



Which self-compassion components mediate the relationship between adverse experiences in childhood and borderline features in adolescents?

Self-compassion in adolescents

Diogo Carreiras, Marina Cunha & Paula Castilho

To cite this article: Diogo Carreiras, Marina Cunha & Paula Castilho (2021): Which self-compassion components mediate the relationship between adverse experiences in childhood and borderline features in adolescents?, *European Journal of Developmental Psychology*, DOI: 10.1080/17405629.2021.1981283

To link to this article: <https://doi.org/10.1080/17405629.2021.1981283>



Published online: 23 Sep 2021.



Submit your article to this journal [↗](#)



View related articles [↗](#)




View Crossmark data [↗](#)



Which self-compassion components mediate the relationship between adverse experiences in childhood and borderline features in adolescents?

Self-compassion in adolescents

Diogo Carreiras^a, Marina Cunha ^{a,b} and Paula Castilho^a

^aUniversity of Coimbra, Faculty of Psychology and Educational Sciences, Center for Research in Neuropsychology and Cognitive and Behavioral Intervention, Coimbra, Portugal; ^bMiguel Torga Institute of Higher Education, Coimbra, Portugal

ABSTRACT

Borderline personality disorder is a severe disorder with distinct features which might be early identified in adolescence. Adverse experiences in childhood have been established as a risk factor for developing borderline features, and self-compassion has been proposed as a protective factor. This study aimed to test the mediation role of the self-compassion components in the relationship between recall of threat and subordination in childhood and borderline features. The sample was composed of 422 Portuguese adolescents ($n = 249$ females) with a mean age of 15.40. Girls exhibited higher borderline features, higher self-judgment, isolation, overidentification and common humanity. A mediation model to explore the role of self-compassion components explained 46% of borderline features, and both direct and indirect effects were significant, controlling the effect of sex. Isolation, self-judgment, and mindfulness were significant predictors. These findings showed which self-compassion mechanisms should be particularly cultivated, possibly having a positive effect for adolescents who had childhood experiences of subordination and threat and current borderline features.

ARTICLE HISTORY Received 19 February 2021; Accepted 7 September 2021

KEYWORDS borderline features; self-compassion; experiences of threat and subordination in childhood; adolescence; mediation

Borderline personality disorder (BPD) is described as an impairing disorder with a persistent pattern of impulsivity, instability in the affect, relationships and self-image and difficulties in emotion regulation (American Psychiatric Association [APA], 2013; Leichsenring et al., 2011). Nonsuicidal self-injury (NSSI) is also associated with BPD (Brown et al.,

CONTACT Diogo Carreiras  diogocarreiras1@gmail.com  Cineicc - Center for Research in Neuropsychology and Cognitive and Behavioral Intervention, University of Coimbra, Rua Do Colégio Novo, S/n 3000-115 Coimbra, Portugal

© 2021 Informa UK Limited, trading as Taylor & Francis Group

2009; Zanarini et al., 2008), as well as functional impairment, overuse of health services (Skodol et al., 2002) and high suicide rates between 4% and 10% (Zanarini et al., 2005). Although BPD is usually diagnosed in adulthood, some authors have been studying borderline features in adolescents since dysfunctional cognitive, affective and behavioural patterns arise before the age of 18 years and marked borderline features and symptoms can be identified in adolescence (Bradley et al., 2005; Crick et al., 2005; Sharp & Bleiberg, 2007; Westen & Chang, 2000). As reported by Sharp et al. (2019), fears of abandonment, unstable relationships, identity disturbance and feelings of emptiness did not show differences between adults and adolescents, suggesting that these features may represent the homotypic features of BPD. Moreover, some prospective studies defended that borderline traits in adolescence were significantly associated with borderline traits at adult age (Greenfield et al., 2014; Winograd et al., 2008).

The relationship between adverse experiences in childhood and BPD has been widely studied. People with BPD are more likely to have had adverse childhood experiences (e.g., verbal, emotional or physical abuse; Zanarini et al., 2006), low parental affection and nurturing, and aversive parental behaviour (e.g., harsh punishment; Johnson et al., 2006). Fruzzetti et al. (2005) studied the role of family environment in the development of BPD. They emphasized the negative impact of an invalidating and conflictual context, characterized by criticism, neglect and absence of positive and supportive interactions. In a prospective study, Winsper et al. (2012) found that BPD symptoms by the age of 11 were predicted by family adversity (hitting, hostility, breaking or throwing things, emotional domestic violence and conflicting partnership), suboptimal parenting and parental conflict. The quality of early interactions may thus contribute to the development of BPD later in life. Although we found no studies specifically with borderline symptoms and childhood experiences of subordination and threat, we hypothesize that this type of early adverse experience is related to borderline features considering the reports above.

Some studies have also provided insight into underlying cognitive-emotional mechanisms and their effect on developing borderline features. Indeed, Sharp et al. (2015), already added evidence that experiential avoidance is a significant predictor of borderline features a year later. Nevertheless, these studies are scarce. Self-compassion can also be considered an underlying mechanism or a way to deal with difficult

situations. It is described as touched by and open to one's suffering, without avoiding or disconnecting from it, having the desire to ease the suffering and heal oneself with kindness. It also means being non-judgemental and understanding and seeing suffering as part of the human experience (Neff, 2003a, 2003b).

Neff (2003a, 2003b, 2018) conceptualized self-compassion as entailing three main interacting components: self-kindness versus self-judgment, common humanity versus isolation and mindfulness versus over-identification. Self-kindness is about being gentle and supportive with oneself, using a calm, understanding, and encouraging inner dialogue. On the contrary, self-judgment involves being self-critical, punitive, and using harsh internal statements as 'You are useless!' or 'You never do anything right!'. Common humanity reflects the recognition that all people suffer, hurt, and make things wrong sometimes. That we are not alone and isolated in our own failure and suffering. On the other hand, isolation means feeling alone in suffering situations, having a sense that no one else understands them. Lastly, mindfulness is paying attention and being aware of our internal and external experiences through a balanced and distanced approach, as the opposite of over-identifying with our thoughts and emotions, and feeling trapped inside of our storytelling mind (Neff & Dahm, 2017).

A growing body of evidence has shown that self-compassion is negatively correlated with psychopathology and positively correlated with well-being and adaptive psychological functioning (Germer & Neff, 2013; Kelly et al., 2014; Krieger et al., 2013; Neff et al., 2007; Yarnell & Neff, 2013). In adolescent samples, self-compassion was found to be associated with positive psychological indicators (Cunha et al., 2016; Bluth & Blanton, 2015; Cunha et al., 2013) and negatively related with maladaptive functioning (e.g., aggression, narcissism, negative affect; Barry et al., 2015; Bluth & Blanton, 2015). Moreover, it counteracts criticism, hostility and hate towards the self and promotes greater emotional awareness and adaptive behavioural patterns in response to emotional distress and dysregulation (Xavier et al., 2016a, 2016b).

In this context, evidence that self-compassion plays a role as a protective factor for BPD in adults has been discussed (Loess, 2015; Scheibner et al., 2017; Warren, 2015). However, there is still a lack of research on self-compassion as an underlying protective process in adolescents with borderline features. Based on our literature review, self-compassion has been studied in adolescents with NSSI, constituting an

essential contribution as a protective process to psychopathology. With compassion-based approaches, people with NSSI may become more aware of their emotional experience and behave in a gentle way to deal with moments of distress and emotional dysregulation (Van Vliet & Kalnins, 2011). Keng and Wong (2017) showed that self-compassion significantly predicted BPD symptomatology in young adults from Singapore. However, it did not moderate the relationship between childhood invalidation and borderline symptoms. Recently, Carreiras, Castilho et al. (2020) reported that self-compassion presented a significant and positive effect on adolescents' borderline features in a regression model that also included depressive symptoms and impulsivity. In that study, self-compassion was examined using the total score of the Self-Compassion Scale (Neff, 2003a), and the individual contribution of the self-compassion subscales has not been explored yet. We believe that developing self-kindness (in contrast with self-judgement), mindfulness (in contrast with overidentification) and common humanity (in contrast with isolation), would decrease the negative self-image of adolescents with borderline features, would promote acceptance of the internal emotional experience and awareness of personal emotions and thoughts.

In the present study, our primary goal was to test the mediator role of the different components of self-compassion in the relationship between experiences of threat and subordination in childhood and borderline features in adolescents from the general population. We hypothesized that childhood experiences of subordination and threat will have a significant direct effect on borderline features and that the self-compassion components will explain part of that relationship. Considering the lack of studies using specifically the self-compassion components in that relationship, we intended to explore which will work as a mediator. Identifying which of the self-compassion components mediate that relationship will help tailor intervention programmes for adolescents at risk, especially those with marked borderline features and childhood experiences of feeling threatened and subordinated.

Method

Participants

The sample was composed of 422 adolescents, of which 173 were males (41%) and 249 were females (59%). They were from 9th, 10th and 11th grade, had a mean age of 15.40 years ($SD = 0.79$) and a mean of

10.17 years of schooling ($SD = 0.69$). Most participants reported a medium socioeconomic status. Nonsignificant differences were found between males and females regarding age and years of schooling.

Procedures

Data were collected from October 2018 to February 2019, in schools in the centre of Portugal. Parents' informed consent was obtained. Information about the nature of the study, such as aims, confidentiality, data protection and voluntary participation, was provided to participants. The self-report questionnaires were completed in the presence of the teachers and the researcher to guarantee independent responses and to provide clarification whenever necessary.

Compliance with ethical standards

All procedures 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. Informed consent was obtained from all individual participants and their parents/guardians.

Measures

The Borderline Personality Features Scale for Children (BPFS-C; Sharp et al., 2014; Portuguese version by Carreiras, Loureiro et al., 2020) is composed of 11 items, rated on a 5-point Likert scale (1 = 'Never true'; 5 = 'Always true'), designed to assess borderline features. Items are about how the adolescents feel about themselves and others (e.g., 'How I feel about myself changes a lot.'). Sharp et al., 2015, 2014). The higher the sum of the items, the higher the levels of borderline features. The original study found a good internal consistency ($\alpha = .85$) and the Portuguese version ($\alpha = .77$), which have 10 items. In our study, the Cronbach's coefficient for the total scale was $\alpha = .84$.

The Self-Compassion Scale (SCS; Neff, 2003b, 2018; Portuguese version for adolescents by M. A. Cunha et al., 2016) was designed to assess self-compassion, which means the capacity to be kind and understanding towards oneself in difficult situations. The scale is composed of 26 items rated in a 5-point Likert scale (1 = 'Almost never'; 5 = 'Almost always'). The

scale encompasses three subscales of compassionate self-response, which are self-kindness (items 5, 12, 19, 23, 26; e.g., 'I try to be kind and supportive to myself when I'm having a hard time'), common humanity (items 3, 7, 10, 15; e.g., 'When I'm sad or unhappy, I remember that other people also feel this way at times.') and mindfulness (items 9, 14, 17, 22; e.g., 'When something difficult happens, I try to see things clearly without exaggerations.'). The scale also includes three subscales of uncompassionate self-response, which are self-judgment (items 1, 8, 11, 16, 21; e.g., 'When I notice things about myself that I don't like, I get really frustrated. '), isolation (items 4, 13, 18, 25; e.g., 'When I feel sad or down, it seems like I'm the only one who feels that way.') and over-identification (items 2, 6, 20, 24; e.g., 'When I'm feeling bad or upset, I can't think of anything else at the time.'). Each subscale is a mean of the corresponding items. The total score of the SCS is a mean calculated with all items, after reversing the scores of isolation, self-judgment and over-identification. Higher scores reflect higher levels of total self-compassion. The SCS presented good internal consistency in the original version (Cronbach's alpha of .92 for total score and ranging between .75 and .81 for subscales) and in the adolescent sample (Cronbach's alpha of .88 for total score and ranging between .70 and .79 for subscales). In the current study, Cronbach's alpha for the total scale was $\alpha = .90$. Subscales presents the following Cronbach's alphas: self-kindness $\alpha = .82$, common humanity $\alpha = .75$, mindfulness $\alpha = .75$, self-judgement $\alpha = .86$, Isolation $\alpha = .81$ and over-identification $\alpha = .79$.

The Early Life Experiences Scale (ELES; Gilbert et al., 2003; Portuguese version for adolescents by Pinto-Gouveia et al., 2016) assesses memories of perceived threat and subordination in childhood through 15 items rated on a 5-point Likert-scale (1 = 'Completely untrue'; 5 = 'Very true'). There are three subscales: threat (e.g., 'I experienced my parents as powerful and overwhelming'), submissiveness (e.g., 'I often had to give in to others at home') and unvalued (e.g., 'I felt able to assert myself in my family'). ELES presented good internal consistency for the total score in the original version ($\alpha = .92$) and in the Portuguese version for adolescents ($\alpha = .86$). In the current study, the Cronbach's coefficient for the total scale was $\alpha = .87$.

Data analyses

The present study followed a cross-sectional design. Statistical analyses were conducted in IBM SPSS Statistics, version 23 (IBM Corp., Armonk, NY, USA) and PROCESS macro (Hayes, 2013). Descriptive statistics and

student's t-tests were computed to examine demographic variables and to explore sex differences. The associations between the variables under study were examined through Pearson product-moment correlations. According to Dancey and Reidy (2017), coefficients between .10 and .39 were considered weak, between .40 and .69 were considered moderate, and above .70 were considered strong. Effect sizes were calculated and interpreted according to Cohen's reference values (Cohen, 1988) being d values between .20 and .49 considered small, between .50 and .79 medium, and above .80 considered large.

A hierarchical regression was conducted to examine the predictive effect of the self-compassion components on borderline features. The independence of the errors was analysed and validated through the value of Durbin–Watson, considering acceptable values under 2.5. Regarding multicollinearity or singularity amongst the variables, Variance Inflation Factors (VIF) indicate the absence of β estimation problems when < 5 (Kline, 2005). A mediator model (model 4) was computed using PROCESS macro (Hayes, 2013) and direct and indirect effects were analysed. A 5,000-bootstrap procedure was used to test the significance of the direct and indirect effects.

Results

Preliminary analyses

No severe violations of normality were found ($|Sk| < 3$ and $|Kul| < 8$; Kline, 2005). Durbin-Watson value was acceptable (2.05). VIF values in the hierarchical regression were all under the recommended 5 (ranging between 1.00 and 4.49). Overall, these results suggested that the present data is adequate for parametric analyses.

Descriptive statistics and sex differences

Descriptive statistics and sex differences are presented in Table 1. Female adolescents exhibited higher levels of borderline features ($t_{(400)} = -2.44$; $p = .02$), with a small effect size ($d = .20$) and male adolescents exhibited higher levels of total self-compassion ($t_{(400)} = 3.41$; $p = .001$), with a small effect size ($d = .31$). Concerning the self-compassion components, results obtained showed nonsignificant sex differences for self-kindness and

Table 1. Means (*M*), standard deviations (*SD*) and student's *t*-tests for independent samples by sex and Cohen's *d* for all variables in study (*N* = 422).

Variables	Total sample (<i>N</i> = 422)		Males (<i>n</i> = 173)		Females (<i>n</i> = 249)		<i>t</i> (<i>df</i>)	Cohen's <i>d</i>
	<i>M</i> (<i>SD</i>)		<i>M</i> (<i>SD</i>)		<i>M</i> (<i>SD</i>)			
Borderline features (BPFS-C)	25.30 (7.34)		24.42 (7.46)		25.92 (7.21)		2.07* (420)	.20
Self-compassion (SCS-A)	3.13 (0.63)		3.24 (0.56)		3.05 (0.67)		3.20** (420)	.31
Self-kindness (SCS-A)	2.65 (0.88)		2.59 (0.87)		2.69 (0.88)		1.08 (420)	.11
Common humanity (SCS-A)	2.76 (0.88)		2.62 (0.88)		2.86 (0.87)		2.83** (420)	.28
Mindfulness (SCS-A)	2.81 (0.87)		2.75 (0.91)		2.85 (0.85)		1.23 (420)	.12
Self-judgment (SCS-A)	2.47 (0.99)		2.15 (0.92)		2.69 (0.98)		5.60*** (420)	.56
Isolation (SCS-A)	2.48 (0.96)		2.20 (0.91)		2.68 (0.94)		5.30*** (420)	.52
Overidentification (SCS-A)	2.49 (0.95)		2.13 (0.88)		2.74 (0.93)		6.78*** (420)	.68
Childhood experiences of subordination and threat (ELES-A)	30.18 (9.64)		29.69 (9.08)		30.51 (10.02)		1.89 (400)	.09

Note: **p* < .05, ***p* < .01, ****p* < .001. BPFS-C = Borderline Personality Features Scale for Children; SCS-A = Self-compassion Scale for Adolescents; ELES-A = Early Life Experiences Scale for Adolescents.

mindfulness. In the other subscales, female adolescents showed higher levels. Nonsignificant sex differences were found for experiences of subordination and threat in childhood.

Correlations

In order to explore the association between the variables in study, Pearson product-moment correlations were conducted (Table 2). Childhood experiences of subordination and threat presented a positive and moderate correlation with borderline features ($r = .42, p < .001$) and a negative and moderate correlation with total self-compassion ($r = -.48, p < .001$). Total self-compassion and borderline features had a negative and moderate correlation ($r = -.56, p < .001$). Examining in detail, the uncompassionate subscales (self-judgment, isolation and over-identification) presented correlations of higher magnitude with childhood experiences of subordination and threat (ranging between .43 and .45, $p < .001$) and borderline features (ranging between .59 and .61, $p < .001$) in comparison with the compassionate subscales. Self-kindness and mindfulness showed negative and weak correlations with childhood experiences of subordination and threat ($r = -.27, p < .001$ and $r = -.20, p < .001$, respectively) and borderline features ($r = -.19, p < .001$). Common humanity presented a negative and weak correlation with childhood experiences of threat and subordination ($r = -.13, p < .001$) and no association with borderline features ($r = -.06, p = .22$).

Regression analysis

A hierarchical regression to predict borderline features in adolescence was conducted (Table 3). In the first model, only sex was entered as independent variable given the sex differences presented above. The model was significant ($F_{(1, 420)} = 4.29, p = .04$) and sex ($\beta = .10, p = .04$) explained 10% of the variance of borderline features. In the second step, the six factors of self-compassion (self-kindness, isolation, common humanity, self-judgment, mindfulness and over-identification) were also included. The final model explained 44% of the variance ($F_{(7, 414)} = 45.94, p < .001$), with a significant *F change*. Sex maintained a significant predictive effect ($\beta = -.09, p = .03$). The main predictor was isolation ($\beta = .36, p < .001$), followed by self-judgment ($\beta = .26,$

Table 2. Pearson correlations between the variables in study ($N = 422$).

	1	2	3	4	5	6	7	8	9
1. Childhood experiences of subordination and threat (ELES-A)	1								
2. Borderline features (BPFS-C)	.42***	1							
3. Self-compassion (SCS-A)	-.48***	-.56***	1						
4. Self-kindness (SCS-A)	-.27***	-.19***	.71***	1					
5. Common humanity (SCS-A)	-.13**	-.06	.49***	.55***	1				
6. Mindfulness (SCS-A)	-.20***	-.19***	.63***	.70***	.62***	1			
7. Self-judgment (SCS-A)	.45***	.59***	-.75***	-.26***	.02	-.10*	1		
8. Isolation (SCS-A)	.43***	.61***	-.72***	-.22***	.02	-.12*	.75***	1	
9. Overidentification (SCS-A)	.43***	.59***	-.77***	-.22***	-.03	-.18***	.84***	.77***	1

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. ELES-A = Early Life Experiences Scale for Adolescents; SCS-A = Self-compassion Scale for Adolescents; BPFS-C = Borderline Personality Features Scale for Children.

Table 3. Hierarchical regression to predict borderline features (BPFS-C) and explore the predictive effect of the six components of self-compassion in adolescents ($N = 422$).

Variables	R ²	R ² adjusted	R ² change	F change	B	β	VIF
Model 1	0.1	0.01	0.01	4.30*			
Sex					1.5	.10*	1
Model 2	0.66	0.44	0.43	52.36***			
Sex					-1.29	-.09*	1.14
Self-kindness (SCS-A)					0.18	0.11	2.37
Common Humanity (SCS-A)					-0.03	-0.02	1.78
Mindfulness (SCS-A)					-0.34	-.16**	2.52
Self-judgment (SCS-A)					0.38	.26**	4.03
Isolation (SCS-A)					0.68	.36***	2.73
Overidentification (SCS-A)					0.22	0.12	4.49

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; Sex was coded as 1 = boy and 2 = girl; SCS-A = Self-compassion Scale for Adolescents; BPFS-C = Borderline Personality Features Scale for Children.

$p = .001$) and mindfulness ($\beta = -.16$, $p = .01$). Self-kindness, common humanity and over-identification were not significant predictors in the regression model.

Mediation effect of self-compassion components

Considering the previous results, indicating sex differences in self-compassion and which of the six self-compassion components were significant predictors of borderline features, we decided to test a mediation model. Isolation, self-judgment and mindfulness were inserted as possible mediators in the relationship between experiences of subordination and threat in childhood and borderline features, controlling the effect of sex (Figure 1). The attained model explained 46% of borderline features. Both the direct ($c' = .15$, 95% CI [.09, .22], $t = 4.80$, $p < .001$) and the total ($c = .36$, 95% CI [.29, .42], $t = 10.90$, $p < .001$) effects of experiences of subordination and threat in childhood on borderline features were significant, when controlled the effect of sex. The indirect effect through isolation ($a_2b_2 = .15$, 95% CI [.10, .20]) and self-judgment ($a_3b_3 = .11$, 95% CI [.06, .17]) were significant and a marginal significance was attained for mindfulness ($a_1b_1 = .02$, 95% CI [.00, .04]), which confirmed the mediation hypothesis. Sex presented a nonsignificant effect on borderline features and mindfulness.

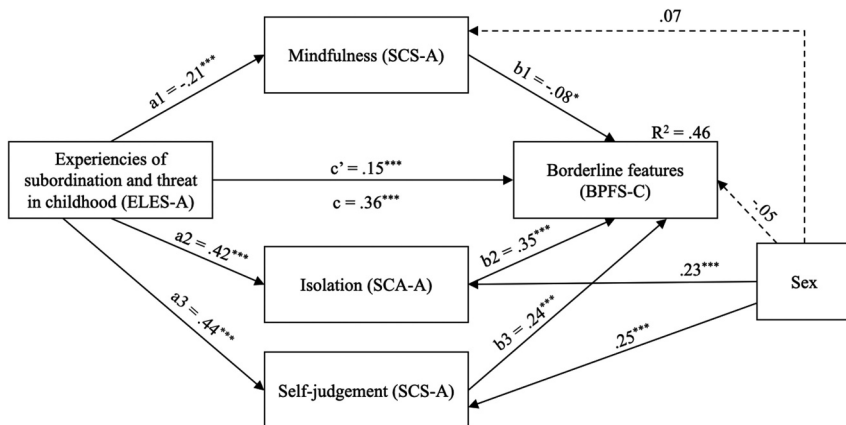


Figure 1. The mediation effect of three self-compassion components (Mindfulness, Isolation and Self-judgment) in the relationship between Experiences of subordination and threat in childhood and Borderline features. *Note.* * $p < .05$, ** $p < .01$, *** $p < .001$; Sex was coded as 1 = boy and 2 = girl; All presented effects are standardized, and dotted lines are nonsignificant paths. ELES-A = Early Life Experiences Scale for Adolescents; SCS-A = Self-Compassion Scale for Adolescents; BPFS-C = Borderline Personality Features Scale for Children.

Discussion

Recent research on BPD has focused on studying borderline features at early stages of development and not only in adults with complete BPD criteria for clinical diagnosis. Adolescence is a critical developmental period and preventing the evolution of borderline features may decrease severe symptoms and difficulties in adulthood (Crick et al., 2005; Sharp & Bleiberg, 2007; Stepp et al., 2013). Therefore, we aimed to test the mediation effect of the different components of self-compassion in the relationship between early experiences of threat and subordination in childhood and borderline features in adolescents, and identify which have distinct and unique effects, possibly working as positive emotion regulation mechanisms.

In our sample, female adolescents presented higher levels of borderline features in comparison to male adolescents. These results support previous studies (Carreiras, Castilho et al., 2020; Swartz et al., 1990; Trull et al., 2010). Indeed, according to the DSM-5, 75% of people diagnosed with BPD are women (American Psychiatric Association [APA], 2013). Nevertheless, studies exploring the prevalence of BPD in men and women are inconsistent, and some authors found no gender differences

(Aragonès et al., 2013; Morey et al., 2002). Widiger (1998) suggested that the over-diagnosis of BPD in women may be related to the fact that borderline features (e.g., intense emotional reactions, dependent relationships) are more socially associated with women, leading to an under-representation of men.

Family contexts characterized by marked neglect, conflict, abuse, invalidation, criticism, and suboptimal parenting were identified as significant risk factors for BPD development (Fruzzetti et al., 2005; Winsper et al., 2012; Zanarini et al., 2006). Moreover, memories of feeling threatened by parents, who were perceived as aggressive and dominant, and having to engage in submissive behaviour in childhood have been associated with an increased liability to develop depression and other psychological symptoms (Gilbert et al., 2003). Xavier et al. (2015) reported that adolescents from fearful and threatened environments, with submissive behaviours and who fear being self-compassionate are at greater risk to engage in self-harm behaviours. Our results align with these studies since memories of perceived threat and subordination in childhood were significantly associated with borderline features. As expected, memories of threat and subordination in childhood were negatively correlated with self-compassion. Family contexts with parental warmth, support and understanding are proven to be associated with a more compassionate relationship with the self in adolescents, with kindness and motivation to alleviate personal suffering. If children are raised in an environment of care and kindness, they are likely to learn to deal with themselves in the same way, preserving a positive view of the self. Additionally, in moments of failure, they will tend to interpret the situation in a realistic and balanced way, instead of being self-critical and harsh. On the contrary, attachment figures who impose subordination behaviours, led children to adopt defensive strategies of submission and self-criticism, and in consequence, difficulties in developing self-compassion (Cunha et al., 2013; Gilbert, 2005).

Self-compassion (total) was negatively correlated with borderline features, supporting previous research which evidenced the negative relationship between self-compassion and maladaptive functioning (Barry et al., 2015; Bluth & Blanton, 2015). The process of being compassionate towards oneself seems also to be associated with lower levels of borderline features in adolescents. About the self-compassion components, the negative subscales showed higher correlations with borderline features and childhood experiences of threat and subordination than the positive subscales. These results possibly reflect that the negative internal

processes of self-judging, putting down, avoiding internal emotional events, and being over-identified with thoughts and feelings might be fostered by early negative parental experiences of subordination and threat and that these negative processes are also more frequently associated to BPD symptoms. Borderline features seem to be more related to the uncompassionate aspects (self-judgment, isolation and over-identification) than with the absence of the compassionate components (self-kindness, common humanity and mindfulness).

Sex differences were explored on self-compassion, and we concluded that male adolescents were, generally, more compassionate with themselves than female adolescents. Furthermore, after examining the self-compassion components, girls presented higher levels of self-judgment, isolation and over-identification, the three negative subscales of self-compassion. Girls also exhibited higher levels of common humanity. These sex differences on self-compassion align with previous research on this topic (Carreiras, Castilho et al., 2020; Muris et al., 2019; Xavier et al., 2016b). Muris et al. (2019) have already reported that girls seem to exhibit increased scores of the uncompassionate factors (self-judgment, isolation and over-identification), which is congruent with our findings. The tendency of girls to exhibit higher self-criticism, increased negative self-talk, lower self-esteem, and higher neuroticism than boys (Yarnell et al., 2015) might explain these differences in self-compassion, particularly the higher scores of girls in the uncompassionate subscales.

Considering the differences between boys and girls, sex was included in the hierarchical regression. It was a significant predictor of borderline features even when the six factors of self-compassion were entered, emphasizing the differences between boys and girls in understanding borderline features. Of the six factors of self-compassion, only mindfulness, isolation and self-judgment presented a significant effect on borderline features. Although self-compassion is theoretically an overarching process emerging out of the combination of the subscales, it seems that feeling isolated in suffering, being self-critical and staying aware in the present moment are the main self-compassion mechanisms to predict borderline features in adolescents.

Then, mindfulness, isolation and self-judgment were tested as mediators between childhood experiences of subordination and threat on adolescents' borderline features. Results from the mediation model revealed that adolescents who experienced threat and subordination within the family seem to present higher borderline features and that this relationship is, in part,

explained by isolation feelings, negative self-judgement attitudes in the face of suffering and fewer awareness skills to be in the present moment (mindfulness). Considering the typical features of BPD, we might say that being more mindful and in contact with the emotional experience, without trying to avoid it or suppress it, might decrease negative affectivity, impulsivity and interpersonal dysfunction as one is more aware of own urges, thoughts and feelings (Wupperman et al., 2009). Being less self-critical and judgemental and more self-compassionate might improve self-acceptance and reduce the engagement in self-harm behaviours (Xavier et al., 2016b). Furthermore, feeling less isolated in suffering could facilitate establishing positive relationships as one is feeling more understood and connected to others, once loneliness is often reported by people with BPD (Nenov-Matt et al., 2020). The significant independent effect of childhood experiences of subordination and threat on borderline features was expected considering previous studies about adverse childhood experiences (Fruzzetti et al., 2005; Zanarini et al., 2006). Our results added that more than half of this effect goes through mindfulness, isolation and self-judgment, pointing to the importance of these self-compassion processes in this relationship.

These findings support the relevance of cultivating self-compassion in adolescents with borderline features. Self-compassion seems to be an important psychological mechanism in the development of borderline features in particular, and psychopathological symptoms in general (Barry et al., 2015; Bluth & Blanton, 2015). In line with this, the implementation of compassion-based programs, specially designed to promote a mindful attitude towards negative emotional experiences, decrease isolation feelings and negative self-evaluations, would prove valuable, either in school or community settings. In clinical context, clinicians who work with adolescents with borderline features (e.g., emotional dysregulation, nonsuicidal self-injury, impulsivity, dependence behaviours) are encouraged to use an approach focused on developing self-compassion to counteract these maladaptive features. Compassion Focused Therapy (CFT; Gilbert, 2010), Dialectical Behavioural Therapy (DBT; Linehan, 2014), Making Friends with Yourself (MFY; Bluth et al., 2016) and Compassion Cultivating Training (CCT; Goldin & Jazaieri, 2017) are examples of structured interventions that give attention to some important aspects of self-compassion. Self-judgment could be addressed by fostering radical acceptance and training our mind to be more compassionate and understanding. Feelings of isolation might be decreased in group sessions, with adolescents sharing similar difficulties, experiences, and useful strategies, as well as by developing a sense that

everyone experiences suffering. Mindfulness might be promoted through meditation practice, breathing exercises and radical acceptance. Additionally, and considering the negative impact of adverse experiences in childhood, positive parental competencies are also important to develop to cultivate a better self-to-self relationship in children (Richter et al., 2009).

The present study has some limitations. The cross-sectional design limits causality inference and stresses the need to be cautious when drawing conclusions from the mediation analysis, so future prospective studies that follow adolescents over time are warranted. We recommend future studies to conduct longitudinal designs, specially prospectively, beginning in adolescence and continuing through adulthood. We only used self-report questionnaires and we could not fully control social desirability of the responses. Besides, one of the questionnaires was retrospective (ELES), which encompasses some bias due to memory recall and shared-method variance. The use of multimethod approaches is encouraged, for example, using self-report questionnaires, parent reports and interviews. Additionally, in the future, studies should further explore sex differences and test comprehensive models of borderline features separately for boys and girls.

Notwithstanding these limitations, the current study examined the individual effect of the different aspects of self-compassion on adolescent's borderline features, which has important clinical and research implications. Developing awareness of the present moment, reducing feelings of isolation, and decreasing the critical self-judgements should be the main aspects to focus when designing and employing compassion-based intervention with adolescents with pervasive borderline symptoms.

Acknowledgments

We would like to express our gratitude to all school assistants and teachers that helped in data collection and to the adolescents who kindly completed the self-report questionnaires.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Data availability statement

The data that support the findings of this study are openly available in Figshare at <https://doi.org/10.6084/m9.figshare.13415186.v1>.

Funding

This work was supported by the Fundação para a Ciência e a Tecnologia [SFRH/BD/129985/2017].

ORCID

Marina Cunha  <http://orcid.org/0000-0002-5957-1903>

References

- American Psychiatric Association [APA]. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5*.
- Aragonès, E., Salvador-Carulla, L., López-Muntaner, J., Ferrer, M., & Piñol, J. L. (2013). Registered prevalence of borderline personality disorder in primary care databases. *Gaceta Sanitaria*, 27(2), 171–174. <https://doi.org/10.1016/j.gaceta.2011.12.006>
- Barry, C. T., Loflin, D. C., & Doucette, H. (2015). Adolescent self-compassion: Associations with narcissism, self-esteem, aggression, and internalizing symptoms in at-risk males. *Personality and Individual Differences*, 77, 118–123. <https://doi.org/10.1016/j.paid.2014.12.036>
- Bluth, K., & Blanton, P. W. (2015). The influence of self-compassion on emotional well-being among early and older adolescent males and females. *The Journal of Positive Psychology*, 10(3), 219–230. <https://doi.org/10.1080/17439760.2014.936967>
- Bluth, K., Gaylord, S. A., Campo, R. A., Mullarkey, M. C., & Hobbs, L. (2016). Making friends with yourself: A mixed methods pilot study of a mindful self-compassion program for adolescents. *Mindfulness*, 7(2), 479–492. <https://doi.org/10.1007/s12671-015-0476-6>
- Bradley, R., Conklin, C. Z., & Westen, D. (2005). The borderline personality diagnosis in adolescents: Gender differences and subtypes. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 46(9), 1006–1019. <https://doi.org/10.1111/j.1469-7610.2004.00401.x>
- Brown, M. Z., Linehan, M. M., Comtois, K. A., Murray, A., & Chapman, A. L. (2009). Shame as a prospective predictor of self-inflicted injury in borderline personality disorder: A multi-modal analysis. *Behaviour Research and Therapy*, 47(10), 815–822. <https://doi.org/10.1016/j.brat.2009.06.008>
- Carreiras, D., Castilho, P., & Cunha, M. (2020). O efeito da impulsividade, autoaversão e autocompaixão nos traços borderline na adolescência: Estudo das diferenças entre sexos [The effect of impulsivity, self-disgust and self-compassion in borderline features in adolescence: Study of sex differences]. *Portuguese Journal of Behavioral and Social Research*, 6(1), 50–63. <https://doi.org/10.31211/rpics.2020.6.1.170>
- Carreiras, D., Loureiro, M., Cunha, M., Sharp, C., & Castilho, P. (2020). Validation of the borderline personality features scale for children (BPFS-C) and for parents (BPFS-P) for the Portuguese population. *Journal of Child and Family Studies*, 29(11), 1–11. <https://doi.org/10.1007/s10826-020-01800-7>

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates, Publishers.
- Crick, N., Murray-Close, D., & Woods, K. (2005). Borderline personality features in childhood: A short-term longitudinal study. *Development and Psychopathology*, 17(4), 1051–1070. <https://doi.org/10.1017/S0954579405050492>
- Cunha, M., Martinho, M. I., Xavier, A., & Espírito-Santo, H. (2013). Early memories of positive emotions and its relationships to attachment styles, self-compassion and psychopathology in adolescence. *European Psychiatry*, 28(1). [https://doi.org/10.1016/S0924-9338\(13\)76444-7](https://doi.org/10.1016/S0924-9338(13)76444-7)
- Cunha, M. A., Xavier, A., & Castilho, P. (2016). Understanding self-compassion in adolescents: Validation study of the Self-Compassion Scale. *Personality and Individual Differences*, 93, 56–62. <https://doi.org/10.1016/j.paid.2015.09.023>
- Dancey, C. P., & Reidy. (2017). *Statistics without maths for psychology* (7th Edition). Pearson Education.
- Fruzzetti, A. E., Shenk, C., & Hoffman, P. D. (2005). Family interaction and the development of borderline personality disorder: A transactional model. *Development and Psychopathology*, 17(4), 1007–1030. <https://doi.org/10.1017/S0954579405050479>
- Germer, C. K., & Neff, K. D. (2013). Self-compassion in a Clinical Practice. *Journal of Clinical Psychology: In Session*, 69(8), 856–867. <https://doi.org/10.1002/jclp.22021>
- Gilbert, P. (2005). *Compassion: Conceptualisations, research and use in psychotherapy*. Routledge
- Gilbert, P. (2010). *Compassion focused therapy: Distinctive features*. Routledge/Taylor & Francis Group.
- Gilbert, P., Cheung, M., Grandfield, T., Campey, F., & Irons, C. (2003). Recall of threat and submissiveness in childhood: Development of a new scale and its relationship with depression, social comparison and shame. *Clinical Psychology & Psychotherapy*, 10(2), 108–115. <https://doi.org/10.1002/cpp.359>
- Goldin, P. R., & Jazaieri, H. (2017). The compassion cultivation training (CCT) program. In E. M. Seppälä, E. Simon-Thomas, S. L. Brown, M. C. Worline, C. D. Cameron, & J. R. Doty (Eds.), *The oxford handbook of compassion science* (pp. 314–324). New York: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780190464684.013.18>
- Greenfield, B., Henry, M., Lis, E., Slatkoff, J., Guilé, J. M., Dougherty, G., Zhang, X., Raz, A., Eugene Arnold, L., Daniel, L., Mishara, B. L., Koenekoop, R. K., & de Castro, F. (2014). Correlates, stability and predictors of borderline personality disorder among previously suicidal youth. *European Child and Adolescent Psychiatry*, 24, 397–406. <https://doi.org/10.1007/s00787-014-https://doi.org/10.1007/s00787-014-0589-9>
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. Guilford Press.
- Johnson, J. G., Cohen, P., Chen, H., Kasen, S., & Brook, J. S. (2006). Parenting behaviours associated with risk for offspring personality disorder during adulthood. *Archives of General Psychiatry*, 63(5), 579–587. <https://doi.org/10.1001/archpsyc.63.5.579>

- Kelly, A. C., Carter, J. C., & Borairi, S. (2014). Are improvements in shame and self-compassion early in eating disorder treatment associated with better patient outcomes? *International Journal of Eating Disorders*, 47(1), 54–64. <https://doi.org/10.1002/eat.22196>
- Keng, S.-L., & Wong, Y. Y. (2017). Association among self-compassion, childhood invalidation, and borderline personality disorder symptomatology in a Singaporean sample. *Borderline Personality Disorder and Emotion Dysregulation*, 4(24), 1–8. <https://doi.org/10.1186/s40479-017-0075-3>
- Kline, R. (2005). *Principles and practice of structural equation modelling* (2nd ed.). The Guilford Press.
- Krieger, T., Alteinsteinst, D., Baettig, I., Doerig, N., & Holtforth, M. G. (2013). Self-compassion in depression: Associations with depressive symptoms, rumination, and avoidance in depressed outpatients. *Behavior Therapy*, 44(3), 501–513. <https://doi.org/10.1016/j.beth.2013.04.004>
- Leichsenring, F., Leibing, E., Kruse, J., New, A. S., & Leweke, F. (2011). Borderline personality disorder. *Lancet*, 377(9759), 74–84. [https://doi.org/10.1016/S0140-6736\(10\)61422-5](https://doi.org/10.1016/S0140-6736(10)61422-5)
- Linehan, M. (2014). *DBT training manual*. The Guilford Press.
- Loess, P. (2015). *Self-compassion as a moderator of the relationship between emotion dysregulation and borderline personality disorder symptoms*. [Graduate Student Theses, Dissertations, & Professional Papers]. University of Montana - Missoula. <https://scholarworks.umt.edu/cgi/viewcontent.cgi?article=5557&context=etd>
- Morey, L. C., Warner, M. B., & Boggs, C. D. (2002). Gender bias in the personality disorders criteria: An investigation of five bias indicators. *Journal of Psychopathology and Behavioral Assessment*, 24(1), 55–65. <https://doi.org/10.1023/A:1014005308914>
- Muris, P., Otgaar, H., Meesters, C., Heutz, A., & van den Hombergh, M. (2019). Self-compassion and adolescents' positive and negative cognitive reactions to daily life problems. *Journal of Child and Family Studies*, 28(5), 1433–1444. <https://doi.org/10.1007/s10826-019-01353-4>
- Neff, K. (2003a). Self-compassion: An alternative conceptualization of a healthy attitude towards oneself. *Self and Identity*, 2(2), 85–101. <https://doi.org/10.1080/15298860390129863>
- Neff, K. (2003b). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2(3), 223–250. <https://doi.org/10.1080/15298860390209035>
- Neff, K. (2018). Setting the record straight about the self-compassion scale. *Mindfulness*, 10, 1–3. <https://doi.org/10.1007/s12671-018-1061-6>
- Neff, K.D., & Dahm, K.A. (2017). Self-compassion: What it is, what it does, and how it relates to mindfulness. In B. A. Gaudiano (Ed.), *Major themes in mental health. Mindfulness: Nonclinical applications of mindfulness: Adaptations for school, work, sports, health, and general well-being* (pp. 495–517). Routledge/Taylor & Francis Group.
- Neff, K. D., Kirkpatrick, K. L., & Rude, S. S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality*, 41(1), 139–154. <https://doi.org/10.1016/j.jrp.2006.03.004>

- Nenov-Matt, T., Barton, B. B., Dewald-Kaufmann, J., Goerigk, S., Rek, S., Zentz, K., Musil, R., Jobst, A., Padberg, F., & Reinhard, M. A. (2020). Loneliness, social isolation and their difference: a cross-diagnostic study in persistent depressive disorder and borderline personality disorder. *Frontiers in Psychiatry, 11*. <https://doi.org/10.3389/fpsyt.2020.608476>
- Pinto-Gouveia, J., Xavier, A., & Cunha, M. (2016). Assessing early memories of threat and subordination: Confirmatory factor analysis of the early life experiences scale for adolescents. *Journal of Child and Family Studies, 25*(1), 54–64. <https://doi.org/10.1007/s10826-015-0202-y>
- Richter, A., Gilbert, P., & McEwan, K. (2009). Development of an early memories of warmth and safeness scale and its relationship to psychopathology. *Psychology and Psychotherapy: Theory, Research and Practice, 82*(2), 171–184. <https://doi.org/10.1348/147608308X395213>
- Scheibner, H. J., Daniels, A., Guendelman, S., Utz, F., & Bermpohl, F. (2017). Self-compassion mediates the relationship between mindfulness and Borderline Personality Disorder symptoms. *Journal of Personality Disorders, 31*, 1–19. https://doi.org/10.1521/pedi_2017_31_331
- Sharp, C., & Bleiberg, E. (2007). Borderline personality disorder in children and adolescents. In A. Martin & F. Volkmar (Eds.), *Lewis's child and adolescent psychiatry: A comprehensive textbook* (4th ed., pp. 680–691). Lippincott Williams and Wilkins.
- Sharp, C., Kalpakci, A., Mellick, W., Venta, A., & Temple, J. (2015). First evidence of a prospective relation between avoidance of internal states and borderline personality disorder features in adolescents. *European Child Adolescent Psychiatry, 24*(3), 283–290. <https://doi.org/10.1007/s00787-014-0574-3>
- Sharp, C., Steinberg, L., Michonski, J., Kalpakci, A., Fowler, C., Frueh, B. C., & Fonagy, P. (2019). DSM borderline criterion function across age-groups: A cross-sectional mixed-method study. *Assessment, 26*(6), 1014–1029. <https://doi.org/10.1177/1073191118786587>
- Sharp, C., Steinberg, L., Temple, L., & Newlin, E. (2014). An 11-item measure to assess borderline traits in adolescents: Refinement of the BPFSC using IRT. *Personality Disorders: Theory, Research, and Treatment, 5*(1), 70–78. <https://doi.org/10.1037/per0000057>
- Skodol, A. E., Gunderson, J. G., McGlashan, T. H., Dyck, I. R., Stout, R. L., Bender, D. S., Grilo, C. M., Shea, M. T., Zanarini, M. C., Morey, L. C., Sanislow, C. A., & Oldham, J. M. (2002). Functional impairment in patients with schizotypal, borderline, avoidant, or obsessive-compulsive personality disorder. *American Journal of Psychiatry, 159*(2), 276–283. <https://doi.org/10.1176/appi.ajp.159.2.276>
- Stepp, S. D., Olino, T. M., Klein, D. N., Seeley, J. R., & Lewinsohn, P. M. (2013). Unique influences of adolescent antecedents on adult borderline personality disorder features. *Personality Disorders: Theory, Research, and Treatment, 4*(3), 223–229. <https://doi.org/10.1037/per0000015>
- Swartz, M., Blazer, D., George, L., & Winfield, I. (1990). Estimating the prevalence of borderline personality disorder in the community. *Journal of Personality Disorders, 4* (3), 257–272. <https://doi.org/10.1521/pedi.1990.4.3.257>

- Trull, T. J., Jahng, S., Tomko, R. L., Wood, P. K., & Sher, K. J. (2010). Revised NESARC personality disorder diagnoses: Gender, prevalence, and comorbidity with substance dependence disorders. *Journal of Personality Disorders, 24*(4), 412–426. <https://doi.org/10.1521/pedi.2010.24.4.412>
- Van Vliet, K., & Kalnins, G. (2011). A compassion-focused approach to nonsuicidal self-injury. *Journal of Mental Health Counseling, 33*(4), 295–311. <https://doi.org/10.17744/mehc.33.4.j7540338q223t417>
- Warren, R. (2015). Commentary on emotional processing in a ten-session general psychiatric treatment for borderline personality disorder: A case study. *Personality and Mental Health, 9*(1), 84–86. <https://doi.org/10.1002/pmh>
- Westen, D., & Chang, C. (2000). Personality pathology in adolescence: A review. In A. H. Esman, L. T. Flaherty, & H. A. Horowitz (Eds.), *Adolescent psychiatry: Developmental and clinical studies* (Vol. 25, pp. 61–100). Analytic Press.
- Widiger, T. A. (1998). Invited essay: Sex biases in the diagnosis of personality disorders. *Journal of Personality Disorders, 12*(2), 95–118. <https://doi.org/10.1521/pedi.1998.12.2.95>
- Winograd, G., Cohen, P., & Chen, H. (2008). Adolescent borderline symptoms in the community: Prognosis for functioning over 20 years. *Journal of Child Psychology and Psychiatry, 49*(9), 933–941. <https://doi.org/10.1111/j.1469-7610.2008.01930.x>
- Winsper, C., Zanarini, M. C., & Wolke, D. (2012). Prospective study of family adversity and maladaptive parenting in childhood and borderline personality disorder symptoms in a non-clinical population at 11 years. *Psychological Medicine, 42*(11), 2405–2430. <https://doi.org/10.1017/S0033291712000542>
- Wupperman, P., Neumann, C. S., Whitman, J. B., & Axelrod, S. R. (2009). The role of mindfulness in borderline personality disorder features. *Journal of Nervous and Mental Disease, 197*(10), 766–771. <https://doi.org/10.1097/NMD.0b013e3181b97343>
- Xavier, A., Cunha, M., & Pinto-Gouveia, J. (2015). Deliberate self-harm in adolescence: The impact of childhood experiences, negative affect and fears of compassion. *Revista de Psicopatología y Psicología Clínica, 20*(1), 41–49. <http://doi.org/10.5944/rppc.vol.1.num.1.2015.14407>
- Xavier, A., Pinto-Gouveia, J., & Cunha, M. (2016a). Nonsuicidal self-injury in adolescence: The role of shame, self-criticism and fear of self-compassion. *Child & Youth Care Forum, 45*(4), 571–586. <http://doi.org/10.1007/s10566-016-9346-1>
- Xavier, A., Pinto-Gouveia, J., & Cunha, M. (2016b). The protective role of self-compassion on risk factors for nonsuicidal self-injury in adolescence. *School Mental Health, 8*(4), 4. <http://doi.org/10.1007/s12310-016-9197-9>
- Yarnell, L. M., & Neff, K. D. (2013). Self-compassion, interpersonal conflict resolutions, and well-being. *Self and Identity, 12*(2), 146–159. <https://doi.org/10.1080/15298868.2011.649545>
- Yarnell, L. M., Stafford, R. E., Neff, K. D., Reilly, E. D., Knox, M. C., & Mullarkey, M. (2015). Meta-analysis of gender differences in self-compassion. *Self and Identity, 14*(5), 499–520. <https://doi.org/10.1080/15298868.2015.1029966>
- Zanarini, M. C., Frankenburg, F. R., Hennen, J., Reich, D. B., & Silk, K. R. (2005). The McLean study of adult development (MSAD): Overview and implications of the first six years of prospective follow-up. *Journal of Personality, 19*(5), 505–523. <http://doi.org/10.1521/pedi.2005.19.5.505>

- Zanarini, M. C., Frankenburg, F. R., Hennen, J., Reich, D. B., & Silk, K. R. (2006). Prediction of the 10-year course of borderline personality disorder. *American Journal of Psychiatry*, 163(5), 827–832. <https://doi.org/10.1176/appi.ajp.163.5.827>
- Zanarini, M. C., Frankenburg, F. R., Reich, D. B., Fitzmaurice, G., Weinberg, I., & Gunderson, J. G. (2008). The 10-year course of physically self-destructive acts reported by borderline patients and axis II comparison subjects. *Acta Psychiatrica Scandinavica*, 117(3), 177–184. <https://doi.org/10.1111/j.1600-0447.2008.01155.x>