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Psychological resilience and related factors in bipolar disorder patients and their families

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Abstract

Interest in studies examining the psychological resilience of individuals with chronic mental illness and their caregivers has been increasing. This study aimed to investigate psychological resilience and burnout in individuals diagnosed with bipolar disorder (BD) in the euthymic phase, their caregivers, and healthy controls who are attending our clinic, and to compare these three groups with each other based on these variables. After obtaining approval from the ethics committee, a total of 114 participants were included in the study. This group comprised 38 individuals previously diagnosed with BD who presented to the Psychiatry Outpatient Clinic of the Kahramanmaraş Sutcu Imam University Health Practice and Research Hospital between March and December 2022 and consented to participate; 38 caregivers of individuals with BD; and 38 healthy controls with no personal or first-degree family history of BD. Young Mania Rating Scale (YMRS) and Hamilton Depression Rating Scale (HDRS) were applied to evaluate the remission of patients. Participants were administered a Socio-demographic Data Form (for patients, caregivers, and controls), the Psychological Resilience Scale for Adults (PRSA) and the Maslach Burnout Scale (MBS). There was a significant difference in the total score of PRSA between the BD patient group (PRSA-total score: 109.4±22) and the caregiver group (PRSA-total score: 122.8±14) and the healthy control group (PRSA-total score: 129.6±17). It was found that the psychological resilience levels of the control group were higher than those of the patients and caregivers. There was a significant difference in the total score of MBS between the groups, and this difference was due to the difference between the patient group (MBS-total score: 34.3±13) and the caregiver group (MBS-total score: 25.1±9.6) and the control group (MBS-total score: 26.6±10.5). Patients with BD were found to have lower levels of psychological resilience and higher levels of burnout compared to their caregivers and the control group. This situation has also been associated with certain clinical data and sociodemographic characteristics. Although caregivers of patients with BD were found to have lower levels of psychological resilience compared to the control group, there was no significant difference between the two groups in terms of burnout. Increasing psychological resilience and developing coping strategies for burnout will positively impact the functionality of both the patient and the caregiver.

Keywords: Bipolar disorder, psychological resilience, caregivers, burnout

Introduction

Bipolar Disorder (BD) is one of the most common psychiatric disorders, characterized by recurrent episodes of depression and mania or hypomania, and is among the most common causes of disability worldwide. Because the illness typically begins, in adolescence or early adulthood, people with BD have symptoms for most of their lives [1,2].

Being a caregiver is supporting the patient physically, emotionally and financially, as well as supporting the patient in carrying out tasks such as routine health care and personal care [3]. In this process, relatives have difficulty in providing the

necessary support to their patients and their need for support and assistance increases [4]. The unpredictable and cyclical course of BD makes caregiving especially difficult and burdensome for family members.

Psychological resilience has been defined as "the ability to adapt positively to life circumstances" and this is a dynamic process that evolves over time, implying a kind of adaptive functionality that specifically allows us to face challenges by restoring initial balance or to mature [5]. Given the impact of stress on BD, it has been hypothesized that psychological resilience influences the functionality and course of BD [6].

CITATION

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Burnout is a syndrome characterized by emotional exhaustion, depersonalization and a reduced sense of personal accomplishment [7]. In 2018, the World Health Organization (WHO) recognized burnout as an occupational phenomenon and included it in the 11th revisions of the International Classification of Diseases (ICD-11) [8]. The concept of job burnout applies to professional caregivers as well as relatives of chronic psychiatric patients who are informal caregivers, which is a second profession for them [9]. It is reported that caregivers of chronic psychiatric patients experience emotional difficulties such as stress, anxiety, shame, strain, helplessness, guilt, hopelessness, anger and depression [10]. Caregivers being alone in the care of patients or not being able to get help may cause burnout and cause caregivers to be inadequate in the care of the patient [11].

When the literature is reviewed, it is observed that studies based on psychological resilience targeting patients with BD and their caregivers are quite limited in number. The majority of the existing research addresses only the patient group and reports that psychological resilience has positive effects. The number of comprehensive studies examining the protective effects of psychological resilience in BD is below 20, and only a very small portion of these (less than 10%) include caregivers. The aim of this study was to investigate psychological resilience, some factors that may be related to resilience and burnout levels in individuals diagnosed with BD and their caregivers and to compare them with the control group.

Material and Methods

Population and Sample

Our study has been approved by the Medical Research Ethics Committee of Kahramanmaraş Sütçü İmam University with the decision dated 08.03.2022, and session number 2022/09. A total of 114 people, including 38 people diagnosed with BD according to the diagnostic criteria, 38 caregivers of BD patients, and 38 healthy controls who did not have BD themselves or their first-degree relatives, were included in this study and who applied to the Kahramanmaraş Sutcu Imam University Health Practice and Research Hospital Psychiatry Outpatient Clinic between March 2022 and December 2022 and gave their consent to participate in the study. Inclusion criteria consisted of patients aged between 18 and 65 years who presented to the psychiatry outpatient clinic and were diagnosed with BD according to the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5) diagnostic criteria, with no comorbid psychiatric disorders; caregivers of these patients; and healthy control participants. All participants were required to be free from major physical illnesses such as cardiovascular disease, neurological disorders, acute or chronic infections, or carcinomas. Exclusion criteria included having an additional psychiatric disorder alongside BD, being under 18 or over 65 years of age, having any major physical illness (e.g., cardiovascular disease, neurological disorder, acute or chronic infections, or carcinomas), or being diagnosed with mental retardation. Fourteen people who did not meet the study criteria and filled out the forms incorrectly were not included in the study. Power analysis was performed in G*Power-3.1.9.2

package program to determine the sample size. In the power analysis, it was determined that 114 people should be reached to reach 95% power and 5% significance level.

Data Collection Tools

Patient Sociodemographic Data Form

It was prepared by the researcher by reviewing the literature to obtain socio-demographic data and clinical information of the patients participating in the study. The form containing questions about the participants' age, gender, educational status, marital status, habits, total number of attacks, past suicide attempts, functionality, etc. was applied by the interviewer.

Caregiver Sociodemographic Data Form

It was prepared by the researcher by reviewing the literature to obtain the socio-demographic data of the caregivers of the patients participating in the study. The form containing questions about the participants' age, gender, educational status, marital status, habits, degree of closeness with the patient, how challenging it is to be a caregiver, etc. was applied by the interviewer.

Hamilton Depression Rating Scale (HDRS)

It was developed by Hamilton in 1978 to assess the severity of depression. It is used to measure the severity of depression rather than diagnose it. The 17-question scale was supplemented with some questions in the following years and 21- and 24-question scales were developed. We used the 17-question form in our study. The scale investigates the individual's depressive symptoms over the past week, with a minimum possible score of 0 and a maximum of 53. A score between 0 and 7 indicates no depression, 8 to 15 indicates mild depression, 16 to 28 indicates moderate depression, and 29 or above indicates severe depression [12]. In 1996, a Turkish validity and reliability study was conducted by Akdemir et al. and the Cronbach's alpha internal consistency coefficient was found to be 0.75 [13].

Young Mania Rating Scale (YMRS)

It is a scale used to assess the severity of manic episodes. There are 11 questions in this scale and each question has five levels of severity. Questions 5, 6, 8 and 9 were given double points to better recognize patients with difficulty in establishing cooperation. A minimum score of 0 and a maximum score of 60 can be obtained from the scale. Although the cut-off score for the scale is 7, some studies have shown that a score of 5 or more may be an active symptom of the disease [14]. A Turkish validity and reliability study was conducted by Karadağ et al. in 2001 and the Cronbach's alpha internal consistency coefficient was found to be 0.79 [15].

Psychological Resilience Scale for Adults (PRSA)

In 2003, Friborg et al. developed a scale with 5 sub-dimensions, and in 2005 the same team added one more sub-dimension and developed a scale that examines 6 sub-dimensions in total. The sub-dimensions assessed in the scale are structural style, future perception, family cohesion, self-perception, social competence and social resources. There is no cut-off score in the

psychological resilience assessment. Psychological resilience increases as the score increases. The content of the dimensions is as follows: (1) Structural style, having and maintaining certain patterns, being planned; (2) Future perception, having a positive outlook and a tendency to be goal-oriented; (3) Family cohesion, family members sharing values, spending time with each other, supporting each other; (4) Self-perception, having confidence in one's own skills and attitudes, having self-efficacy; (5) Social competence, being flexible in social settings, being able to make friends; and (6) Social resources, having social support. Basım and Çetin conducted a validity and reliability study of the scale in Turkish in 2011 and found that the Cronbach's alpha internal consistency coefficient was 0.86 [16].

Maslach Burnout Scale (MBS)

It was developed in 1981 by Maslach and Jackson. The scale consists of 22 questions and the questions are grouped under three dimensions. There are 5 questions in Depersonalization dimension, 9 questions in Emotional Burnout dimension and 8 questions in Personal Achievement dimension. Each dimension of the scale is scored separately. The Maslach Burnout Scale is scored on a 5-point Likert scale. There is no cut-off score for the burnout sub-dimension scores obtained during the assessment. High scores in Depersonalization and Emotional Burnout dimensions and low scores in Personal Achievement dimension indicate high levels of burnout. The Turkish validity and reliability study was conducted by Ergin, and in the adaptation, the 7-stage answer options in the original form were reduced to 5 because they did not fit our culture. The validity of the three-dimensional structure of the scale in our culture has been shown by validity studies conducted for Turkish. The Cronbach's alpha coefficients for the three dimensions were found to be 0.83 for emotional exhaustion, 0.65 for depersonalization, and 0.67 for personal accomplishment [17,18].

Statistical Analysis

All statistical analyses were conducted using SPSS version 22.0 (Statistical Package for the Social Sciences; SPSS Inc., Chicago, IL). Descriptive statistics were reported as frequencies and percentages for categorical variables, and as means $\pm$ standard deviations for continuous variables. Pearson's Chi-square test was employed to assess differences in categorical variables between groups. The normality of distribution for continuous variables was evaluated using the Kolmogorov-Smirnov test. For group comparisons involving more than two groups, One-Way ANOVA was utilized for normally distributed variables, while the Kruskal-Wallis test was applied for non-normally distributed variables. Spearman's rank-order correlation analysis was performed to assess the relationships between continuous variables. To identify predictors of the total PRSA score, linear regression analysis was conducted using the Enter method, incorporating variables that demonstrated statistically significant correlations. A p-value of less than 0.05 was considered indicative of statistical significance.

Result

A total of 114 participants were included in the study, including 38 (33.3%) patients with BD (Group 1), 38 (33.3%) caregivers of patients with BD (Group 2) and 38 (33.3%) controls without BD (Group 3). Among the participants, 50% of Group 1, 39.5% of Group 2, and 34.2% of Group 3 were male, and no statistically significant difference was found between the groups in terms of gender distribution ($p=0.363$). It was observed that 44.7% of Group 1, 65.8% of Group 2, and 21.1% of Group 3 were graduates of middle school or below. A statistically significant difference was found between the groups in terms of educational status, and this difference was attributed to the significant contrast between Group 2 and Group 3 ($p<0.001$). No significant difference was observed between the groups in terms of marital status ($p=0.117$) and employment status ($p=0.369$) (Table 1). In Group 1, the mean duration of illness was 10.0 ± 7.3 years, while the mean age at initiation of psychiatric treatment was 25.7 ± 8.8 years. Among the patients, 81.6% had good inter-episode functioning, and 68.4% experienced a manic episode as their first episode. The mean total number of episodes was 7.6 ± 6.6 , with an average of 3.8 ± 3.9 manic episodes and 3.7 ± 4.3 depressive episodes. Seasonality was observed in 92.1% of the patients, whereas rapid cycling was present in only 2.6%. The mean duration of untreated illness was 10.6 ± 17.8 years. Hospitalization was reported in 78.4% of the patients, with a mean number of hospitalizations of 3.5 ± 3.8 (Table 2). In Group 2, the degree of kinship was as follows: 44.7% were spouses, 28.9% mothers, 5.3% fathers, 13.2% siblings, and 7.9% sons or daughters. Additionally, 39.5% of the caregivers reported receiving assistance while providing care (Table 3). In Group 1, 36.8% of individuals had a history of suicide attempt, while 63.2% had no such history. In contrast, none of the participants in Group 3 reported a suicide attempt (100% had no history) (Figure 1). A statistically significant difference was found among the groups in terms of PRSA total scores, and this difference was attributed to the distinction between Group 1 and the other two groups ($p<0.001$). Similarly, a significant difference was observed among the groups in terms of MBS total scores, which was also due to the difference between Group 1 and the other two groups ($p=0.001$) (Table 4). The figure illustrates the distribution of total psychological resilience scores as measured by the PRSA among patients with BD (Group 1), caregivers (Group 2), and healthy controls (Group 3). A statistically significant difference was observed between the groups ($p<0.05$), with Group 1 showing lower resilience scores compared to the other groups (Figure 2). According to the results of the multiple linear regression analysis, none of the variables—YMRS, MBS-Depersonalization, MBS-Emotional Exhaustion, MBS-Personal Accomplishment, and MBS-Total Score—were found to be significant predictors of the total PRSA score (Table 5). A multiple linear regression analysis was conducted to determine the predictive effects of YMRS and MBS subdimensions on the PRSA total score. The overall model was statistically significant ($R^2=0.530$, $F(5, N)=26.503$, $p<0.001$), indicating that approximately 53% of the variance in PRSA-total scores could be explained by the independent variables (Table 6).

Table 1. Comparison of sociodemographic characteristics of the groups

Variable	Category	Group 1		Group 1		Group 1		p
		Number	%	Number	%	Number	%	
Age, Mean±SD		36.1±9.4 ^a		42.8±12.4 ^b		42.1±12.9 ^{a,b}		0.038*
Gender	Men	19	50.0	15	39.5	13	34.2	0.363**
	Female	19	50.0	23	60.5	25	65.8	
Educational status	Secondary school and below	17	44.7 ^{a,b}	25	65.8 ^a	8	21.1 ^b	<0.001**
	High School and above	21	55.3	13	34.2	30	78.9	
Marital status	Single	13	34.2	6	15.8	7	18.4	0.117**
	Married	25	65.8	32	84.2	31	81.6	
Employment status	Employed	14	36.8	16	42.1	20	52.6	0.369**
	Unemployed	24	63.2	22	57.9	18	47.4	

Table 2. Characteristics of Group 1

Variable	Category	Number	%
Disease duration, Mean±SD		10.0±7.3	
Age at admission to psychiatric treatment, Mean±SD		25.7±8.8	
Interperiod functionality	Good	31	81.6
	Poor	7	18.4
First attack type	Mania	26	68.4
	Depression	12	31.6
Total number of attacks, Mean±SD		7.6±6.6	
Number of manic episodes, Mean±SD		3.8±3.9	
Number of depressive episodes, Mean±SD		3.7±4.3	
Seasonality	Yes	35	92.1
	No	3	7.9
Rapid loop	Yes	1	2.6
	No	37	97.4
Duration of treatment-free follow-up, Mean±SD		10.6±17.8	
Hospitalization	Yes	29	78.4
	No	8	21.6
Number of hospitalizations, Mean±SD		3.5±3.8	

Table 3. General characteristics of group 2

Variable	Category	Number	%
Degree of proximity	Wife	17	44.7
	Mother	11	28.9
	Father	2	5.3
	Brother/sister	5	13.2
	Son/daughter	3	7.9
Purchase of assistance while providing care	Yes	15	39.5
	No	23	60.5

Table 4. Comparison of scale scores of the groups

Scale	Group 1	Group 2	Group 3	p*
	Mean±SD	Mean±SD	Mean±SD	
YMRS	.7±1.1 ^a	.0±.0 ^b	.0±.0 ^b	<0.001
HAM-D	1.3±1.6	1.0±1.3	1.1±1.5	0.660
PRSA-Structural style	13.1±3.8 ^a	14.4±3.0 ^{a,b}	15.0±2.9 ^b	0.045**
PRSA-Future perception	13.0±4.4 ^a	14.6±3.3 ^{a,b}	15.7±3.3 ^b	0.022
PRSA-Family adjustment	21.3±5.0	22.6±3.6	23.7±4.5	0.068**
PRSA-Self-perception	18.9±6.0 ^a	22.3±3.8 ^b	23.3±4.0 ^b	0.002
PRSA-Social competence	18.8±5.0 ^a	22.3±3.8 ^b	22.9±4.7 ^b	0.001
PRSA-Social resources	24.5±5.6 ^a	26.7±4.4 ^{a,b}	29.0±3.9 ^b	<0.001**
PRSA-Total	109.4±22.0 ^a	122.8±14.7 ^b	129.6±17.5 ^b	<0.001**
MBS-Desensitization	13.5±7.4	9.4±6.0	11.2±6.6	0.053
MBS-Emotional burnout	5.3±3.9	3.7±3.0	3.9±3.0	0.148
MBS-Personal success	15.6±6.3 ^a	12.1±4.4 ^{a,b}	11.4±5.8 ^b	0.002
MBS-Total	34.3±13.4 ^a	25.1±9.6 ^b	26.6±10.5 ^b	0.001**

*Cruskal-Wallis analysis; **One Way ANOVA analysis was applied. a,bThe group where the difference originated

Table 5. Correlation results of serum 25(OH)D, NF-κB levels and SF-36 vitality/fatigue scores with SF-36 subscales in peritoneal dialysis and hemodialysis patients

Variable	PRSA-Total	
	r	p
YMRS	-.301	.001
HAM-D	-.143	.128
MBS-Desensitization	-.405	.000
MBS-Emotional burnout	-.296	.001
MBS-Personal success	-.638	.000
MBS-Total	-.636	.000
Age	.114	.226
Disease period	-.044	.795
Age at admission to psychiatric treatment	.122	.464
Total number of attacks	-.212	.202
Manic attacks	-.103	.540
Number of depressive episodes	-.258	.118
Treatment-free period	.035	.833
Number of hospitalizations	-.210	.266
Duration of patient care	.038	.820

Table 6. Linear regression analysis of PRSA-total score

Predictor variables	β	SE	Standard β	t	p
PRSA-total (R2=0.530; F=26.503; p<0.001)					
YMRS	-1.811	1.902	-.064	-.952	0.343
MBS-Desensitization	-.088	1.330	-.030	-.066	0.947
MBS-Emotional burnout	1.094	1.219	.184	.897	0.372
MBS-Personal success	-1.060	1.276	-.308	-.831	0.408
MBS-Total	-.966	1.272	-.574	-.759	0.449

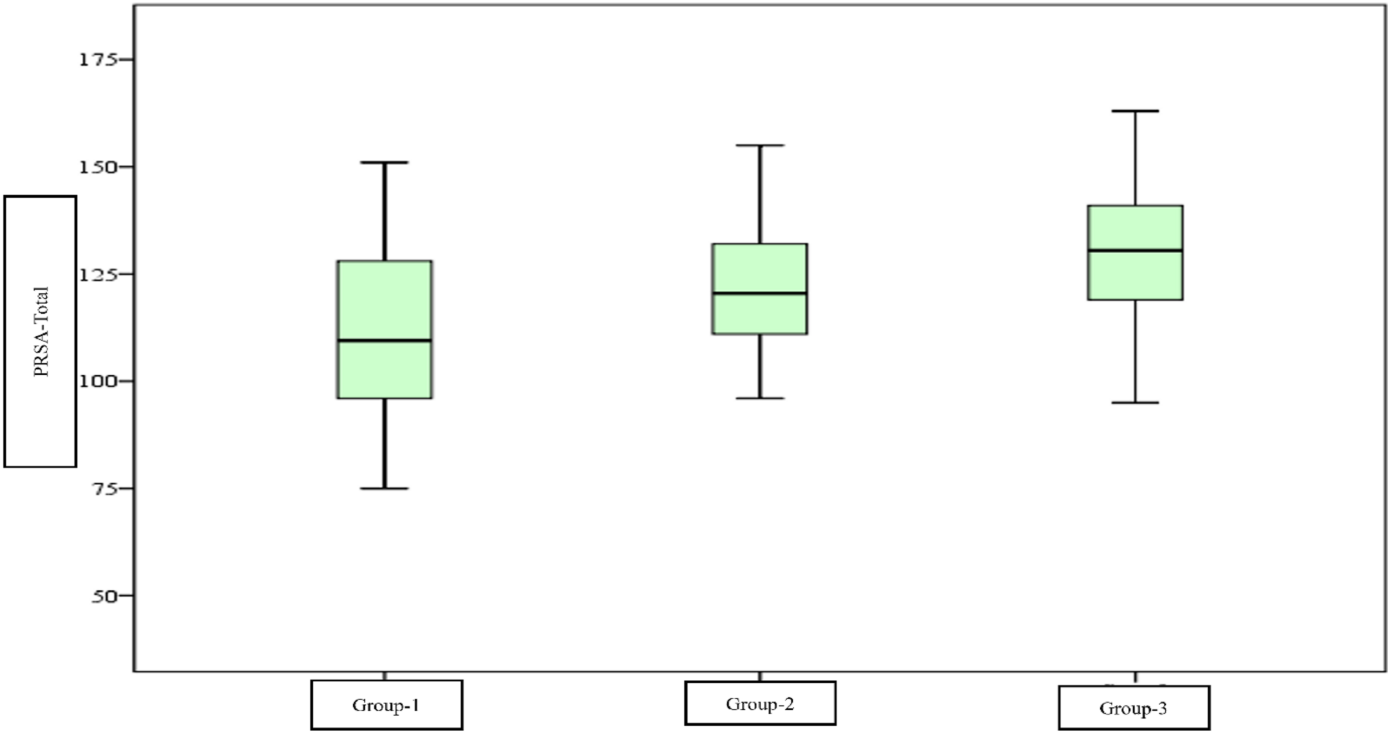


Figure 1. Comparison of the presence of suicide attempt between Group 1 and Group 3

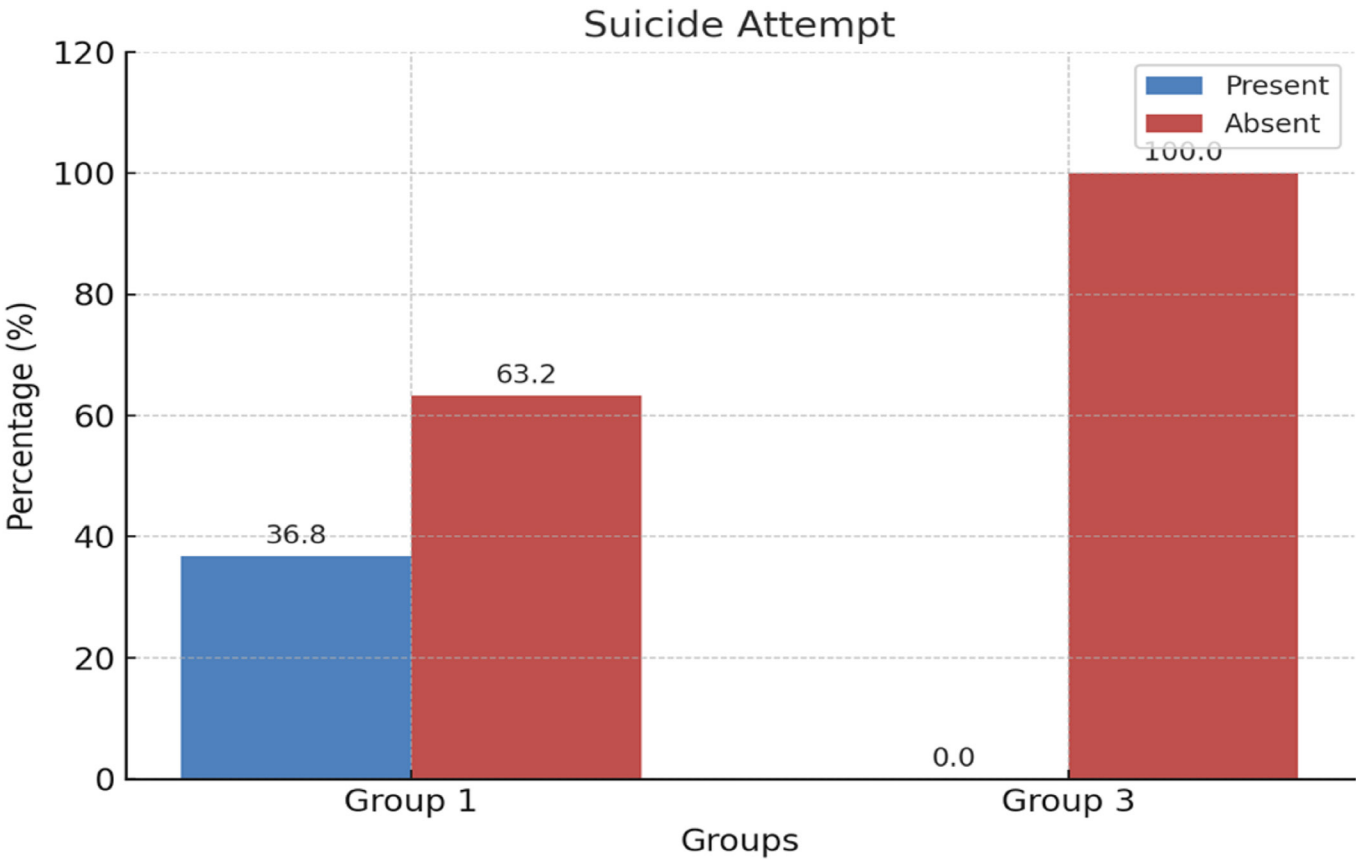


Figure 2. Comparison of PRSA-total score of the group

Discussion

BD is a mental health condition characterized by chronic, recurrent episodes, which affects individuals in terms of physical, emotional, occupational, and functional aspects, as well as in their relationships within family and social environments [19]. Families of individuals with BD often serve as primary caregivers, taking a leading role in managing patients' behaviors during symptomatic periods and dealing with the outcomes of these behaviors [20].

In our study, when examining the degree of closeness of caregivers, 44.7% were spouses, 28.9% were mothers, 5.3% were fathers, 13.2% were siblings, and 7.9% were sons or daughters. In a study conducted by Dore and Romans in 2001, it was shown that 37% of caregivers of individuals with BD were their mother or father, 32% were their spouse, and 24% were other relatives [21]. The literature indicates that the majority of caregivers of bipolar patients consist of first-degree relatives, which is consistent with the findings of our study.

A statistically significant difference was found in educational status between the control group and the patient and caregiver groups. The rate of high school and higher education in the control group was significantly higher compared to the patient and caregiver groups. Many studies have indicated that the high morbidity rates and episodic nature of bipolar disorder have negative impacts on education, social, and functional areas, leading to lower levels of education and employment among patients [22]. In a study by Çoban et al., it was found that caregivers have significant responsibilities in providing social support, ensuring treatment adherence, and maintaining the continuity of care, which results in them having less personal time and difficulty attending to their own needs and interests [23].

In our study, 39.5% of caregivers reported receiving assistance during the caregiving process. The chronic and episodic nature of BD can make caregiving particularly demanding for family members. Receiving support plays a key role in alleviating this burden and reducing caregiver burnout. Previous studies have shown that social support from family and close friends positively influences caregivers' functionality and their overall caregiving experience [24,25].

In our study, it was found that 36.8% of patients with BD had previously attempted suicide, showing a significant difference compared to healthy controls. Although there are varying results in the literature regarding suicide attempts in individuals with BD, approximately 20-60% of these patients are reported to have attempted suicide, with 3-14% resulting in death from these attempts [26,27]. Differences in rates across countries may be influenced by various factors, such as cultural differences and the methodology of the study. The rates found in our study appear consistent with those reported in the literature.

One of the key findings of the study is that individuals with BD have lower levels of psychological resilience compared to

both their caregivers and the control group. In our study, we also examined burnout levels, which we thought to be related to psychological resilience. When the literature was reviewed, few studies were found on the psychological resilience and burnout of patients with BD and their caregivers.

Our study found a significant difference in psychological resilience scores among patients, caregivers, and healthy controls, primarily driven by lower scores in the patient group. Studies comparing psychological resilience across these three groups remain limited. A thesis conducted in Türkiye in 2020 reported significantly lower resilience levels in individuals with BD compared to their caregivers and healthy controls [28]. Similarly, Choi et al. found that patients with BD had significantly lower resilience than healthy individuals [6]. These findings are consistent with the results of our study.

Our study revealed significant differences between the patient and control groups in the structural style and future perception subscales of the PRSA, while the patient group also scored significantly lower than both caregivers and healthy individuals in self-perception and social competence. The main difference observed in the social resources subscale stemmed from the disparity between the patient and control groups. Individuals with high psychological resilience tend to maintain a positive future outlook, possess strong coping skills, and demonstrate resistance in the face of adversity [29,30]. Klag et al. (2004) emphasized that resilience is a developable trait, strengthened through the experience of overcoming challenging life events [31]. In this context, structured problem-solving abilities, access to social support, family cohesion, and a positive perception of the future are key contributors to resilience. Among individuals with BD, high resilience is associated with greater illness insight, improved coping capacity, and better adherence to treatment. Likewise, resilience in caregivers facilitates effective communication, a better understanding of the illness process, and more efficient use of both familial and social resources.

In our study, no statistically significant relationship was found between psychological resilience and variables such as age, duration of illness, number of manic or depressive episodes, or number of hospitalizations in individuals with BD. However, previous studies have reported a negative association between the frequency of episodes and resilience levels [6,32]. The discrepancy in our findings may be attributed to the absence of certain individual-level psychological variables—such as cognitive processing style, problem-solving abilities, and alexithymia—which were not accounted for in our analysis. Additionally, the limited sample size may have restricted the ability to stratify patients based on illness course, potentially influencing the results.

In our study, a significant difference was found among groups in the personal accomplishment subscale of the MBS, primarily driven by the disparity between the patient and control groups. Notably, the patient group scored higher on this subscale. Since

lower scores indicate higher levels of burnout, these findings suggest that a diminished sense of personal accomplishment is associated with increased burnout. The unexpectedly high personal accomplishment scores observed in the patient group can be explained by several factors. First, the relatively low frequency of rapid cycling episodes and the preserved level of inter-episode functioning among participants may have contributed to the sustained sense of occupational and social competence. Furthermore, the self-report nature of the MBS and its reliance on subjective assessments may have reinforced patients' tendency to present themselves in a more favorable light. In this context, the findings may not only reflect the level of burnout but also patients' insight, self-awareness, and social comparison processes.

In our study, a statistically significant difference was found between groups in total burnout scores measured by the MBS. The burnout levels in the patient group were significantly higher than those in both the caregiver and healthy control groups. Emotional fluctuations, insight-related awareness, social and functional impairments, as well as feelings of guilt and loss of control experienced by individuals with BD, may contribute to elevated levels of burnout. Caregivers exhibited low levels of emotional exhaustion, moderate levels of depersonalization, and high levels of reduced personal accomplishment. These findings are supported by the literature. For example, Vonderfort et al. reported that caregivers of patients experiencing manic or depressive episodes exhibited higher burnout levels, whereas caregivers of patients in remission reported lower levels of burnout [33]. Other studies have also demonstrated that caregivers of individuals with severe mental disorders frequently report high levels of emotional exhaustion and diminished personal accomplishment [9,10,34]. One of the distinguishing features of BD compared to other psychiatric conditions is that individuals are often able to maintain a relatively high level of functioning during inter-episode periods. This may help explain the lower burnout levels observed among caregivers during remission phases, as caregiving burden tends to decrease. In this context, it can be concluded that the psychological burden experienced by caregivers is dynamic and closely linked to the clinical status of the patient.

In our study, we found significant negative correlations between psychological resilience and the subscales of burnout, depersonalization, emotional exhaustion, and personal accomplishment, in patients with BD. As burnout levels increase, psychological resilience tends to decrease. This finding is consistent with the existing literature, which suggests that resilience plays a mitigating role in burnout. Individuals with high levels of resilience have been reported to manage stress more effectively, experience lower levels of burnout, and exhibit milder depressive symptoms [35]. In a study conducted in Turkey in 2013, psychological resilience was also found to be negatively associated with burnout [36]. Another study conducted on nurses demonstrated that individuals with higher

levels of resilience were more effective in coping with emotional exhaustion and depersonalization [37]. Among patients with BD, several factors contribute to burnout, including emotional instability, polypharmacy, poor treatment adherence, maladaptive coping strategies, personality traits, and lack of social support. Maladaptive coping mechanisms, such as excessive rumination, avoidance behaviors, substance use, and engagement in risky activities, tend to exacerbate burnout. In contrast, psychological resilience equips individuals with healthier and more effective strategies to manage stress. It is suggested that these two variables may influence each other reciprocally. While individuals with high resilience may be better able to reduce burnout and thereby improve treatment adherence, high levels of burnout may, in turn, weaken coping capacities and diminish resilience. Thus, psychological resilience serves as a protective factor against burnout, whereas elevated burnout levels can impair resilience.

As a result, individuals with BD and their caregivers face multifaceted financial, social, and emotional challenges throughout the course of the illness and its treatment. Effectively addressing these difficulties requires structured and comprehensive support systems. In this context, targeted psychosocial interventions are essential for enhancing psychological resilience and mitigating burnout in both groups. Psychoeducation programs have been shown to strengthen coping skills and resilience, while Cognitive Behavioral Therapy (CBT) and mindfulness-based approaches are effective in reducing stress and burnout.

Furthermore, support groups and group therapy enhance social connectedness, reduce loneliness, and improve psychological well-being. Structured interventions specifically tailored to caregivers serve a protective role by alleviating their burden and preventing burnout. These interventions, when integrated into Community Mental Health Centers (CMHCs), can strengthen individual psychological resources and support the management of environmental stressors. This multidimensional approach not only improves treatment adherence but also fosters sustainable coping strategies for living with the illness.

Conclusion

Our study stands out as one of the few that examines both psychological resilience and burnout in patients with BD and their caregivers. This unique focus constitutes a strong aspect of research, contributing significantly to the existing literature. In this context, the findings of our study aim to serve as a guide for both academic research and clinical practice.

Our study has several limitations. First, the fact that the patient group was in the remission episode limits the generalizability of the findings to other patients and caregivers dealing with BD. The lack of evaluation of caregivers' psychological resilience based on the characteristics of the patient group is among the limitations of our study. Factors such as patients' treatment adherence, job loss, disability, polypharmacy, presence of comorbid conditions, and past legal issues could

potentially impact caregivers' psychological resilience. We believe that these variables need to be considered to gain a more comprehensive understanding of the factors influencing caregivers' resilience. Additionally, the small sample size and the study being conducted at a single center further restrict the generalizability of the results. There is a need for more comprehensive, multi-center studies with a heterogeneous sample to address these limitations. Such studies should also consider variables like caregivers' demographic characteristics and socio-cultural factors, which would contribute to a more in-depth understanding of the subject.

Conflict of Interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

The authors declare that they have received no financial support for the study.

Ethical Approval

The study received ethical approval from the Medical Research Ethics Committee of Kahramanmaraş Sütçü İmam University with the decision dated (08.03.2022), and session number (2022/09).

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