

# What stands between self-disgust and borderline features? The need to cultivate self-compassion in adolescents from Portugal

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## Abstract

Borderline personality disorder (BPD) is characterized by emotional instability, unstable relationships, feelings of abandonment and emptiness, impulsivity, and self-harm. An unstable self-image is also a common borderline feature, often marked by self-criticism, self-hate and feeling of disgust towards aspects of the self. Considering the developmental path of BPD, it is essential to act at early ages with adolescents that show growing and persistent borderline features. The present study aimed to test the mediation role of self-compassion in the relationship between self-disgust and borderline features in Portuguese adolescents. Participants were 655 adolescents (381 girls and 274 boys) with an average of 15.58 years old ( $SD = 1.51$ ), who completed self-report questionnaires at school. Data were analyzed through SPSS and PROCESS Macro to perform descriptive statistics, comparisons, correlations and regressions. Results showed that self-compassion mediated the relationship between self-disgust and borderline features. The mediation model explained 51% of borderline features and gender was used as a covariate, considering that girls exhibited higher self-disgust and borderline features, and lower self-compassion than boys.

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These findings indicate that cultivating self-compassion skills in adolescents could be a potential positive regulation mechanism for self-disgust's effect on borderline features.

**Keywords:** adolescence, borderline features, self-compassion, self-disgust, mediation.

## O que se entrepõe entre a auto-aversão e os traços borderline? A necessidade de cultivar autocompaixão em adolescentes de Portugal

### Resumo

A Perturbação Borderline da Personalidade (PBP) é caracterizada por instabilidade emocional, relacionamentos intáveis, sentimentos de abandono e vazio, impulsividade e auto-dano. Uma auto-imagem instável é também uma característica borderline comum, muitas vezes marcada por auto-criticismo, auto-ódio e sentido de aversão direcionados a aspetos do eu. Considerando o percurso desenvolvimental da PBP, é essencial agir em idades precoces com adolescentes que denotam traços borderline crescentes e persistentes. Este estudo procurou testar o papel mediador da auto-compaixão na relação entre a auto-aversão e traços borderline em adolescentes portugueses. Os participantes foram 655 adolescentes (381 raparigas e 274 rapazes) com uma média de idade de 15.58 anos ( $DP = 1.51$ ), que completaram questionários de autorresposta na escola. Os dados foram analisados através do SPSS e PROCESS Macro para realizar estatísticas descritivas, comparações, correlações e regressões. Os resultados mostraram que a autocompaixão mediou a relação entre a auto-aversão e os traços borderline. O modelo de mediação explicou 51% dos traços borderline e o género foi incluído como covariável, uma vez que as raparigas apresentaram maior auto-aversão e traços borderline e menor autocompaixão do que os rapazes. Estes resultados indicam que cultivar competências auto-compassivas em adolescentes pode ser um potencial mecanismo de regulação positivo para o efeito da auto-aversão nos traços borderline.

**Palavras-chave:** adolescência, traços borderline, auto-compaixão, auto-aversão, mediação.

## INTRODUCTION

Borderline personality disorder (BPD) is characterized by an unstable self-image or identity disturbance, emotional instability, unstable relationships, feelings of

abandonment and emptiness, impulsivity, and self-harm (American Psychiatric Association [APA], 2013). This severe personality disorder is associated with functional impairment, overuse of health services (Skodol et al., 2002) and patients with BPD present a suicide rate between 3% and 10% (Paris, 2004). Although BPD is usually diagnosed in adulthood, evidence has shown that borderline features can be manifested at early ages, particularly in adolescents (Crick et al., 2005; Sharp & Tackett, 2014). Acting preventively, for example promoting more effective and healthy regulation strategies to adolescents with marked borderline features, might attenuate the evolution of these symptoms (Bozzatello et al., 2019; Chanen & Kaess, 2012; Sharp et al., 2015), and possibly other indicators such as quality of life, well-being and social pleasure.

People diagnosed with BPD often describe inconsistency or disorganization about their sense of self (Fuchs, 2007). A qualitative study with five BPD patients provided evidence of multiple self conceptualizations rather than a singular identity (Agnew et al., 2016). Additionally, hand in hand with the fragmented concept of the self, BPD patients also struggle with a negative and insecure self-to-self relationship (Dammann et al., 2011). Winter et al. (2015) showed that BPD female patients avoid seeing themselves in the mirror compared to healthy controls. The authors clarified that this might be explained by the intention to avoid self-awareness due to a negative self-concept, expected rejection, shame, and negative body image perception. These processes are common in people with low self-esteem. In fact, BPD patients seem to exhibit self-esteem instability, which is associated with a poorer self-concept, decreased self-concept clarity, and diminished self-acceptance (Paradise & Kernis, 2002; Santangelo et al., 2020; Zeigler-Hill & Abraham, 2006). Accordingly, other studies have shown that borderline symptoms are related to marked self-criticism, harshness, low compassion and feelings of disgust towards the self (Carreiras, Castilho, et al., 2020; Donald et al., 2019; Guiomar, 2015).

Self-disgust occurs when a person experiences disgust, revulsion or aversion towards aspects of the self, including physical appearance and behaviors or even internal aspects such as personality or attitudes (Carreiras, 2014; Overton et al., 2008). Several studies have pointed to the relationship between self-disgust and depression (Overton et al., 2008; Powell et al., 2013; Ypsilanti et al., 2019), eating psychopathology (Ille et al., 2014; Palmeira et al., 2019), and borderline symptoms in adults (Guiomar, 2015; Ille et al., 2014) and adolescents (Carreiras, Castilho, et al., 2020).

Certain research works (Gilbert, 2010; LeDoux, 1998; Morrone-Strupinsky & Depue, 2005; Panksepp, 1998) showed that our brains contain three interacting types of emotion regulation systems: the threat and self-protection system (to

detect and respond to threats), the drive-excitement system (to promote positive feelings that motivate, encourage and energize) and the soothing and safeness system (to restore balance through soothing, safeness and peace). Self-disgust might be included in the threat and self-protection system to alert us to take action against aspects of the self that are perceived as threats and toxic. This response encompasses physiological activation (e.g., nausea, increased heart rate), cognitions (e.g., self-hate, self-criticism) and behaviors to avoid or exclude the perceived threats within the self (Carreiras, 2014). Gilbert (2010) suggested that stimulating the soothing and safeness system and the respective neuro-hormones will influence the activation of the threat and self-protection system. Feeling safe, secure and soothed would work as an antidote to decrease negative affect (e.g., depressive symptoms, anxiety, stress), deactivating the threat and self-protection system.

Self-compassion means being sensitive to own suffering and feeling motivation to relieve it (Gilbert, 2005; Neff, 2003) and it is a way to stimulate the soothing and safeness system. A compassionate mind can be essential to facilitate dealing with unpleasant, difficult and harmful situations and emotions (Gilbert, 2010). Being self-compassionate reflects staying mindful of the present moment instead of being overidentified with thoughts and feelings, perceiving suffering as part of the human condition and not feeling isolated, and being gentle and kind when talking with the self rather than harsh and critical (Neff, 2003). Although several studies identified a positive effect of self-compassion in people with BPD, for example on recovery, acceptance, and decreasing of borderline symptom themselves (Donald et al., 2019; Feliu-Soler et al., 2017; Keng & Wong, 2017; Loess, 2015), studies replicating such results in adolescent samples are scarce.

Considering the need to intervene preventively, studying borderline features at early ages has recently gained support. Nonetheless, not so many studies have focused on internal psychological processes and how they work in developing borderline features. For example, experiential avoidance predicted borderline features' levels at one-year follow-up. In this study, the effects of depression and anxiety on borderline features were washed out by the experiential avoidance, suggesting that experiential avoidance might be an important process in the relation between negative affect and borderline symptoms in youth (Sharp et al., 2015). However, few is known about the positive effects of self-compassion to counteract the negative self-to-self relationship, self-hate and self-disgust usually associated with borderline symptoms. In this line, this study aimed to test the mediation role of self-compassion between self-disgust and borderline features in a representative adolescent sample.

## METHOD

### *Participants*

The sample of the current study was composed of 655 Portuguese adolescents from the general population, of which 381 were girls (58%) and 274 boys (42%). They presented an average of 15.58 years old ( $SD = 1.51$ ) and a mean of 10.26 years of schooling ( $SD = 1.43$ ). Non-significant gender differences were found for age ( $t_{(653)} = -.35, p = .72$ ) and years of schooling ( $t_{(653)} = 1.76, p = .08$ ).

### *Procedures*

This study is part of the first author's PhD project. All procedures consider the ethical standards of the Ministry of Education and the National Commission for Data Protection of Portugal (number: 6713/2018), the Ethics and Deontology Commission of the Faculty of Psychology and Educational Sciences of University of Coimbra, and the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Participants were students from four schools in the north and centre regions of Portugal. The adolescents and their parents gave written consent after being informed about the aims of this study, confidentiality, and voluntary participation. In the classroom, the adolescents completed the self-report questionnaires in the presence of the researchers and teachers to provide any clarification when needed.

### *Measures*

The Borderline Personality Features Scale for Children (BPFS-C; Sharp et al., 2014; Portuguese version by Carreiras, Loureiro, et al., 2020) is a unidimensional self-report questionnaire composed of 11 items to assess adolescents' borderline features. Items are rated on a 5-point Likert scale (1 = *Never true*; 5 = *Always true*) and the total score is a sum of all items. The higher the scores, the higher the level of borderline features. The 11-item version presented good internal consistency ( $\alpha = .85$ ; Sharp et al., 2014) as well as the ten-item Portuguese version ( $\alpha = .77$ ; Carreiras, Loureiro, et al., 2020). In the current study, Cronbach's alpha was .88.

The Self-Compassion Scale (SCS; Neff, 2003; Portuguese version for adolescents by Cunha et al., 2015) is a self-report questionnaire composed of 26 items (e.g., “I’m kind to myself when I’m experiencing suffering”; “When I’m down and out, I remind myself that there are lots of other people in the world feeling like I am”) to assess the ability to be kind and understanding with oneself when experiencing suffering. The items are divided into six subscales (Self-kindness, Isolation, Common Humanity, Self-judgement, Mindfulness and Over-identification) and are rated on a 5-point Likert scale (1 = *Almost never*; 5 = *Almost always*). The total score is a mean of all subscales (after reversing Isolation, Self-judgment and Over-identification), and higher scores reflect higher self-compassion. The SCS revealed good internal consistency in the original version ( $\alpha = .92$ ) and in the Portuguese version ( $\alpha = .85$ ). In our data, Cronbach’s coefficient for the total scale was  $\alpha = .87$ .

The Multidimensional Self-Disgust Scale (MSDS; Carreiras, 2014; Version for adolescents by Carreiras et al., 2022) is a self-report questionnaire to assess the emotion disgust directed to aspects of the self. This instrument comprises 32 items divided into four subscales: Defensive activation (“When I feel self-disgust, my heart beats fast”), Cognitive-emotional subscale (“When I feel self-disgust, I feel diminished, inferior and small”), Avoidance (“When I feel self-disgust, I avert my gaze from the body”), and Exclusion (“When I feel self-disgust, I want to cut, burn or eliminate those parts of myself”). Items are rated on a 5-point Likert scale (1 = *Never*; 5 = *Always*), and the total and subscales scores are a sum of the items. Higher scores indicate higher levels of self-disgust. The adolescent version is composed of 30 items and presented good internal consistency (Cronbach’s alphas ranging from .75 to .97; Carreiras et al., 2022). In the current study, the total score presented a Cronbach’s alpha of .96.

### *Data Analyses*

Data were analyzed through IBM SPSS Statistics version 23 and PROCESS Macro (Hayes, 2013). Normality of data was tested with the Kolmogorov-Smirnov test and examining the skewness ( $sk$ ) and kurtosis ( $ku$ ) values (normality assumed for  $Sk < 3$  and  $Ku < 8$ ; Kline, 2011). Outliers were examined considering the box-plot diagram.

Descriptive statistics were conducted to characterize the sample. Student’s t-tests for independent samples were conducted to test differences between groups. Effect sizes were analyzed according to Cohen (1988), considering  $d$  values between .20 and .49 small, between .50 and .79 medium, and above .80 large. Pearson corre-

lation coefficients were used to examine the relationship between variables. The reference values of Dancey and Reidy (2017) were used to interpret the correlation coefficients: from .10 to .39 were considered weak, from .40 to .69 moderate, and above .70 strong.

A simple mediation model (model 4) was conducted using PROCESS Macro (Hayes, 2013) with a five thousand bootstrap procedure. Significance was considered when the 95% confidence interval did not include zero. The simple mediation model is a statistical method to explain how an independent variable (self-disgust) impacts a dependent variable (borderline features), going through a mediator variable (self-compassion). We analyzed the influence of the independent variable on the dependent variable examining two paths: the direct effect (by which self-disgust influences borderline features without going through self-compassion) and the indirect effect (by which self-disgust influences borderline features through self-compassion). Gender was included in the model as a covariate to control its potential confounding effect.

## RESULTS

### *Preliminary Analyses*

Preliminary data analyses were conducted to guarantee the assumption of data normality. No severe violations were found ( $Sk < 3$  and  $Ku < 8$ ; Kline, 2011). Outliers were maintained to keep the natural variance and consider that no significant differences occurred in our results (Osborne, 2008).

### *Descriptive Statistics*

Means and standard deviations for all variables are presented in Table 1. Girls exhibited higher borderline features, self-disgust and lower self-compassion than boys, with small to medium effect sizes.

**Table 1.**

Means (*M*) and standard deviations (*SD*) of variables in the study for the total sample, males and females. Student's *t*-test (*t*) were conducted to test differences between groups and Cohen's *d* for effect sizes.

|                                 | Total sample<br>( <i>N</i> = 655) | Males<br>( <i>n</i> = 274) | Females<br>( <i>n</i> = 381) | <i>t</i> ( <i>df</i> ) | <i>p</i> | <i>d</i> |
|---------------------------------|-----------------------------------|----------------------------|------------------------------|------------------------|----------|----------|
|                                 | <i>M</i> ( <i>SD</i> )            | <i>M</i> ( <i>SD</i> )     | <i>M</i> ( <i>SD</i> )       |                        |          |          |
| Borderline features<br>(BPFS-C) | 24.43<br>(8.23)                   | 21.77<br>(8.05)            | 26.34<br>(7.84)              | -7.27<br>(653)         | <.001    | 0.56     |
| Self-disgust<br>(MSDS-A)        | 19.08<br>(21.05)                  | 12.87<br>(16.83)           | 23.55<br>(22.62)             | -6.93<br>(653)         | <.001    | 0.54     |
| Self-compassion<br>(SCS-A)      | 3.10<br>(0.63)                    | 3.24<br>(0.54)             | 3.01<br>(0.66)               | 4.92<br>(653)          | <.001    | 0.38     |

Note. BPFS-C = Borderline Personality Features Scale for Children; MSDS-A = Multidimensional Self-Disgust Scale for Adolescents; SCS-A = Self-Compassion Scale for Adolescents.

### Correlations

Self-compassion was negative and moderately correlated with self-disgust ( $r = -.60$ ,  $p < .001$ ) and borderline features ( $r = -.57$ ,  $p < .001$ ), meaning that higher self-compassion was associated with higher self-disgust and higher borderline features. Borderline features and self-disgust presented a positive and moderate correlation ( $r = .69$ ,  $p < .001$ ; Table 2).

**Table 2.**

Pearson correlations between borderline features, self-disgust and self-compassion (*N* = 655).

|                                 | 1      | 2      | 3 |
|---------------------------------|--------|--------|---|
| 1. Borderline features (BPFS-C) | 1      |        |   |
| 2. Self-disgust (MSDS-A)        | .69**  | 1      |   |
| 3. Self-compassion (SCS-A)      | -.57** | -.60** | 1 |

Note. \*\*  $p < .001$ . BPFS-C = Borderline Personality Features Scale for Children; MSDS-A = Multidimensional Self-Disgust Scale for Adolescents; SCS = Self-Compassion Scale for Adolescents.

### Mediation Effect of Self-compassion Between Self-disgust and Borderline Features in Adolescents

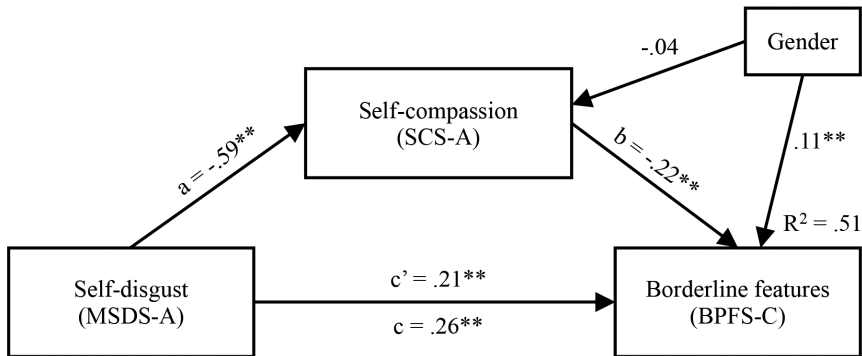
To test if self-compassion played a role between self-disgust and borderline features, a mediation model was performed controlling gender (Figure 1). Results showed that these variables accounted for 51% of borderline features ( $F_{(3, 651)} = 228.78$ ,  $p < .001$ ). Self-disgust presented a significant effect on self-compassion ( $a = -.59$ , 95% CI [-.02, -.02],  $t_{(650)} = -18.33$ ,  $p < .001$ ) and self-compassion on borderline features ( $b = -.22$ , 95% CI [-3.76, -1.99],  $t_{(650)} = -6.38$ ,  $p < .001$ ). The direct effect of self-disgust



on borderline features was significant ( $c' = .21$ , 95% CI [.18, .23],  $t_{(650)} = 15.25$ ,  $p < .001$ ), as well as the total effect ( $c = .26$ , 95% CI [.23, .28],  $t_{(650)} = 22.67$ ,  $p < .001$ ).

**Figure 1.**

*The mediation effect of self-compassion in the relationship between self-disgust and borderline features.*



*Note.* \*\* $p < .001$ ; All presented effects are standardized. MSDS-A = Multidimensional Self-Disgust Scale for Adolescents; SCS-A = Self-Compassion Scale for Adolescents; BPFS-C = Borderline Personality Features Scale for Children.

## DISCUSSÃO

Identifying core psychological mechanisms with the potential to counteract borderline features at early ages might result in decreasing these symptoms with important lifetime implications (Bozzatello et al., 2019; Chanen & Kaess, 2012; Sharp et al., 2015). Accordingly, this study aimed to examine the potential positive effect of self-compassion between feeling disgust towards the self and borderline features in adolescents. The relationship between a negative and insecure self-to-self relationship (Dammann et al., 2011), as well as self-criticism, self-hate and self-disgust and borderline features has been established (Carreiras, Castilho, et al., 2020; Donald et al., 2019; Guiomar, 2015) but the influence of self-compassion in this relationship is still underexplored.

Our results corroborated the idea that self-disgust is closely linked to borderline symptomatology, considering a moderate association between both variables. Perceiving the self as generally undesirable, insecure and aversive (including internal aspects related to personality and sense of self, and physical and external aspects related to personal appearance, body and behaviors) activates the threat and self-protection system, and consequently outputs of avoidance and rejection of what is perceived as toxic. As previously proposed, activating the soothing system might function as an antidote to ease the activation of the threat and self-protection system (Gilbert,

2005, 2010). Self-compassion emerges as a way to feel soothed and safe within the self, recognizing suffering and being actively motivated to alleviate it (Gilbert, 2010; Neff, 2003). Self-compassion skills training encourages people to embrace their flaws, failures and mistakes, with a compassionate and wise inner voice, accepting who they are (Neff, 2011). For this reason, the negative and moderate association between self-compassion and self-disgust was expected, as it has been reported in previous research works (Carreiras, Castilho, et al., 2020; Guilherme, 2019; Palmeira et al., 2017).

In the present data, gender differences were found for all variables. Girls exhibited higher borderline features and higher self-disgust than boys with medium effect sizes. These findings corroborate previous literature suggesting that females tend to report higher BPD symptoms (Carreiras, Castilho, et al., 2020; Swartz et al., 1990; Trull et al., 2010) and feelings of disgust towards the self (Carreiras, 2014; Guilherme, 2019; Guiomar, 2015). Also, our results align with previous works showing that males tend to be more self-compassionate than females (Cunha et al., 2015; Yarnell et al., 2015). In general, females tend to exhibit higher internalized difficulties (e.g., depression, anxiety) (Hayward & Sanborn, 2002; Mendle, 2014), a more self-critical internal talk (Yarnell et al., 2015) and poorer self-esteem than males (Gentile et al., 2009), which might explain the gender differences in our interest variables. Considering these differences, we controlled the effect of gender in the mediation model.

The mediation model showed that self-disgust had an effect on borderline features indirectly through self-compassion, corroborating our initial hypothesis. The negative statistics associated with self-compassion indicate that it worked in the opposite direction of self-disgust and borderline features. Considering all variables, the model explained 51% of borderline features, demonstrating that a negative self-to-self relationship with aversion and disgust towards personal aspects had a direct effect on borderline features. It seems that adolescents who experience more self-disgust-related thoughts and feelings tend to exhibit higher borderline symptoms. Moreover, the mediation results seemed to indicate that being self-judging, harsh with the self, not accepting the current experience and feeling isolated in suffering have an important contribution to explain how self-disgust influences borderline features in adolescents, whether for boys or girls. Cultivating self-compassion at early ages has been indicated by several authors as an essential tool to promote psychological well-being and resilience and counteract emotional distress (Bluth et al., 2018; Marsh et al., 2017). Nonetheless, the role that self-compassion can play between self-disgust and borderline features have not been tested so far. Our results support the positive effect of self-compassion in adolescents, indicating that being more self-kind, mindful and feeling part of a shared human experience could be beneficial to oppose the effect of self-disgust on borderline symptomatology.

Evidenced-based interventions focused on developing self-compassion seems to be particularly important for adolescents with a negative self-to-self relationship, especially

if they have marked feelings of self-disgust. Compassion Focused Therapy (CFT; Gilbert, 2010) is an example of an intervention to foster and cultivate self-compassion that clinicians could implement in therapeutic settings. There are also group interventions for adolescents designed to develop self-compassion, for example Making Friends with Yourself (MFY; Bluth et al., 2016), which are a relevant option to employ in schools or community settings. Results showed that adolescents who attended the MFY program presented significantly higher self-compassion and life satisfaction, as well as significantly lower depression, comparing to the waitlist control. Compassion-based interventions are encouraged to adolescents with marked self-disgust, as a possible measure to decrease the likelihood to develop borderline features.

Some limitations of the current study are important to acknowledge. The cross-sectional design precludes causal inference, which stresses the need to be cautious when interpreting the mediation analysis. Although our results suggested that part of the effect of self-disgust on borderline features goes through self-compassion, longitudinal studies are essential to verify these findings. Additionally, we only used self-report questionnaires to assess the variables, which entails biases related to the person's feeling at the time they responded. Future studies are encouraged to use clinical interviews to assess borderline features. Notwithstanding these shortcomings, the current study was the first one exploring the relationship between these variables, identifying self-compassion as competence and attitude to cultivate in youth, possibly having a positive impact on borderline features. Adolescents with lower borderline symptoms would reflect greater mental health, emotional balance and well-being.

### *Compliance with Ethical Standards*

This study was supported by the PhD Grant of the first author, sponsored by the Portuguese Foundation for Science and Technology (FCT). All procedures performed were in accordance with the ethical standards of the Ministry of Education and the National Commission for Data Protection of Portugal (number: 6713/2018) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. All parents and participants gave their written informed consent.

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