

# Comparison of Distress Tolerance, Emotion Dysregulation, and Self-Compassion in Individuals with and without Borderline Personality Disorder Symptoms

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**Submitted:** 18 March 2021

**Accepted:** 21 April 2021

Int J Behav Sci. 2021; 15(1): 27-33

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## Abstract

**Introduction:** The current research was conducted to examine emotion dysregulation, distress tolerance, and self-compassion in people with and without borderline personality disorder symptoms.

**Method:** A causal-comparative design was used to carry out this study. The participants included 343 students from the Islamic Azad University of Rasht who were selected through a relative stratified sampling method. The research tools included the Schizotypal Trait Questionnaire-B Scale (STB), the Difficulties in Emotion Regulation Scale (DERS), the Self-Compassion Scale (SCS), and the Distress Tolerance Scale (DTS). The MONOVA and an ANOVA test were used to analyze the data.

**Results:** The results showed that people with borderline personality disorder symptoms had more difficulty regulating their emotions and tolerating distress compared to people without borderline personality disorder symptoms. As regards to the SCS, people with borderline personality disorder symptoms scored lower on components of self-compassion, sense of humanity and mindfulness, but they scored higher on the self-judgment component. There were no significant differences between the two groups on the isolation and the over-identification components.

**Conclusion:** According to the findings, it can be stated that people with borderline personality disorder symptoms have problems tolerating distress and regulating their emotions. They also do not show self-compassion, compared to people without borderline personality disorder symptoms.

**Keywords:** Borderline Personality Disorder, Emotional Distress, Confusion, Self-compassion

## Introduction

Personality disorder is a persistent pattern of inner experiences and behavior that is dramatically deviant from the social/cultural norms, hence leading to discomfort [1]. One of the most important disorders of the cluster B is borderline personality disorder, which is the most common in psychiatric settings. Borderline personality disorder, existing in a variety of contexts, initiates with a pattern of observable impulsivity as well as instability in interpersonal relationships, self-image, and emotions in early adulthood [1, 2]. The prevalence of moderate borderline personality disorder in the population is estimated at 1.6%, but may be as high as 5.9% [1]. Despite the inconsistencies in the symptoms of the disorder, there is a consensus today that emotion dysregulation is a major feature of the disorder. Numerous researchers believe that borderline personality disorder is characterized by significant failure in the ability to perceive and regulate emotions and mood [3–5]. Characteristics of borderline personality disorder, including emotional instability, chronic feelings of nihilism, inappropriate and intense aggression, impulsivity, self-harm, fear of abandonment and dissociative symptoms indicate problems with emotional processing [6]. Emotion regulation, which is adversely affected in a wide range of psychological disorders, refers to activities that allow individuals to monitor, evaluate, and modify the

nature and duration of emotional responses [7]. Difficulty in emotion regulation has been proposed as a key component in the pathology of several psychological disorders such as borderline personality disorder, major depression, bipolar disorder, generalized anxiety disorder, social anxiety disorder, eating disorders, and substance and alcohol abuse disorders [8].

Distress tolerance refers to the ability to experience and tolerate negative psychological situations. Distress tolerance is conceptualized as a meta-emotional concept and is considered as an attribute rather than an emotional state. It is a common construct studied in research on emotion regulation. For example, Marsha Linehan's dialectical behavior therapy is based on the principle that people with borderline personality disorder have a low emotional tolerance [3]. Research also shows that a low level of distress tolerance is associated with borderline personality disorder [9]. On the other hand, distress tolerance is one of the most important and fundamental mediating factors in the relation between borderline personality disorder and suicide. Hence the dialectical behavioral therapy focuses on distress tolerance to reduce suicidal behaviors in patients with this disorder who are chronically involved with such behaviors [10].

Another concept that is thought to be related to the symptoms of borderline personality disorder is self-compassion. Neff defines compassion as a three-component construct, including self-kindness versus self-judgment, sense of common humanity versus isolation, and mindfulness versus over-identification [11]. Today, a combination of the three interrelated components is believed to be characteristic of people who feel compassion for themselves [11]. Self-compassion is a powerful predictor of mental health; for example, self-compassion has been shown to be negatively associated with self-criticism, depression, anxiety, obsessive rumination, repression of thoughts, and neurotic perfectionism [12]. Self-compassion is negatively associated with borderline personality symptoms and is able to mediate the relationship between mindfulness and borderline personality symptoms.

There are no published studies today on the prevalence of borderline personality disorder in Iran. However, clinical observations speak for an increase in the prevalence rate of the disorder in the Iranian society. The borderline personality disorder is associated with an increased risk of self-harm, suicide and non-suicidal injury, and has serious repercussions for the patients, their families and the whole society. This warrants further studies examining major factors which contribute to the development of the disorder in our society. Not only are the results from such investigations helpful in improving our theoretical knowledge of the disorder and developing prevention and intervention programs, they also bear significance when it comes to social issues. Considering the association between borderline personality disorder and distress tolerance, self-compassion and emotional dysregulation, we aimed to investigate how people with borderline personality disorder differed from those without the disorder on their tolerance to distress,

compassion for themselves and emotion regulation.

## Method

A causal-comparative research design was used in the present study. The research population included all students of the Islamic Azad University of Rasht in the academic semester 2015-2016 (N=16000). Using Morgan's table and the approximate size of the population, a sample size for the study was calculated, which equaled 400 (Dropouts included). The relative stratified random sampling method was used to select the participants. Eventually, 343 questionnaires were filled out and formed the basis for statistical analysis. It is noteworthy that 27% of the top and bottom (93 individuals in each group) were selected to perform the statistical comparisons. There were 48 women (45 men) in the normal group and 51 women (42 men) in the symptom group.

After preparing the questionnaires, necessary arrangements were made to perform sampling at the university in question. All participants were met individually. Upon their arrival, the participants received necessary explanations regarding the purpose of the research, confidentiality of the information, and voluntary participation in the study. The questionnaires were administered only to those who gave their consent to participate in the study. It should be noted that in order to eliminate the fatigue effect, the questionnaires were presented in a random order. Having no psychopathological history (specially personality and mood disorders) was the inclusion criteria. A MANOVA and an ANOVA test were performed to analyze the data using SPSS statistical software.

The tools used in the present study were as follows:

**Borderline Personality Disorder Scale (Schizotypal Trait Questionnaire-B; STB):** The scale has been designed to measure the patterns of borderline personality and includes 24 yes/no items. There are three subscales of frustration, impulsivity, and dissociative and paranoid symptoms. Claridge and Jackson reported the retest rate of this test as 0.61 [13]. Rawlings et al. reported an alpha coefficient of 0.80 [14]. In a study conducted with a clinical sample of borderline personality patients, both the discriminant validity ( $p < 0.01$ ) and the construct validity ( $p < 0.01$ ) of the scale were confirmed [15]. Also, the factor and discriminant validity of the Persian version of the scale was confirmed. In addition, the tool's test-retest reliability coefficient for the Persian version of the scale was reported to be about 0.85 in a four-week interval, and Cronbach's alpha coefficient was reported to be 0.77 for the whole scale. For the sub-scales of frustration, impulsivity, and dissociative and paranoid symptoms, internal consistency was acceptable ( $\alpha = 0.64$ , 0.85, and 0.57, respectively) [16]. The internal consistency of the scale was also confirmed in the current study ( $\alpha = 0.74$ ).

**Distress Tolerance Scale (DTS):** Distress Tolerance Scale is a 15-item self-report tool designed by Simons and Gaher [17]. It requires the participants to agree or disagree with each item using a 5-point Likert scale

(5=Strongly disagree to 1=Strongly agree). A higher score indicates a high degree of distress tolerance. Four forms of distress tolerance are assessed by this scale: 1. Tolerance (e.g. my feelings of discomfort and distress are intolerable); Appraisal (e.g. discomfort and distress always pose a big challenge for me); Absorption (e.g. my feelings of distress are so intense that they completely dominate me); Regulation (e.g. when I feel distressed or uncomfortable, I should immediately do something to overcome such flings). Results from the confirmatory factor analysis confirmed both the single and the four-factor structure of the scale ( $p < 0.01$ ) [18]. Cronbach's alpha coefficients of tolerance, appraisal, absorption, and regulation sub-tests were 0.73, 0.84, 0.77, and 0.74, respectively. In the research of Mohammadi et al., the Cronbach's alpha coefficient of tolerance, appraisal, absorption, and regulation subtests was 0.71, 0.85, 0.72, and 0.73, respectively [19]. In the present study, an acceptable internal consistency was reported for the scale ( $\alpha = 0.78$ ).

**Self-Compassion Scale (SCS):** The tool is a 26-item self-report scale developed by Neff in 2003 [12]. This scale includes six subscales of self-kindness (5 items), self-judgment (5 items), sense of common humanity (4 items), mindfulness (4 items), and over-identification (4 items). Participants are required to answer the questions on a five-point Likert scale from 0 (almost never) to 4 (almost always). The average score of these subscales (reverse scores included) give the overall score of self-compassion. Research on the preliminary validation of this scale has shown that all six subscales have a high internal correlation, and the confirmatory factor analysis has shown that a separate factor of self-compassion explains this internal correlation. There is a vast body of evidence for the reliability of the scale. The internal reliability of the SCS has been found to be consistently high in different studies with a wide variety of populations, suggesting that all SCS items are inter-correlated in a satisfactory manner. Results from a study showed that the scale had an internal consistency of 0.92 and a test-retest reliability of 0.93 [20]. The results of a study applying confirmatory factor analysis for an Iranian sample supported the 6-factor structure of the scale [21]. For an Iranian sample, Cronbach alpha coefficient was estimated to be over 0.80 for the total scale [21].

**Difficulties in Emotion Regulation Scale (DERS):** The DERS was employed to assess emotion dysregulation. It

has been developed by Gratz and Roemer [8] to assess difficulties in emotion regulation. It comprises 36 items divided into six subscales of non-acceptance, goals, impulse, awareness, strategies and clarity. The scale uses a five-point Likert scale ranging from 1 (almost never) to 5 (almost always). Higher scores indicate emotion dysregulation. The results of a study on the reliability of the scale showed that the DERS had a high internal consistency. Cronbach alpha is 0.93 for the total scale. Also, acceptable internal consistency was reported for each separate subscale including non-acceptance ( $\alpha = 0.85$ ), goals ( $\alpha = 0.89$ ), impulse ( $\alpha = 0.86$ ), awareness ( $\alpha = 0.80$ ), strategies ( $\alpha = 0.88$ ), and clarity ( $\alpha = 0.84$ ). Test-retest reliability coefficient for the overall score was 0.88. Regarding validity, previous studies reported that the scale had an acceptable construct and predictive validity. Correlations between the subscales and the two constructs of experiential avoidance and emotional expressivity was used as an index for the construct validity of the scale [8]. The results revealed significant correlations between the subscales and the two constructs ( $p < 0.01$ ). Also, correlations between the DERS scores and two clinically important behavioral outcomes (i.e. frequency of deliberate self-harm and frequency of intimate partner abuse) was found to be significant ( $p < 0.01$ ), confirming the predictive validity of the scale. Cronbach's alpha for the Persian version of the DERS was 0.92. The coefficients Cronbach's Alpha for the subscales non-acceptance, goals, impulse, awareness, strategies, and clarity were 0.61, 0.77, 0.6, 0.84, and 0.63 respectively [22].

**Results**

Eighty-five students (58 undergraduates and 27 postgraduates) with borderline personality disorder symptoms participated in the current study. They aged 23.26 on average (SD = 5.51). The controls were 45 undergraduates and 48 graduates, with the mean age of 27.13 (SD = 7.67). Table 1 gives descriptive statistics for the two groups.

In Table 1, the means and standard deviations of the scores for the six components of emotion dysregulation are given for the two groups. As observed, at the level of descriptive statistics, the mean scores for all of the components of emotion dysregulation are higher in the group with borderline personality disorder symptoms compared to the controls.

**Table 1.** Descriptive Statistics of Components Difficulty in Emotion Regulation in Terms of Groups

Variable	With borderline personality disorder symptoms		Without borderline personality disorder symptoms	
	Mean	SD	Mean	SD
Non-acceptance of emotional responses	17.19	5.13	12.41	4.47
difficulty engaging in goal-directed cognition and behavior when distressed (Goals)	15.65	3.31	12.05	3.58
difficulty regulating behavior when distressed (Impulse)	15.59	5.53	11.33	5.09
Lack of emotional awareness (awareness)	14.23	5.99	12.33	5.62
Lack of access to strategies (strategies)	22.31	6.76	16.49	5.72
Lack of clarity (clarity)	14.54	5.37	10.77	5.28

Table 2 gives the mean and standard deviation scores for the four components of distress tolerance in two groups. As observed, at the level of descriptive statistics, the means for all components of distress tolerance are lower in the group with borderline personality disorder symptoms compared to controls.

Table 3 gives the mean and standard deviation scores for the six components of self-compassion in the two groups. As observed, at the level of descriptive statistics, the means for all components of self-compassion were lower in the group with borderline personality disorder symptoms compared to the controls.

A multivariate analysis of variance (MANOVA) was used to compare emotion dysregulation in the two groups. The assumptions of this test must be met before the multivariate analysis of variance can be applied. Hence, Box's M tests were used to check the identicalness of variance matrix of the variables between the groups. The results indicated that this condition was met ( $P = 0.05$ ,  $F = 1.17$ ,  $M \text{ Box} = 25.51$ ). The Levene's test was also used to measure the equality of error variances of the variables between the groups. The results showed that the significance level for all components of difficulty in emotion regulation was greater than 0.05, which fulfills the condition of homogeneity of variances. The results of multivariate analysis of variance showed a significant difference between the groups in linear composition of the components of difficulty in emotion regulation ( $P < 0.001$ ,  $F = 14.17$ , Wilks' lambda = 0.322). A univariate

analysis of variance was used to investigate the differences in the patterns.

As observed in the table above, there is a significant difference between the two groups in the components of difficulty in emotion regulation ( $P < 0.001$ ) such that people with borderline personality disorder acquired higher scores for emotion dysregulation compared to controls. To check the difference between the groups in the distress tolerance component, a multivariate variance analysis was used. First, Box's M tests were applied to check the MANOVA assumption of identicalness of variance matrix of variables. The results confirmed that the assumption was met ( $P > 0.05$ ,  $F = 1.73$ ,  $M \text{ Box} = 17.74$ ). In addition, Levene's test was used to measure equality of error variances of variables between two groups. The results indicate that the significance level for all distress tolerance components was higher than 0.05. Therefore, assumption of homogeneity of variances for these components is established. Considering the establishment of the conditions, the results of multivariate analysis of variance showed a significant difference in linear composition resulting from the distress tolerance components in the two groups ( $P < 0.001$ ,  $F = 1.73$ , Wilks' lambda = 0.690). The univariate analysis of variance was used to investigate the differences in the patterns.

**Table 2.** Descriptive Statistics of Distress Tolerance Components in Terms of Groups

Variable	With borderline personality disorder symptoms		Without borderline personality disorder symptoms	
	Mean	SD	Mean	SD
Tolerance	7.49	2.85	10.18	3.01
Absorption	7.00	2.04	8.97	2.43
Appraisal	16.58	3.98	21.38	4.00
Regulation	8.68	3.26	10.03	3.57

**Table 3.** Descriptive Statistics of Self-compassion Components in Terms of Groups

Variable	With borderline personality disorder symptoms		Without borderline personality disorder symptoms	
	Mean	SD	Mean	SD
Self-compassion	13.97	3.49	15.81	3.79
Self-judgment	16.94	4.64	15.49	4.84
sense of common humanity	11.17	3.26	12.40	12.94
Isolation	13.13	3.22	12.52	3.38
Mindfulness	12.33	2.83	13.24	2.85
Over-identification	12.63	3.39	12.12	3.81

**Table 4.** Between-subject Effects in Components of Difficulty in Emotion Regulation

Dependent variables	Sum of squares	Degree of freedom	Average of squares	F Statistics	Sig. level
Non-acceptance of emotional responses	1059.87	1	1059.87	45.72	0.0001
Difficulty engaging in goal-directed cognition and behavior when distressed (Goals)	603.360	1	603.360	50.60	0.001
difficulty regulating behavior when distressed (Impulse)	843.10	1	843.10	25.61	0.001
Lack of emotional awareness	168.44	1	168.44	6.14	0.023
Lack of access to strategies (strategies)	1573.55	1	1573.55	20.12	0.001
Lack of clarity	662.37	1	662.37	23.34	0.001

As observed in the table above, there is a significant difference between the two groups in distress tolerance components ( $P < 0.001$ ), such that people with borderline personality disorder obtained lower scores compared to controls. To check the difference between the groups in the self-compassion component, a multivariate variance analysis was used. Again, Box's M tests were used to check the identical variance matrix of the variables between the groups. The results confirmed the fulfillment of the condition ( $P > 0.05$ ,  $F = 0.966$ ,  $M \text{ Box} = 21.015$ ). Moreover, results from Levene's test indicated that the significance levels for all self-compassion components were above 0.05. Therefore, the assumption of homogeneity of variances for these components was met. The

results of the multivariate analysis of variance showed a significant difference between the groups in linear composition of components of difficulty in emotion regulation ( $P < 0.001$ ,  $F = 3.51$ , Wilks' lambda = 0.895). A univariate analysis of variance was used to investigate the differences in the patterns.

As observed in the table above, there is a significant difference between the two groups in the self-compassion components ( $P < 0.001$ ). Compared to controls, people with borderline personality disorder symptoms gained higher scores on self-judgment component and lower scores on self-kindness, sense of common humanity and mindfulness. Moreover, there were no significant differences between the two groups in isolation and over-identification components.

**Table 5.** Between-subject Effects in Components of Distress Tolerance

Dependent variables	Sum of squares	Degree of freedom	Average of squares	F statistics	Sig. level
Tolerance	336.02	1	336.02	39.00	0.001
Absorption	182.02	1	182.02	36.01	0.001
Appraisal	1074.24	1	1074.24	67.21	0.001
Regulation	84.00	1	84.00	7.18	0.001

**Table 6.** Between-subject effects in components of self-compassion

Dependent variables	Sum of squares	Degree of freedom	Average of squares	F statistics	Sig. level
Self-compassion	157.21	1	157.21	11.78	0.001
Self-judgment	97.98	1	97.98	4.35	0.038
sense of common humanity	71.10	1	71.10	7.34	0.007
Isolation	17.47	1	17.47	1.60	0.207
Mindfulness	38.84	1	38.84	4.80	0.03
Over-identification	11.88	1	11.88	0.91	0.34

## Discussion

The results of the current research indicated that the mean scores for all components of distress tolerance were lower in individuals with borderline personality disorder symptoms. Findings of the present study are consistent with those of the previous studies [19, 23–27]. Distress tolerance is a common construct studied in research on emotion regulation [18]. There is a consensus that individuals with borderline personality disorder have a low emotional tolerance [26]. Accordingly, individuals with a low distress tolerance are more likely to experience borderline personality symptoms (i.e. frustration, impulsivity, and dissociative/stress-related paranoia) when confronting negative emotions such as stress, anxiety, self-blame or when solving interpersonal problems. Individuals with a low distress tolerance are unable to tolerate negative psychological situations, unpleasant inner states, negative emotions, ambiguity, and uncertainty. Also, they make a constant effort to avoid negative emotions or to relieve them immediately after they come up. These people demonstrate compensatory behaviors such as drug use if they fail to avoid negative emotions. This issue is negatively associated with the constant emotional instability of individuals with borderline personality disorder and their constant impulsiveness to take immediate action to relieve

negative emotions. This can explain the difference in distress tolerance between individuals with and without borderline personality disorder symptoms. As suggested in previous studies using normal and clinical samples, a low distress tolerance is associated with a range of maladaptive behaviors, such as antisocial behavior, pathological gambling, intentional self-harm, overeating and heavy alcohol and drug consumption [23]. Such maladaptive behaviors have been shown to be associated with impulsiveness and other symptoms of individuals with borderline personality disorder.

Findings of the present study showed that the mean score for difficulty in emotion regulation was higher for individuals with borderline personality disorder. In line with previous research, despite inconsistencies in the symptoms of the disorder, there is a consensus today that failure to perceive and regulate emotions and mood instability are some major characteristics of borderline personality disorder [3, 4, 28]. Findings from the present study are in line with those from previous studies according to which patients with borderline personality disorder symptoms had higher emotional variability and higher emotional intensity than patients with other personality disorders [29, 30].

Moreover, it was found that individuals with borderline personality disorder obtained higher scores on self-

judgment component and lower scores on components of self-kindness, sense of common humanity, and mindfulness while there were no significant differences between the two groups in terms of isolation and over-identification. As Mohammadi et al. suggested [19], there was a significantly negative association between borderline personality and the total score of self-compassion. It was found that borderline personality disorder was negatively associated with self-compassion, self-kindness, sense of common humanity, and mindfulness. It was also found that the disorder was positively associated with isolation and over-identification. In line with findings from previous research, Neff showed that self-compassion was a strong predictor of mental health [12]. Studies on individuals with borderline personality disorder showed that self-compassion was negatively associated with borderline personality disorder symptoms and mediated the relationship between mindfulness and borderline personality disorder symptoms [31]. Results from the current research are consistent with previous findings which suggested that self-compassion played an important role in psychological trauma and psychological well-being [21, 32–34].

Self-compassion is the optimal form of self-acceptance, which reflects the degree to which one accepts undesirable aspects of oneself and one's life [35]. Neff indicates that self-compassion can be viewed as an emotion regulation strategy which helps take negative emotions with awareness and kindness, hence creating a sense of experiencing a common human experience [20]. Individuals with high self-compassion are kind to themselves when they experience negative events and have less negative self-judgments. They view such experiences as common human experiences and do not separate themselves from others. They are mindful of the negative events and do not identify themselves with unpleasant thoughts, feelings, behaviors and physical sensations caused by the negative events. However, individuals with borderline personality disorder, who demonstrate low self-compassion, feel isolated and ashamed of their emotions and failures when faced with adverse situations. These individuals feel that they are the only ones struggling with failures or feelings of inadequacy.

Given that self-compassion is a new psychological construct, its associations with other constructs has not been fully explored yet. This lack of evidence was the major limitation of the current study. In addition, since the sample comprised only students from the Islamic Azad University of Rasht, further studies with different samples are warranted. Considering the significant differences between individuals with and without borderline personality disorder symptoms in emotion dysregulation and self-compassion, it is recommended that the effectiveness of therapies focusing on emotion dysregulation and self-compassion on the alleviation of borderline personality disorder symptoms be further explored. Also, emotion regulation training could be used

for individuals with more severe borderline personality disorder symptoms.

## Conclusion

In general, individuals with a low distress tolerance try to avoid negative emotions such as ambiguity and uncertainty because they cannot endure difficult and negative emotional conditions. If avoidance is not possible, they adopt compensatory behaviors, such as drug and alcohol abuse, overeating, and pathological gambling [36]. These traits are all closely related to impulsivity and symptoms of borderline personality disorder. Individuals with borderline personality disorder persistently experience feelings of instability. Emotional and mood instability are important characteristics of borderline personality disorder. Individuals with these symptoms have little ability to process, recognize, and regulate their emotions. Failure in tolerating negative emotions and properly regulating them is very similar to failure in tolerating distress. Self-compassion is a kind and compassionate attitude toward oneself. A self-compassionate person is less critical of himself/herself and admits that making mistakes is a common human behavior. This is contrary to the constant feelings of abandonment, rejection, and negative self-denial experienced by patients with symptom of borderline personality disorder. Another characteristic of self-compassion is mindfulness. People who are mindful are aware of feelings, thoughts, and emotions they experience at any given moment. Individuals with borderline personality disorder lack such mindfulness; they have no insight into their emotions. It can be stated that improving feelings of self-compassion in individuals with borderline personality disorder can help them achieve self-acceptance and become mindful of their emotions.

## Conflict of Interest

There are no conflicts of interest.

## Ethical Approval

The participants were informed about all ethical considerations, such as the aims of the study, their right to withdrawal at any time of the study, and the confidentiality of their data.

## Acknowledgement

The authors would like to thank the authorities of the Islamic Azad University of Rasht and the students who kindly agreed to participate in this study.

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