she has a illness (21)

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Statistical analysis

Percentage, standard deviation and arithmetic mean were used to evaluate demographic data. Shapiro-Wilk analysis was performed to evaluate the normality distribution of the data. The scale scores of the spouses of bipolar patients who participated in the study and control groups were normally distributed, and the mean and standard deviation scores were calculated by an independent sample t test. The pre-test and post-test mean scores of the study groups were compared with the paired sample t test and the p value was calculated and its significance at .05 level was analysed.

RESULTS

The mean age of the spouses of bipolar patient who participated in the study group was 43.4±7.04 years, all of them were female, the educational status of 50% was primary school, the income status of 80% was medium, 70% had chronic disease. The mean number of hospitalizations of bipolar patients in the study group was 3.5±5.87, the mean number of depression attacks was 6±2.26, the mean number of manic attacks was 2.4±2.01, and the mean disease duration was 18.3±9.71 years.

The mean age of the spouses of bipolar patient participating in the control group was 39±8.29 years, all of them were female, the educational status of 50% was high school, the income status of 75% was medium, all of them had no chronic disease. The mean number of

hospitalizations of bipolar patients in the control group was 3.5±5.87, the mean number of depression episodes was 4.5±1.51, the mean number of manic episodes was 3.12±2.53, and the mean duration of illness was 11.37±8.24 years (Baseline caracteristics of participants were shown in Table 1).

There was no significant difference between the mean scores of the spouses in the study and control groups on the SSI-F, EES and DASS-21 before the training (p>0.05). The mean UCLA-LS score of the individuals in the study group before psychoeducation was 35±8.18, the mean UCLA-LS score of the control group was 24±3.58 and there was a statistically significant difference between them (Evaluation of the study and control groups in terms of scale scores before psychoeducation is shown in Table 2, p<0.05).

The mean SSI-F scores of the spouses in the study group before the training were 11.10±7.01 for the social withdrawal subscale, 7.2±3.52 for the disease concealment subscale, 10.00±3.97 for the perceived worthlessness subscale and 28.3±11.65 for the total SSI-F. The mean scores of the EES of the patients' spouses were 8.80±1.81 for the fondness subscale, 9.10±2.64 for the hostility subscale and 18.10±3.51 for the total EES score. DASS-21 mean scores were 5.80±3.26 for the stress subscale, 5.30±4.47 for the anxiety subscale and 5.80±4.47 for the depression subscale. The mean score of UCLA-LS was found to be 35±8.18 (The pre-test scores of the spouses of the study group patients were shown in Table 3).

The mean SSI-F scores of the spouses in the study group after the training were 8.30±4.88 for the social withdrawal subscale, 4.70±2.06 for the disease concealment subscale, 6.40±1.35 for the perceived worthlessness subscale and 19.50±6.29 for the total SSI-F score. The mean scores of the EES of the patients' spouses were 6.20±1.69 for the fondness subscale, 6.70±2.58 for the hostility subscale and 12.70±4.03 for the total EES score. The mean scores of DASS-21 were 3.00±1.94 for stress subscale, 3.00±3.13 for anxiety subscale and 3.70±4.19 depression subscale. The mean UCLA-LS was found to be 21.50±8.00 (The pre-test and post-test scale scores of the spouses of the study group patients were shown in Table 3).

To determine the effect of the psychoeducation programme for the spouses of bipolar patient on SSI-F, EES, DASS-21 and UCLA-LS, the difference between pre-test and post-test mean scores was examined by paired sample t test. After the psychoeducation programme applied to the spouses in the study group, a significant decrease was observed in SSI-F, EES, DASS-21 scale scores (p<0.001, p<0.001, p=002, p=001, respectively).

However, even though there was a decrease in UCLA-LS scores, it was not significant (p=.061). (The evaluation of the pre-test and

post-test scale scores of the spouses of bipolar patients by t test is shown in Table 4).

Table 1. Socio-demographic characteristics of patients' spouses in the study and control groups

Variables		**Study Group (SG)**		**Control Group (CG)**	
Education level		n	%	n	%
	Primary School	5	50	3	37.5
	Middle school	2	20	1	12.5
	High school	3	30	4	50
Income level					
	Low	2	20	1	12.5
	Centre	8	80	6	75
	High	-	-	1	12.5
Chronic illness					
	Yes	7	70	-	-
	No	3	30	8	100
Age		43.4 ±7.04		39±8.29	
Number of hospitalisation		3.5±5.87		0.75±1.39	
Number of episodes of depression		6±2.26		4.5±1.51	
Number of manic episodes		2.4±2.01		3.12±2.53	
Number of attacks		8.4±3.92		7.6±3.20	
Duration of illness		18.3±9.71		11.37±8.24	

Table 2. Evaluation of the study and control groups in terms of scale scores before psychoeducation with independent sample t test

Groups	**Scale (Pre-test) Mean (±SD)**	***t***	***P***
	SSI-F		
SG	28.30±11.65	1.816	.088
CG	20.37±4.34		
	EES		
SG	18.10±3.51	-.597	.559
CG	18.87±1.12		
	DASS-21-S		
SG	5.80±3.26	.859	.403
CG	5.12±6.15		
	DASS-21-A		
SG	5.50±4.40	.264	.796
CG	4.87±1.25		
	DASS-21-D		
SG	5.80±4.47	.859	.403
CG	4.37±1.50		
	UCLA-LS		
SG	35±8.18	3.526	.003
CG	24±3.58		

Abbreviations: SSI-F; Self-Stigma Inventory for Families, EES; Expressed Emotion Scale, DASS-21-S; DASS-21 Stress, DASS-21-A; DASS-21 Anxiety, DASS-21-D; DASS-21 Depression, UCLA-LS; UCLA Loneliness Scale, *p<0.05, **p<0.001

Table 3. Evaluation of the Pre-Test and Post-Test Scale Scores of patients' spouses in the Study Group

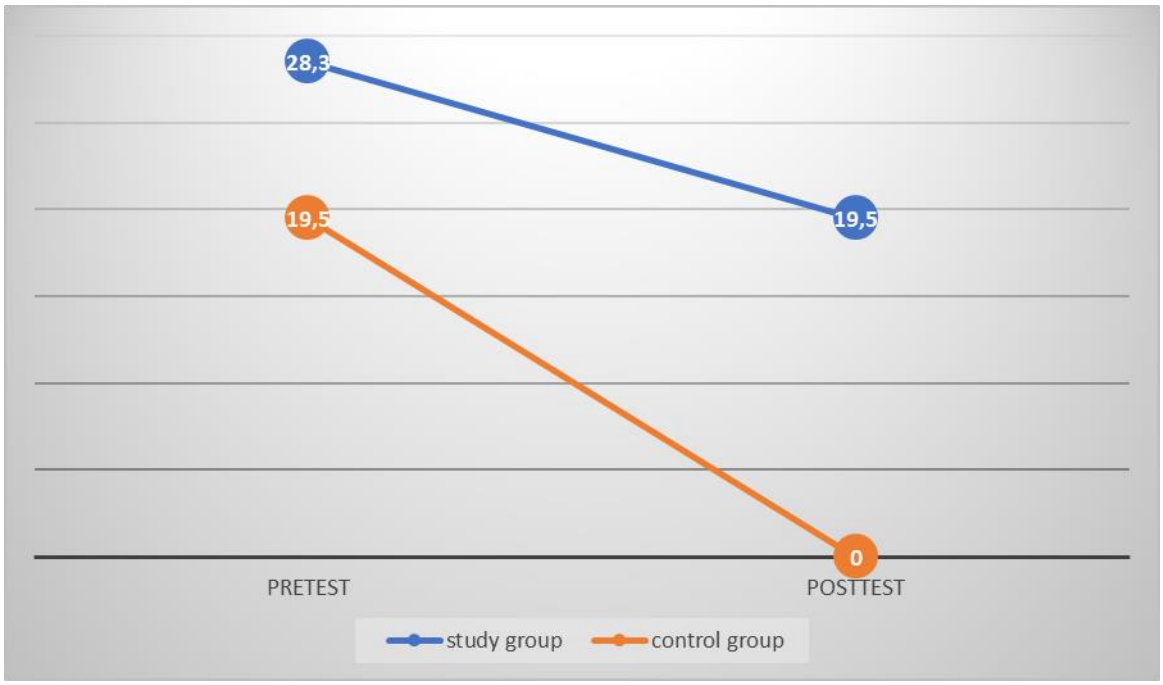
Scales	Group		Pre-test		Post-test	
SSI-F	SG	n	Mean	±SD	Mean	±SD
		10	28.3	11.65	19.50	6.29
SSI-F SW	SG	10	11.10	7.01	8.30	4.88
SSI-F DC	SG	10	7.2	3.52	4.70	2.06
SSI-F PW	SG	10	10	3.97	6.40	1.35
EES-Total	SG	10	18.10	3.51	12.70	4.03
EES-D	SG	10	8.80	1.81	6.20	1.69
EES-H	SG	10	9.10	2.64	6.70	2.58
DASS-21-S	SG	10	5.80	3.26	3.00	1.94
DASS-21-A	SG	10	5.30	4.40	3.00	3.13
DASS-21-D	SG	10	5.80	4.47	3.70	4.19
UCLA-LS	SG	10	35	8.18	21.50	8.00

Abbreviations: SSI-F; Self-Stigma Inventory for Families, SSI-F SW; Self-Stigma Inventory for Families Social Withdrawal subscale, SSI-F DC; Self-Stigma Inventory for Families Disease Concealment subscale, SSI-F PW; Self-Stigma Inventory for Families perceived worthlessness subscale, EES; Expressed Emotion Scale, DASS-21-S; DASS-21 Stress, DASS-21-A; DASS-21 Anxiety, DASS-21-D; DASS-21 Depression, UCLA-LS; UCLA Loneliness Scale.

Table 4. Evaluation of pre-test and post-test scale scores of spouses of bipolar patients by paired sample t test

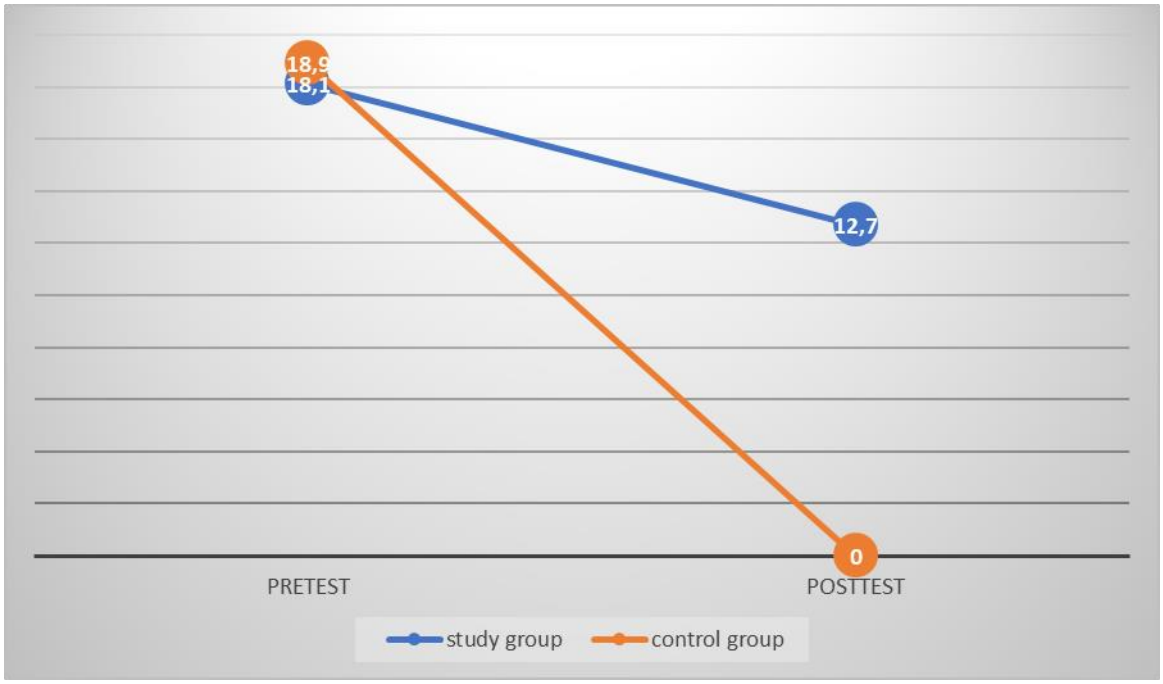
Scales	**Group**	**Pre-test post-test diffrence Mean (±SD)**	***t***	***p***
SSI-F	**SG**	**8.80±6.07**	**-4.534**	**<0.001****
	CG	**20.37±4.34**		
EES	**SG**	**5.40±1.43**	**-21.758**	**<0.001****
	CG	**18.88±1.12**		
DASS-21-S	**SG**	**2.80±1.62**	**-1.154**	**.265**
	CG	**5.12±6.15**		
DASS-21-A	**SG**	**2.30±1.57**	**-3.781**	**.002***
	CG	**4.87±1.25**		
DASS-21-D	**SG**	**2.10±.99**	**-3.854**	**.001***
	CG	**4.37±1.50**		
UCLA-LS	**SG**	**13.50±13.04**	**-2.023**	**.061**
	CG	**23.86±3.85**		

Abbreviations: SSI-F; Self-Stigma Inventory for Families, EES; Expressed Emotion Scale, DASS-21-S; DASS-21 Stress, DASS-21-A; DASS-21 Anxiety, DASS-21-D; DASS-21 Depression, UCLA-LS; UCLA Loneliness Scale, *p<0.05, **p<0.001



Graph 1. Evaluation of Self-Stigma Inventory for Families Scores of Patient spouses

In the study, the mean score of the Self-Stigma Inventory for Families Scale of the study group before the training was 28.30 and the mean score of the control group was 20.37; the mean score of the Stigmatization Scale of the study group after the training was 19.50.



Graph 2. Evaluation of Emotion Expression Scores of relatives of Spouses

In the study, the mean score of the Emotion Expression Scale of the study group before the training was 18.1 and the mean score of the control group was 18.9; the mean score of the Stigma Scale of the study group after the training was 12.70.

DISCUSSION

In general, it is reported that the majority of bipolar patients are either single or divorced as a result of relationship difficulties. However, a study in our country found that, depending on the culture, divorce rates were lower than in other studies (23). Furthermore, reports indicate that these individuals experience an increase in marital issues during attack periods, which they attribute to changes in their home environment and socioeconomic status (24). In this context, our study aimed to increase the level of knowledge about the disease and coping skills to reduce emotional expression, stigmatization, and loneliness by applying psychoeducation to the spouses of bipolar patients. In our study, we found that applying psychoeducation to caregivers significantly reduced stigmatization, emotional expression, depression, and anxiety scores. Although there was a decrease in the loneliness score, it was not significant.

BD is a significant burden for patients and family members due to recurrent mood episodes, hospitalizations, and loss of productivity (25). It has also been reported that caregivers' expectations of the patient's ability to control symptoms lead to more emotional expression (anger, shame, excessive interest) and worsening of the prognosis (6,7). Reports indicate that applying psychoeducational interventions to caregivers positively impacts patients' emotional expression and functionality (26). We applied six sessions (15 hours) of psychoeducation to the spouses of bipolar patients in our study. A significant decrease was observed in the emotional expression scale scores of the spouses of bipolar patients after psychoeducation intervention. A study assessed how a psychoeducational intervention for families affected the caregivers of bipolar patients. As a result, caregivers' knowledge about the disease increased, their subjective burden dropped, and their tendency to blame the relative's illness for life disruptions decreased (27). Another recent study reported that the relatives' emotional expression decreased after providing psychoeducation about the disease to 88 caregivers (28). As a result of a meta-analysis combining data from nine studies covering individual, family, and group-based psychoeducation, it was reported that psychoeducation can improve caregiver burden, but further studies are needed (29).

Stigmatization is a common issue that families of people with bipolar disorder deal with (10). In our study, spouses of bipolar individuals were evaluated in terms of stigmatization after psychoeducation with a scale evaluating stigmatization in 3 dimensions (social withdrawal, concealment of illness, and

perceived worthlessness). Following the intervention, we noted a substantial reduction in stigma scale scores in our sample. A recent study evaluated the long-term effectiveness of psychoeducational family intervention (PFI) in bipolar I disorder at one and five years post-intervention. The study reported that psychoeducation reduced stigmatization and improved problem-solving skills in patients and their families (30). Another study compared the effectiveness of an online web-based peer-assisted self-management intervention (REACT) with a cognitive intervention for relatives of individuals with psychosis or bipolar disorder. The study reported that the stress levels of the patients' relatives decreased and their well-being increased during the follow-up period (24 w) (31).

Another difficulty that relatives of bipolar patients experience is being isolated from society and not getting enough social support, which is caused in part by their feelings or perception of stigmatization (14). In a study evaluating caregivers for loneliness, the participants reported living in isolation with an average of 1.7 people in their close networks and an average of 5.3 people in their entire networks (32). Similar findings were found in a study that examined the personal support networks of caregivers of patients with serious mental illnesses. The study reported that most of the participants lived in isolation due to "stigma" and had a small support network consisting mostly of close family members (33). In our study, spouses of bipolar patients were assessed on the "UCLA loneliness scale" before and after the intervention. Although the loneliness level scores of the bipolar patients' spouses decreased after psychoeducation intervention, there was no significant decrease. The findings of our study may be explained by the fact that some people experience loneliness even when they are not socially isolated (34). The results of the study, which show that Turkey has the highest levels of loneliness in Europe and emphasise the need for more extensive research on loneliness, support this view (35).

Relatives of bipolar patients are prone to depression, anxiety, and stress because they often live in isolation due to care burden and stigmatization (8). In the present study, DASS-21 was used to measure anxiety, depression and stress of spouses of bipolar patients before and after the psychoeducational intervention. The spouses of bipolar patients showed a significant decrease in their levels of depression and anxiety after the intervention. A study evaluating the effectiveness of a 7-session (2 hours each) psychoeducation program for caregivers reported a significant decrease in caregivers' depression (36). A study that only applied a group-based psychoeducation intervention for caregivers and used DASS-21 for the evaluation reported similar results (37).

Limitations should be taken into consideration when evaluating our research. The study involved caregivers who applied within specific dates, took place in a single center, had a restricted sample group (the majority of bipolar patients are divorced or alone), and had a brief follow-up period following the intervention.

CONCLUSION

Our study observed a significant decrease in the stigmatization, emotional expression, depression, and anxiety scores of the patients' spouses who participated in the intervention. However, although there was a decrease in the loneliness score, it was not significant. Our study results are similar to the literature reporting that psychoeducational intervention improves family members' knowledge about the disease, relieves their burden, and reduces their distress (38). Based on this result, it may be recommended to continue psychoeducation systematically in clinical practice.

Acknowledgements : The authors would like to appreciate the patients participation in this study.

Ethics Committee Approval: Approval for this study was obtained from the Kırıkkale University Non-Interventional Research Ethics Committee (29/06/2022 tarih ve 2022.06.06).

We state that the parents have given their written informed consent to be involved in the study, in accordance with the Declaration of Helsinki.

Peer-review: Externally peer-reviewed

Author Contributions: Concept: HK, KA, Design: HK, KA, Data Collection and Processing: HK, Analysis and Interpretation: KA, Writing: HK, KA

Conflict of Interest: The authors declared no conflict of interest.

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