

# Dream themes and rejection sensitivity of individuals with and without borderline personality disorder: a comparative study

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## ABSTRACT

**Objectives:** This study aims to determine how the dream themes of borderline personality disorder patients differ from those of without borderline personality disorder diagnosis and the mediating role of rejection sensitivity in this differentiation process.

**Methods:** The convenience sampling method was used in the study, and the participants were 79 female borderline patients diagnosed with semi-structured interviews with criteria of DSM-5 and 79 female individuals who had not received a psychological diagnosis before and at the study interviews. Sociodemographic Information Form, Dream Themes Scale, Borderline Personality Questionnaire, and Rejection Sensitivity Scale were used in the study. Linear Regression Analysis, Hierarchical Regression Analysis, and Independent Groups T-Test were used during the investigations.

**Results:** Borderline personality disorder patients scored higher in all sub-dimensions of the dream themes scale and rejection sensitivity scale than the control group. Borderline personality traits predicted rejection sensitivity. Borderline personality traits and rejection sensitivity together predicted dream themes. Borderline personality predicts anxiety dreams, fear dreams, and experience dreams, and rejection sensitivity mediates these predictive relationships.

**Conclusions:** The dreams of borderline personality disorder patients have negative content covered by the impact of experiences sub-dimension on dream themes, as they contain reflections of negative content in beliefs, thoughts and emotions related to their daily lives. Rejection sensitivity plays a mediator role in borderline patient's dreams. The study results show that it would be beneficial not to ignore the content of dreams in patients with borderline personality disorder, considering the relationship of negative dreams with daily functioning, dissociative symptoms, self-harming behaviors, and suicide attempts. Results also indicate that it might be beneficial to target rejection sensitivity to reduce aggravating dream contents.

**Keywords:** Borderline personality disorder, dream themes, dreams, negative dream themes, rejection sensitivity

**D**reaming is a collection of mental activity that takes place during sleep [1]. Sigmund Freud [2] described the dream as "the royal road to

the unconscious" and presented a psychoanalytic framework for dream analysis by penning the books "Interpretation of Dreams 1 and 2" and gave this mys-

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terious phenomenon its place and importance in psychology [2]. He postulated that dreams reflect the subconscious mind's conflicts, desires, and fears [1]. Freud [2] said, "the dream is not only about unconscious conflicts or desires, but it is also very closely related to the personality."

Hobson and Kahn [3] state that obtaining and analyzing dreams with a mental state examination is worth a short interview to obtain the general cognitive functions of patients while they are admitted to the hospital [3]. Kramer and Glucksmann [4] state that dreams reflect the emotional state of patients and states that dreams are a valid and reliable assessment tool in terms of psychodynamic and psychodiagnostic pain, reflecting conflicts, resistances, transferences, and opposing transferences, self-images, and defenses. Clinical states are said to be reflected in a patient's dreams. The themes of dreams tend to reflect the patient's current mood state; bipolar patients mostly have bizarre and grandiose themed dreams when they are in a manic episode. On the other side, depression was characterized by more negative themes, and improvement in depression may be heralded by changes in the patient's dreams [4]. Dream content has also been researched in patients with anxiety disorders; in particular, for PTSD, nightmares are used as a diagnostic symptom, and the content and frequency of nightmares help clinicians infer the severity of the illness [1].

Patients with borderline personality disorder (BPD) have a hypersensitivity to abandonment [5]. This situation results in high rejection sensitivity levels, which can be considered as a precursor or substitute for abandonment [6]. While rejection sensitivity indicates intense sensitivity to signals for rejection, the reactions of individuals with rejection sensitivity in the face of actual and/or perceived rejection experiences are inconsistently high [7]. Rejection sensitivity and sleep disturbance are two factors that may maintain or exacerbate BPD symptoms [8]. Although sleep problems are not included in the diagnostic criteria of BPD, approximately half of the borderline patients report disturbed sleep [9] and have more nightmares and dream anxiety than healthy individuals [10]. Additionally, borderline patients with dreams with negative content show more significant psychopathology than borderline patients without dreams with negative content [9]. Generally, an increased fre-

quency of negative dream content is associated with increased anxiety, sleep disturbances, and poor mental health [11, 12].

This study was conducted because there is no comparative study with Turkish BPD patient samples about dreams content and rejection sensitivity's role in it. In this study, it is expected that patients with BPD will encounter more nightmare dreams because of their rejection sensitivity than healthy participants, and it is also thought this might be because of their hyper rejection sensitivity. It is thought that determining the separation of dream themes of patients with borderline personality disorder from individuals who are not sick will be useful in determining the status and severity of the disease in the patient and determining the correct treatment method, both in the academic literature and in clinical treatments. Because it is known that sleep problems in BPD cause difficulties in social, emotional, and cognitive impairment and reduced self-care [13].

Borderline patients can often engage in self-harming and sabotaging behaviors [14]; approximately 70-75% of patients attempt suicide at least once in their lifetime, and approximately 8-10% of suicidal attempts are completed [5]. Besides, it is known that there is a positive relationship between nightmares and non-suicidal self-injury (NSSI) [15] and suicidal behavior [16]. Therefore, it is thought that borderline patients with nightmares have an increased risk of harming themselves and committing suicide. Therefore, this study may be useful for inhibiting the NSSI and suicidal attempts of borderline patients by showing the increase in negative contents in dreams as a sign of future NSSI or suicidal attempts. Sleep disorders deepen the dissociative symptoms of borderline patients and cause dissociative symptoms even in healthy individuals [17]. Because of that, this study might help by stressing the importance of reducing dissociative symptoms in borderline patients.

## METHODS

The universe of the study consists of female borderline patients and women without any psychiatric diagnosis in Turkey. Convenience sampling and comparative design was used in the study. Convenience sampling is

a non-random sampling method in which the sample to be selected from the population is determined by the judgment of the researcher.

### Population

The sample of the study consists of borderline personality disorder patients who applied to a Psychiatry Clinic between 2021-2022 and individuals without a psychiatric diagnosis.

The ages of participants were between 18-36, and they were residing in Istanbul/Turkey. All participants in the study group (borderline personality disorder patients) were women, 15.2% were high school graduates, 72.2% had undergraduate degrees, 12.7% had graduate degrees, 2.5% perceived their economic level as low, 34.2% perceived their economic level as moderate, 63.3% perceived their economic level as high. The mean age of the participants in the study group (32±8 years).

All participants in the control group (women without borderline personality disorder diagnosis) are women, 3.8% are primary school graduates, 10.1% are high school graduates, 60.8% are undergraduate graduates, 25.3% are postgraduate graduates, 1.3% perceived their economic level as low, 88.6% perceived their economic level as moderate, 10.1% perceived their economic level as high. The mean age of the participants in the control group (30±9 years).

### Procedure

The study has been approved by the Istanbul Aydın University Ethics Committee (Date: 09.07.2021, No: 2021/08). Researchers reached out to individuals without any psychiatric disorders from social media platforms by announcing their study. Groups were similar in age. All the participants voluntarily participated in this study between August 2021 and April 2022 by filling out the Dream Themes Scale, Rejection Sensitivity Scale, and sociodemographic data form. The study group consisted of 79 female borderline patients who had borderline personality disorder diagnoses with semi-structured interviews taken by a psychiatrist with criteria of DSM-5, and the control group consisted of 79 female individuals who had not received a psychological diagnosis before and at the studies' interviews. While determining the study group, having a depressive episode or PTSD was scanned as an exclusion crite-

tion, and patients who met the diagnostic criteria for depressive disorder or PTSD comorbid with borderline personality disorder were not included in the study. Besides semi-structured interviews with criteria of DSM-5, the Borderline Personality Questionnaire was given to the control group to measure their borderline personality traits to see the effect of borderline traits, which are not as high as to get a diagnosis on dream themes and rejection sensitivity.

### Scales Used

The Sociodemographic Data Form which developed by the researcher, the Borderline Personality Questionnaire, the Dream Themes Scale and the Rejection Sensitivity Scale used for collecting data.

#### *Sociodemographic Data Form*

The sociodemographic data form includes gender, age, education level, economic level, and marital status.

#### *Borderline Personality Questionnaire (BPQ)*

It has Principal Components Analysis scores ranging between 0.40-0.81 [19]. Turkish BPQ internal consistency coefficient Cronbach  $\alpha$  value was determined as 0.89. The scale consists of 80 questions and 9 sub-dimensions [20]. Their Cronbach  $\alpha$  value was determined as: impulsivity: 0.50, emotional lability: 0.77, abandonment: 0.40, relationships: 0.68, self-image: 0.72, suicidal/self-injurious behavior: 0.48, feeling of emptiness: 0.73, intense anger: 0.74, and psychosis-like states: 0.62. In this study, the total score of the Borderline Personality Questionnaire was used, and the total Cronbach alpha value of the scale was determined as .929.

#### *Dream Themes Scale (DTS)*

The Dream Themes Scale (DTS) is a measurement tool developed by Genç *et al.* [21]. As a result of the reliability analysis, Cronbach's alpha internal consistency coefficient was found to be .94, and the item-total correlations were found to be between .34 and .72 [21]. In this study, the Cronbach alpha values of the sub-dimensions of the Dream Themes Scale were respectively: Negative Themes: .711, Anxiety Themes: .613, Fear Themes: .736, Effect of Experiences: .786, Frustration Themes: .872. The scale consists of 29 items and five sub-dimensions. It evaluates anxiety

themes, fear themes, effects of experiences, frustration themes, and negative themes. It is a valid and reliable scale. The increase in the scores obtained from the sub-dimensions of the DTS and the overall scale indicates the results of the dream themes.

### Rejection Sensitivity Scale (RSS)

Downey and Feldman's [22] Rejection Sensitivity Scale (RSS) has 18 hypothetical situations in which the individual is likely to be rejected by others that are meaningful to the individual, and the person is asked to answer the rejection and acceptance expectations about the stated situation in a 6-point Likert type. Item scores can vary from 1 to 36. The Turkish validity and reliability study of the scale was conducted by Özen *et al.* [23], and the Cronbach's alpha value for the total score was found to be 0.85. In this study, the Cronbach alpha value of the rejection sensitivity scale was determined as .858.

### Statistical Analysis

In the study, the relational screening model, which is the method in which the event, individual, or object subject to the research is tried to be defined as it exists, was used. Analyzes were made using the SPSS 25 program. The normality test, which is the first stage of the analysis, was applied, and when the skewness and kur-

tosis values of the variables were examined, it was seen that the relevant values were between -2 and +2. After deciding on the existence of a normal distribution, it was decided to use parametric analysis. Descriptive statistics for the demographic variables in the study were calculated immediately after the normality analysis in order to evaluate variables independent samples T-Test, Simple Linear Regression Analysis Test, and Hierarchical Regression Analysis Test used.

## RESULTS

When we compared the scores obtained from the Negative Themes subscale ( $t=115.79$ , mean:  $17.07\pm 115.79$ ,  $P<0.05$ ), from the Anxiety Themes subscale ( $t=132.38$ , mean:  $11.11\pm 132.38$ ,  $P<0.05$ ), from the Fear Themes subscale ( $t=109.10$ , mean:  $14.84\pm 109.10$ ,  $P<0.05$ ), Effect of Experiences subscale ( $t=126.79$ , mean:  $17.14\pm 126.79$ ,  $P<0.05$ ), Frustration Themes subscale ( $t=109.67$ , mean:  $19.53\pm 109.67$ ,  $P<0.05$ ), and from Rejection Sensitivity Scale ( $t=88.22$ , mean:  $5.27\pm 88.22$ ,  $P<0.05$ ) according to the study and control group variables, a significant difference was found between the means. When we evaluate the results, it is seen that the scores of the participants in the study group are higher than

**Table 1. Comparison of dream themes scale and rejection sensitivity scale scores between study and control group**

		n	Mean±SD	t	df.	P value*
Negative themes	Study group	79	23.65±2.27	17.07	115.79	<0.001
	Control group	79	14.03±4.47			
Anxiety themes	Study group	79	16.52±2.73	11.11	132.38	<0.001
	Control group	79	10.18±4.28			
Fear themes	Study group	79	11.91±1.78	14.84	109.10	<0.001
	Control group	79	4.76±3.90			
Influence of experiences	Study group	79	16.62±2.06	17.14	126.79	<0.001
	Control group	79	8.84±3.47			
Frustration themes	Study group	79	13.01±1.52	19.53	109.67	<0.001
	Control group	79	5.01±3.31			
Rejection sensitivity scale	Study group	79	60.34±4.84	5.27	88.22	<0.001
	Control group	79	48.78±18.87			

\*Independent samples t-test

**Table 2. Predicting rejection sensitivity of borderline personality**

	<i>B</i>	<i>SH</i>	$\beta$	<i>t</i>	<b>P value*</b>
<b>(Constant)</b>	32.51	3.48		9.34	<b>&lt;0.001</b>
<b>Borderline personality questionnaire</b>	0.76	0.14	0.53	5.48	<b>&lt;0.001</b>

\*Simple linear regression analysis.  $R=.53$ ,  $R^2=.28$ ,  $F=30.01$ ;  $P<0.001$

the scores of those in the control group (Table 1).

Borderline personality was found to predict rejection sensitivity ( $R=.53$ ,  $R^2=.28$ ,  $P<0.05$ ). It was determined that the independent variable in the established regression model explained 28% of the change in rejection sensitivity. When we evaluate the results, borderline personality has a positive effect on rejection sensitivity ( $\beta=.53$ ,  $P<0.05$ ) (Table 2).

When the findings in Table 3 were evaluated, it was seen that in the first model, borderline personality explained 40% of the variance in anxiety-themed dreams. In the second process, the rejection sensitivity variable was added to the model. Rejection sensitivity explained 3% of the variance in anxiety-themed dreams. It was observed that rejection sensitivity and borderline personality variables explained 43% of the variance in anxiety-themed dreams. With the addition of rejection sensitivity in the second process, the beta value of the borderline personality variable decreased from .64 to .53. This difference in Beta value with the bootstrapping method was found to be significant since the lower and upper limit values of the indirect

total effect did not contain zero. According to this result, it was determined that there was partial mediation (Fig. 1).

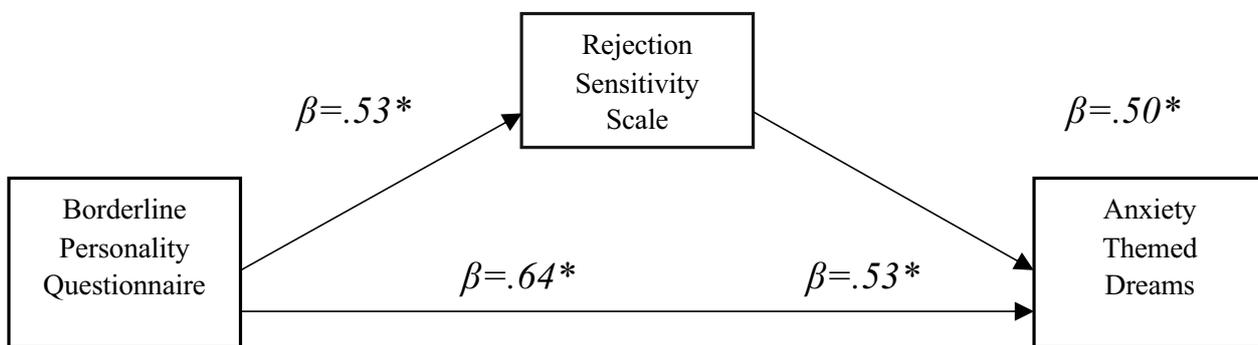
When the findings in Table 4 were evaluated, it was seen that borderline personality explained 30% of the variance in fear-themed dreams in the first model. In the second process, the rejection sensitivity variable was added to the model. Rejection sensitivity was found to explain 3% of the variance in fear-themed dreams. It was observed that rejection sensitivity and borderline personality variables explained 33% of the variance in the score in fear-themed dreams. With the addition of rejection sensitivity in the second process, the beta value of the borderline personality variable decreased from .55 to .41. This difference in Beta value with the bootstrapping method was found to be significant since the lower and upper limit values of the indirect total effect did not contain zero. According to this result, it was determined that there was partial mediation (Fig. 2).

As a result of the evaluation of the findings in Table 5, it was seen that in the first model, borderline

**Table 3. Mediator role of rejection sensitivity in predicting anxiety-themed dreams of borderline personality in the control group**

<i>Model</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>B</i>	<i>SH</i>	$\beta$	<i>t</i>	<b>P value*</b>	<b>Lower bound</b>	<b>Upper bound</b>
<b>(Constant)</b>	.64	.40	5.71	0.71		8.00	<b>&lt;0.001</b>	4.29	7.13
<b>1</b> <b>Borderline personality questionnaire</b>			0.21	0.03	0.64	7.33	<b>&lt;0.001</b>	0.15	0.27
<b>(Constant)</b>	.68	.43	4.11	1.02		4.04	<b>&lt;0.001</b>	2.09	6.14
<b>Borderline personality questionnaire</b>			0.17	0.03	0.53	5.23	<b>&lt;0.001</b>	0.11	0.24
<b>2</b> <b>Rejection sensitivity scale</b>			0.05	0.02	0.22	2.15	<b>0.035</b>	0.00	0.09
<b>Undirect total effect (mediator)</b>			0.04	0.02				0.00	0.09

\*Hierarchical regression analysis

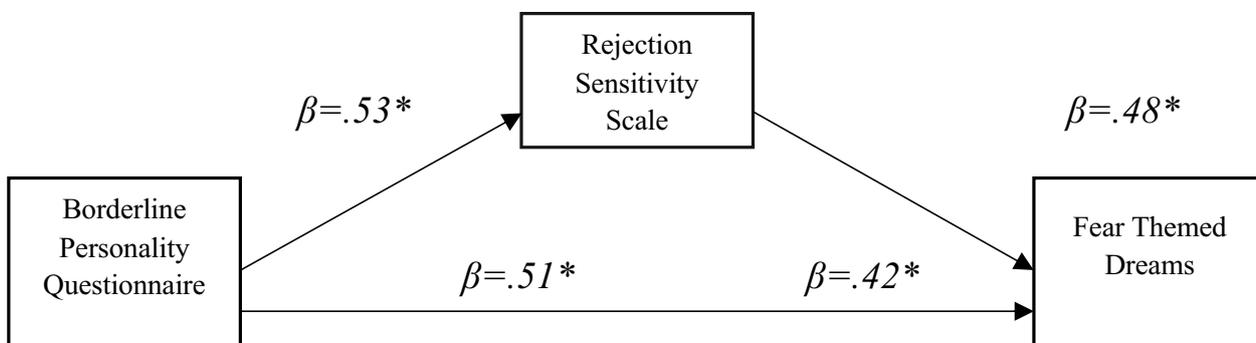


**Fig. 1.** Beta values on the mediator role of rejection sensitivity in predicting anxiety-themed dreams of borderline personality in the control group. \*P<0.05

**Table 4.** The mediating role of rejection sensitivity in predicting fear-themed dreams of borderline personality in the control group

Model	R	R <sup>2</sup>	B	SH	β	t	P value*	Lower bound	Upper bound
(Constant)	.55	.30	1.28	0.71		1.81	0.074	-0.13	2.70
1									
Borderline personality questionnaire			0.16	0.03	0.55	5.74	<0.001	0.11	0.22
(Constant)	.59	.33	-0.44	1.01		-0.43	0.665	-2.44	1.57
Borderline personality questionnaire			0.12	0.03	0.41	3.77	<0.001	0.06	0.19
2									
Rejection sensitivity scale			0.05	0.02	0.26	2.35	0.021	0.01	0.10
Undirect total effect (mediator)			0.04	0.02				0.02	0.09

\*Hierarchical regression analysis



**Fig. 2.** Beta values on the mediator role of rejection sensitivity in predicting fear-themed dreams of borderline personality in the control group. \*P<0.05

**Table 5. Results on the mediator role of rejection sensitivity in predicting borderline personality effects of experiences-themed dreams in the control group**

Model		R	R <sup>2</sup>	B	SH	β	t	P value*	Lower bound	Upper bound
1	(Constant)	.55	.30	1.28	0.71		1.81	0.074	-0.13	2.70
	Borderline personality questionnaire			0.16	0.03	0.55	5.74	<0.001	0.11	0.22
	(Constant)	.59	.33	-0.44	1.01		-0.43	0.665	-2.44	1.57
2	Borderline personality questionnaire			0.12	0.03	0.41	3.77	<0.001	0.06	0.19
	Rejection sensitivity scale			0.05	0.02	0.26	2.35	0.021	0.01	0.10
	Undirect total effect (mediator)			0.04	0.02				0.02	0.09

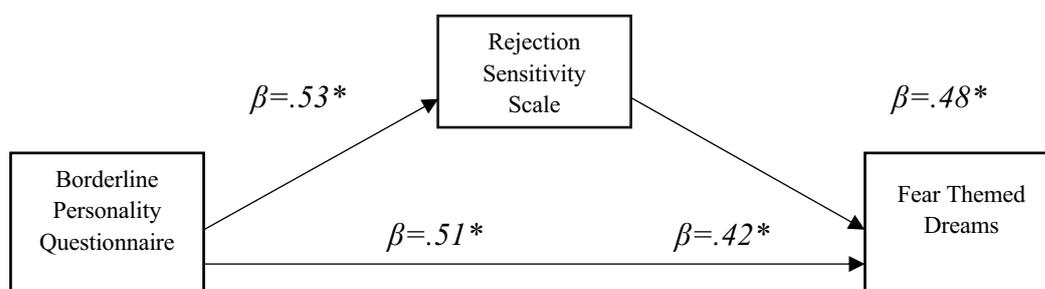
\*Hierarchical Regression Analysis

personality explained 30% of the variance in the Dreams themed Effect of Experiences. In the second process, the rejection sensitivity variable was added to the model. Rejection sensitivity was found to explain 3% of the variance in Dreams with the theme of Effect of Experiences. It was observed that rejection sensitivity and borderline personality variables explained 33% of the variance in the score of Dreams with the theme of the Effect of Experiences. With the addition of rejection sensitivity in the second process, the beta value of the borderline personality variable decreased from .55 to .41. This difference in Beta value with the bootstrapping method was found to be significant since the lower and upper limit values of the indirect total effect did not contain zero. According to this result, it was determined that there was partial mediation (Fig. 3).

As a result of the evaluation of the findings in Table 6, it was seen that borderline personality ex-

plained 54% of the variance in frustration-themed dreams in the first model. In the second process, the rejection sensitivity variable was added to the model. Rejection sensitivity explained 4% of the variance in frustration-themed dreams. It was observed that rejection sensitivity and borderline personality variables explained 58% of the variance in the scores of frustration-themed dreams. With the addition of rejection sensitivity in the second process, the beta value of the borderline personality variable decreased from .74 to .62. This difference in Beta value with the bootstrapping method was found to be significant since the lower and upper limit values of the indirect total effect did not contain zero. According to this result, it was determined that there was partial mediation (Fig. 4).

It was determined that the rejection sensitivity scale predicted the dreams with the theme of the Effect of Experiences (R=.26, R<sup>2</sup>=.07, P<0.05). It was determined that the independent variable in the estab-



**Fig. 3. Beta values on the mediator role of rejection sensitivity in the prediction of borderline personality effects of experiences-themed dreams in the control group. \*P < 0.05**

**Table 6. Results on the mediator role of rejection sensitivity in predicting frustration-themed dreams of borderline personality in the control group**

Model		R	R <sup>2</sup>	B	SH	β	t	P value*	Lower bound	Upper bound
1	(Constant)	.74	.54	1.02	0.48		2.12	<b>0.037</b>	0.06	1.99
	Borderline personality questionnaire			0.19	0.02	0.74	9.67	<b>&lt;0.001</b>	0.15	0.23
2	(Constant)	.77	.58	-0.29	0.68		-0.42	0.674	-1.64	1.07
	Borderline personality questionnaire			0.16	0.02	0.62	7.11	<b>&lt;0.001</b>	0.11	0.20
	Rejection sensitivity scale			0.04	0.02	0.23	2.65	<b>0.010</b>	0.01	0.07
	Undirect total effect (mediator)			0.03	0.02				0.00	0.07

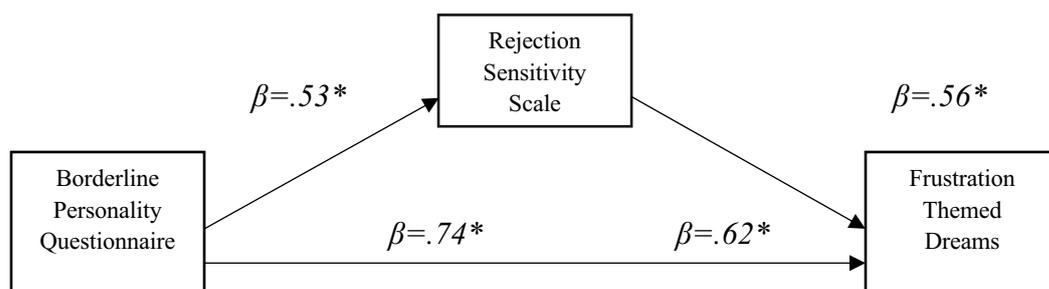
\*Hierarchical regression analysis

lished regression model explained 07% of the change in the Dreams-themed Effect of Experiences. When we evaluate the results, the rejection sensitivity scale has a positive effect on Dreams with the theme of the Effect of Experiences ( $\beta=.26, P<0.05$ ) (Table 7).

## DISCUSSION

According to Freud [2], the materials of dreams can be chosen from any segment of the dreamer's life. The only condition here is the existence of a line of thought that connects the life of the day before the dream to earlier ones. Although Freud [2] defined dreams as the “royal road to the unconscious” of neurotic patients, [24] states that dreams are a very important element in the understanding of borderline patients. Borderline personality disorder patients report much more nega-

tive themes in their dreams than other individuals during their psychodynamic treatment [25]. Stone [24] states that the evaluation of dreams of borderline patients is critical in two respects. The first of these is that the dreams of borderline patients can often contain frightening themes, and the second is that the interpretation of their dreams is meaningful because they often use defense mechanisms such as denial and negation, and their awareness of their actual motivations is low. In this study, it was determined that borderline patients have more dreams with frightening themes, anxiety themes, and negative themes than the control group. A quarter of adult nightmare sufferers are borderline patients [26], and patients with borderline personality disorder have high (%49) comorbidity with night mare disorder [9]. Individuals with vulnerable psychological boundaries, like borderline patients, experience longer, more intensely emotional, stressful, vivid, and



**Fig. 4. Beta values on the mediator role of rejection sensitivity in predicting frustration-themed dreams of borderline personality in the control group. \*P<0.05**

**Table 7. Findings regarding the prediction of rejection sensitivity of the study group on the effect of experiences themed dreams**

	<i>B</i>	<i>SH</i>	$\beta$	<i>t</i>	<b>P value*</b>
<b>(Constant)</b>	6.25	2.45		2.55	<b>0.013*</b>
<b>Rejection sensitivity scale</b>	0.09	0.04	0.26	2.32	<b>0.023*</b>

\*Simple linear regression analysis; Stepwise method.  $R=.26$ ,  $R^2=0.07$ ,  $F=5.37$ ;  $P=0.023$

frightening dreams that resemble nightmares than individuals with thick boundaries [27].

In this study, it was determined that the effect of the daily experiences of the borderline patient group on dream themes was higher than the control group. Freud [2] says that the dream is not only about unconscious conflicts or desires; it is very closely related to the personality, age, gender, living standards, daily customs, and what he has been through [2]. Yu [28] stresses that the dreaming procedure is sensitive to affect valence and emotional concerns experienced during wakefulness. Borderline personality disorder patients have a high level of rejection sensitivity, and this sensitivity leads to emotional instability [29]. Aumann *et al.* [30] found that individuals with emotional instability have more dreams as a kind of continuation of daily life, and also, more than the present, their dreams are rooted in the past or the future. They also showed there is a relationship between dream bizarreness and emotional instability.

In this study, it was determined that the negative dream themes level of the borderline patient group was higher than the control group. Simor *et al.* [31] found that BDP patients report their dreams as more distressing, and when 68.1% of BPD patients experience night terror-like symptoms, the rate comes down to 22% in the control group. Some theories explain negative dream themes in borderline patients. At first, the negative dream content of borderline patients can be explained with the ironic process theory [32]. Ironic process theory postulates that deliberate attempts to think about different thoughts other than the negative ones that are target for suppression go together with a monitoring procedure. This process looks for instances where the negative thought was unsuccessfully suppressed, which ironically can trigger thoughts of it, particularly during periods of high cognitive load, such as stressful situations. This process looks for in-

stances where the negative thought was unsuccessfully suppressed, which ironically can trigger thoughts of it, particularly during periods of high cognitive load, such as stressful situations. This process looks for instances where the negative thought was unsuccessfully suppressed, which ironically can trigger thoughts of it, particularly during periods of high cognitive load, such as stressful situations.

The second theory for explaining negative dream contents in borderline patients is the classical continuity hypothesis. Borderline patients suffer more from adverse life events than other personality disorders patients. This theory hypothesis dreams are a reflection of the dreamer's waking life, thus individuals with BPD may have more bad dreams than those of other people, even those with other personality disorders [33, 34]. Classical continuity theory has been confirmed by the study of Schredl *et al.* [35]. Kramer and Nuhic's [36] study of inpatients with mental disorders showed that psychopathological symptoms are reflected in the patients' dreams, and their finding supports the continuity hypothesis of dreaming. Therefore, it is thought that the continuity hypothesis makes the difference between anxiety themes, fear themes, negative themes, frustration themes, and the effects of experiences unclear in the case of patients with BPD and explains why all these themes are reported more by BPD patients in our research results. The third theory stresses emotional dysregulation's effect on negative dream themes like nightmares [37]. Emotional instability, which is a result of emotion regulation difficulty, has a close relationship with nightmare frequency and/or distress [34, 35] and negative dream content [38]. Additionally, Selby *et al.* [39] highlight it in their Emotional Cascade Model (ECM). The ECM makes an effort to identify the cause of the disturbing nightmares BPD sufferers encounter. Emotion regulation difficulty is one of the core factors of

BPD. According to ECM, nightmares or any unpleasant dreams in addition to the terror they cause, may result in weaknesses in the ability to appropriately regulate one's emotions, which makes it harder to deal with stress the next day. During the waking state, borderline patients experience emotional cascades [31], and this adverse consequence leads to rumination, which is the repetitive thinking of mostly unpleasant thoughts.

Because of their difficulty in emotion regulation, ruminations increase negative affect, which, in turn, intensifies ruminations and starts a circulation. These processes result in increased negative emotions and increased cognitive activity during sleep that favors the appearance of nightmares and maladaptive behaviors during the waking state that are intended to regulate negative emotions. So borderline patient lives the day and night continuity; negative emotional experiences during day life increases the escalation of negative emotions, increased negative emotions increase ruminations, increased ruminations create a very aversive emotional state, aversive emotional state triggers dysfunctional coping skills and makes the emotions of patients even more dysregulated. Catastrophic emotions elevate cognitive activity during sleep, and they create negative dream themes or nightmares. Nightmares increase negative affect and vulnerability to stressors and negative emotional experiences during wakefulness. So, it seems that there is a bipolar relationship between unfavorable dream themes and borderline personality disorder severity. Frequent bad dreams in persons with BPD may influence the occurrence of negative life events [39]. Additionally, the emotional cascade model says that behavioral symptoms of BPD, such as substance use, binge eating, or self-harm, represent the person's attempt to interrupt the cascade [40]. Although, results show that dreams have an important role in BPD symptoms and their severity.

Furthermore, BPD has high comorbidity with axis I and axis II disorders. Especially it shows high comorbidity with depressive disorders [41]. It is known that the dreams of depressive patients mostly contain negative themes such as rejection, defeat, and loss [42], and the severity of depression during the daytime is correlated with the intensity of negative dream emotions [43]. But even when the level of depressive disorder is controlled for, BPD continues to be associated

with negative dream content [44]. Post-traumatic stress disorder (PTSD) is the second most reported co-occurring axis I disorder in BPD. Individuals who have a PTSD diagnosis have dreams that include more negative themes than individuals with no PTSD diagnosis [45]. BPD patients often experience various traumas not in their adulthood but in their childhood which makes them even more vulnerable, and it increases nightmare frequency [38], thus explaining heightened nightmare frequency in BPD patients with comorbid PTSD, especially [46]. In this study, although both PTSD and depressive disorders were excluded in the borderline patient group, the higher negative dream content in the borderline patient group indicates that rejection sensitivity may be more determinant than comorbid diagnoses.

The study findings show that it may be beneficial to devote more space to dreams in clinical practice and scientific research practice related to borderline patients. Our recommendation in this direction is to investigate the relationship between complex post-traumatic stress disorder and dreams in patients with BPD. Complex posttraumatic stress disorder (cPTSD) is a new diagnosis in ICD-11 that considers the potentially more extensive posttraumatic consequences, including emotional dysregulation, particularly after prolonged and repeated trauma [47]. The diagnostic criteria consist of the three PTSD criteria and the additional symptoms of emotional dysregulation, interpersonal difficulties, and negative self-concept which are the core factors of BPD [5].

### Limitations

The limitation of the study is that only female participants were included in the current study. It is well-known that borderline personality disorder affects women more frequently (up to 76%) than men, and men with borderline personality disorder may exhibit severe antisocial personality traits or drug use symptoms. [18]. So, in order to provide a higher level of access to the literature and it was selected to work primarily with female borderline patients for convenience of comparison.

### CONCLUSION

As a result of this study, in which the dream themes

of BPD patients and undiagnosed individuals were compared, it was determined that all dream theme dimensions were seen at a higher level in BPD patients. It has been determined that the dreams of BPD patients generally have negative content (the concept of negative is used to indicate the content, not the negative themes sub-dimension), and it shows that the negative content in the daily life of borderline patients and the effect of intense experiences sub-dimension also cause negative content in these patients. The results of the present study reveal the relationship between BPD and negative dream content and the important role of rejection sensitivity in this relationship. The study's results emphasize the importance of addressing dreams in patients with BPD, considering the relationship of negative dreams with daily functioning, dissociative symptoms, self-harming behaviors, and suicide attempts. Results also indicate that it might be beneficial to target rejection sensitivity to reduce aggravating dream contents.

### *Ethical Considerations*

The study has been approved by the Istanbul Aydın University Ethics Committee (Date: 09.07.2021, No: 2021/08). An informed consent form was sent to the participants and their consent was obtained. The entire study was performed in accordance with the Declaration of Helsinki.

### *Authors' Contribution*

Study Conception: HF; Study Design: HF; Supervision: HF; Funding: HF; Materials: HF; Data Collection and/or Processing: HF; Statistical Analysis and/or Data Interpretation: HF; Literature Review: HF; Manuscript Preparation: HF and Critical Review: HF.

### *Conflict of interest*

The author disclosed no conflict of interest during the preparation or publication of this manuscript.

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