UNIVERSIDADE D
COIMBRA

Diogo Rafael Veiga Carreiras

BORDERLINE FEATURES IN ADOLESCENCE:
CONTRIBUTIONS TO ASSESSMENT, UNDERSTANDING INNER SELF-TO-SELF RELATIONSHIP AND IDENTIFYING TRAJECTORIES FOR BORDERLINE PERSONALITY DISORDER

Doctoral thesis in Doctorate in Psychology, Specialty Clinical Psychology, supervised by Professor Marina Isabel Vieira Antunes Cunha and Professor Paula Cristina de Oliveira de Castilho Freitas and submitted to the Faculty of Psychology and Educational Sciences of the University of Coimbra.

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Title

Borderline features in adolescence: Contributions to assessment, understanding inner self-to-self relationship and identifying trajectories for borderline personality disorder

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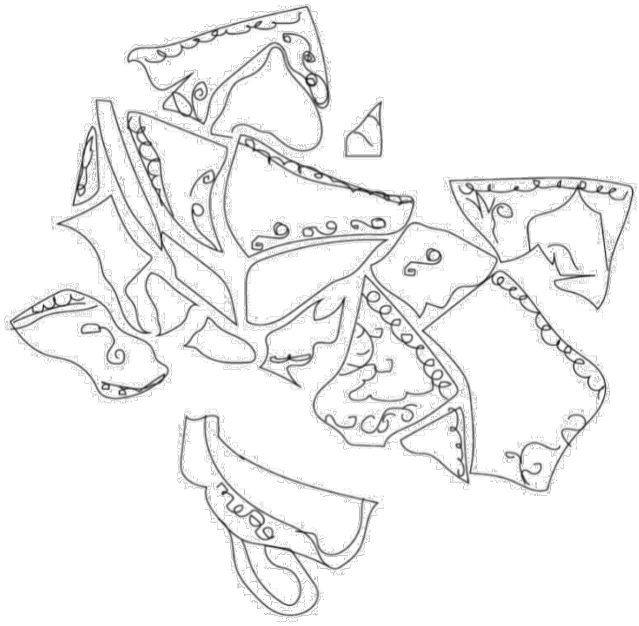
To everyone who has felt empty and forsaken.
Let love for yourself guide you home.

i don’t know what living a balanced life feels like
when i am sad
i don’t cry i pour
when i am happy
i don’t smile i glow
when i am angry
i don’t yell i burn
the good thing about
feeling in extremes
is when i love
i give them wings
but perhaps
that isn't
such a good thing
cause they always
tend to leave and
you should see me
when my heart is broken
i don't grieve
i shatter

- rupi kaur



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Abstract

Introduction

Borderline personality disorder (BPD) is a severe condition related to emotion, self-image and relationships instability, feelings of abandonment and emptiness, marked impulsivity, self-harm behaviors and suicide ideation. Patients with BPD often show decreased quality of life and well-being, and present one of the highest suicide rates of mental disorders. This disorder has a developmental path that often begins in childhood and the onset usually occurs in late adolescence or early adulthood. Identifying marked borderline features at early ages would be valuable to refer adolescents for appropriate treatment and prevent these features' growth. Moreover, research on psychological processes in adolescence is scarce but crucial to understand the development of BPD and sustain and design psychotherapeutic interventions. Thus, this doctoral dissertation aimed (1) to provide valid and adapted instruments for early assessment of borderline symptoms in the Portuguese population, (2) to describe and characterize youth borderline features in Portugal, identify internal risk and protective factors and examine the relationships between them and finally, (3) to longitudinally explore different trajectories of borderline features and test the influence of self-disgust and self-compassion over time.

Methods

This research included ten studies, of which four are psychometric, four cross-sectional and two longitudinal. Most studies were conducted with convenience adolescent samples from the general population. In one study was used a sample of parents, in two studies were used panels of experts in mental health, and in another was used a sample of adolescents with non-suicidal self-injury (NSSI) history. Data were collected in schools and online, mostly through self-report questionnaires. Additionally, data from parent-rated questionnaires and a clinical interview was also collected. Statistical analyses were conducted using the SPSS (and PROCESS Macro), AMOS and MPLUS.

Results

The psychometric studies indicated that (I) the Borderline Personality Features Scale for Children (BPFS-C) and for Parents (BPFS-P) are valid, reliable and brief questionnaires to assess borderline features in youth; (II) the

Multidimensional Self-Disgust Scale for Adolescents (MSDS-A) showed good psychometric quality, with good convergent validity and also temporal stability; (III) the Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A) was accepted by youth and the expert panel classified the instrument as generally good, providing important suggestions and comments to improve its quality; (IV) and the English version of the CI-BOR-A was approved by English experts and is now also available to be used in other countries. In turn, cross-sectional studies showed that (V) the more prevalent borderline features amongst Portuguese youth were feelings of abandonment, emotional intensity, and an unstable self-image; and that impulse, suicide ideation, stress and depression were significant predictors of borderline features; (VI) girls exhibited higher borderline features and self-disgust than boys, and lower self-compassion; (VII) mindfulness, isolation, and self-judgement were the self-compassion factors that mediated the relationship between memories of subordination and threat in childhood and borderline features; (VIII) self-compassion stood in the way of self-disgust and borderline features, highlighting the mediating role of self-compassion. Longitudinal studies revealed that (IX) self-compassion protected adolescents with NSSI from developing borderline features over six months; and (X) adolescents who already had higher borderline features seem to present a gradually rising trajectory, and feelings of self-disgust increased borderline features over one year.

Conclusions

Early assessment of borderline features, BPD and related constructs is essential to identify adolescents that need appropriate treatment. The BPFS-C, BPFS-P, MSDS-A, and the CI-BOR-A can now be used for this purpose in the Portuguese population. Self-disgust increases the risk of adolescents growing borderline symptoms and self-compassion might counter this effect and evolution. Targeting self-disgust and cultivating self-compassion in adolescents with subthreshold BPD symptoms could mitigate the development of borderline features, decreasing BPD occurrence in adulthood, with significant implications for patients, families, communities, and society.

Keywords

borderline features, adolescence, self-compassion, self-disgust, non-suicidal self-injury, developmental trajectories, assessment, prevention

Resumo

Introdução

A Perturbação *Borderline* da Personalidade (PBP) é uma condição severa relacionada com instabilidade emocional, na autoimagem e nas relações sociais, sentimentos de abandono e vazio, marcada impulsividade, comportamentos autolesivos e ideação suicida. Pacientes com PBP frequentemente apresentam reduzida qualidade de vida e bem-estar e apresentam uma das maiores taxas de suicídio das perturbações mentais. Esta perturbação tem um percurso desenvolvimental que muitas vezes começa na infância e se manifesta no final da adolescência ou início da idade adulta. A identificação de sintomatologia *borderline* marcada em idade precoce é valiosa para referenciar adolescentes para tratamentos adequados e prevenir o crescimento destes sintomas. Ademais, a investigação de processos psicológicos na adolescência é escassa, mas crucial para compreender o desenvolvimento da PBP e fundamentar o desenho de intervenções psicoterapêuticas. Neste sentido, esta dissertação de doutoramento teve como objetivos (1) fornecer instrumentos válidos e adaptados para a avaliação precoce de sintomas *borderline* na população portuguesa, (2) descrever e caracterizar os sintomas *borderline* em jovens portugueses, identificar fatores internos protetores e de risco e analisar as relações entre eles e, por fim, (3) explorar longitudinalmente diferentes trajetórias dos traços *borderline* e testar a influência da autoaversão e autocompaixão ao longo do tempo.

Métodos

Esta investigação incluiu dez estudos, dos quais quatro são psicométricos, quatro transversais e dois longitudinais. A maioria dos estudos utilizou amostras de conveniência de adolescentes da população geral. Um estudo incluiu uma amostra de pais, dois estudos utilizaram painéis de especialistas em saúde mental, e outro estudo utilizou uma amostra de adolescentes com histórico de comportamentos autolesivos não suicidários. Os dados foram recolhidos presencialmente em escolas e *online*, maioritariamente através de questionários de autorresposta. Também foram utilizados questionários para pais e entrevista clínica. As análises estatísticas foram realizadas no SPSS (e PROCESS Macro), AMOS e MPLUS.

Resultados

Os estudos psicométricos indicaram que (I) a Escala de Traços de Personalidade *Borderline* para Adolescentes (ETPB-A) e para Pais (ETPB-P) são questionários breves, válidos e fidedignos para avaliar sintomas *borderline* em jovens portugueses; (II) a Escala Multidimensional da AutoAversão para Adolescentes (EMAA-A) mostrou boa qualidade psicométrica, boa validade convergente e estabilidade temporal; (III) a Entrevista Clínica para a Perturbação *Borderline* da Personalidade para Adolescentes (CI-BOR-A) foi bem aceite pelos/as jovens e o painel de especialistas classificou o instrumento como bom na generalidade, dando importantes comentários e sugestões para melhorar a sua qualidade; (IV) a versão inglesa da CI-BOR-A foi aprovada por especialistas ingleses e está também disponível para ser utilizada noutros países. Por sua vez, os estudos transversais mostraram que (V) os traços *borderline* mais prevalentes entre adolescentes portugueses são os sentimentos de abandono, intensidade emocional e autoimagem instável; e que o impulso, ideação suicida, *stress* e depressão foram preditores significativos da sintomatologia *borderline*: (VI) as raparigas apresentaram traços *borderline* e autoaversão mais elevados do que os rapazes e menor autocompaixão; (VII) o *mindfulness*, isolamento e autojulgamento foram os fatores da autocompaixão que mediaram a relação entre memórias de subordinação e ameaça na infância e os traços *borderline*; (VIII) a autocompaixão entrepôs-se na relação entre a autoaversão e a sintomatologia *borderline*, mostrando o seu efeito mediador. Os estudos longitudinais revelaram que (IX) a autocompaixão protegeu adolescentes com comportamentos autolesivos não suicidários de desenvolverem sintomatologia *borderline* em seis meses; e (X) adolescentes que apresentam traços *borderline* elevados tendem a revelar uma trajetória crescente, e os sentimentos de autoaversão parecem aumentar a sintomatologia *borderline* ao longo de um ano.

Conclusões

A avaliação precoce de sintomas *borderline*, de PBP e construtos relacionados é essencial para identificar adolescentes que necessitam de tratamento. A ETPB-A, ETPB-P, EMAA-A e a CI-BOR-A podem ser utilizadas para esse fim na população portuguesa. A autoaversão aumenta o risco de adolescentes desenvolverem sintomas *borderline* e a autocompaixão poderá

contrariar este efeito e evolução. Combater a autoaversão e cultivar a autocompaixão em adolescentes com sintomas subclínicos de PBP poderá mitigar o desenvolvimento de traços *borderline*, diminuindo a ocorrência de PBP na idade adulta, com importantes implicações para pacientes, famílias, comunidades e sociedade.

Palavras-chave

traços *borderline*, adolescência, autocompaixão, autoaversão, comportamentos autolesivos não suicidários, trajetórias desenvolvimentais, avaliação, prevenção

Preface

Personality disorders were often seen as the ugly duckling of mental illness. Maybe because most people think they are “untreatable” or “incurable”, and clinicians sometimes do not know how to manage the persistent problems brought into session. Although personality disorders are associated with a high economic burden (and certainly with a higher inner emotional burden), not all funding entities are aware of the need to address such problems and provide these patients the appropriate treatments to empower them. People who have a personality disorder bring maladaptive cognitive and behavioral patterns from a long journey, which prevent them from thinking and functioning in much more fulfilling and flourishing ways. The idea of targeting borderline-related problems at early age is the cornerstone of this work. Instead of trying to treat adults with already rigid patterns of malfunctioning, what about preventing adolescents from evolving such features?

I have been fascinated by the borderline functioning since I first heard about it. But only some years after I really understood what it was all about. Hearing in session people crying their guts out for feeling abandoned, unable to fill the emptiness inside, and hating themselves for being who they are, it was heartbreaking and touching enough to make me want to know more about this and to think about what could help people regulate their emotions and, mostly, live their best lives. What if instead of self-harming and self-destructive behaviors we saw them as coping mechanisms and resourceful attempts at survival? What if instead of only seeing the dangerous behaviors, we saw moments of getting through unbearable moments? Would we hold compassion for the reasons why they did it? Would we offer support and understanding for the darkness and heaviness that made them necessary?

The truth is that despite being unstable, unpredictable and hurt, people with marked borderline symptoms can be extremely sensitive, artistic, brave and a little deeper than most people. In fact, people who suffer in the deepest places have a privileged contact with emotions in their purest shape and with the human nature.

The following pages are a proof of my long journey into borderline living, evolution, psychological processes, and suffering. Four and a half years of research in schools, in research centers, in cafes, at home. With adolescents, parents, mental health professionals, colleagues. With myself. In a world before

and after the COVID-19 pandemic, the greatest health crisis of our time. I cannot say this was easy, but I can assure it was worthy every word.

The preset dissertation has three main focuses. Firstly, to adapt and validate important assessment instruments of borderline features and related constructs for the Portuguese adolescent population. Secondly, to characterize borderline symptoms in a large Portuguese sample and identify potential risk and protective factors for the evolution of such symptoms. Moreover, to examine the relationship between those factors. Finally, to observe borderline features' trajectories in adolescents and assess the longitudinal impact of psychological variables in the evolution of borderline features.

Ten studies were conducted to accomplish the abovementioned goals, of which six are already published, three under review and one in preparation. Most papers are in international journals in developmental, clinical or general psychology, with blinded peer-review.

This thesis is divided into three parts and six chapters.

Part I has two chapters. **Chapter 1** includes an overview of borderline personality disorder, specificities of borderline features in adolescence, and a proposal of how borderline features might be prevented from the inside out at early ages. This chapter will lead the reader through general considerations on BPD, then focusing on early prevention of such features. In the end, it is presented how borderline features might be prevented by activating the soothing system from the inside (self-compassion as affiliative motivation that works as antidote to self-disgust). **Chapter 2** provides a look at the general and specific aims of this research as well as how the different studies fit those aims. Moreover, the general methodology behind the descriptive and empirical studies is presented.

Part II includes three chapters with all the descriptive and empirical studies of this dissertation. **Chapter 3** presents four studies of adaptation, validation, and development of essential tools to assess borderline features and self-disgust in the adolescent population. Three articles present four new instruments in Portugal: a short self-report questionnaire to assess borderline features in youth, a questionnaire for parents to assess their children's borderline features, a multidimensional self-report questionnaire to evaluate self-disgust in adolescents and, finally, a clinical interview to diagnose BPD in young ages and further

assessment of self-harm. The fourth article consists of developing the English version of the clinical interview. **Chapter 4** proceeds to contribute with four cross-sectional studies. The first study intends to clinically characterize borderline symptoms in the Portuguese adolescent population. The other studies shed light on potential risk (e.g., gender, impulsivity, self-disgust) and protective factors (e.g., self-compassion and its components) for adolescents' borderline features and examine their relationship. **Chapter 5** is composed of two longitudinal studies, one with two and another with three waves of assessment. These studies provide more sound evidence of the effect of self-compassion and self-disgust on the evolution of borderline features in adolescents and contribute valuable insights into preventive measures.

Part III encompasses **Chapter 6**, where readers can find a summary of the main findings and a general discussion. Besides the clinical implications of these findings for screening and prevention of borderline features in youth, this last part acknowledges the limitations and strengths of the current research while suggesting new directions for future studies.

List of publications

I. 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*, 1–11. https://doi.org/10.1007/s10826-020-01800-7

II. Carreiras, D., Guilherme, M., Cunha, M., & Castilho, P. (2023). Measuring Self-Disgust in Adolescence: Adaptation and validation of a new instrument for the Portuguese adolescent population. *Under review*

III. Carreiras, D., Cunha, M., Sharp, C. & Castilho, P. (2023). The Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A): Development, Acceptability and Expert Panel Evaluation. *Under review*

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Part I

Introduction

Chapter 1

Theoretical background

Chapter 2

Aims and methods

Chapter 1

Theoretical background

This chapter will lead the reader through an overview of borderline personality disorder functioning, its course and development, particularly in adolescence, and a description of some internal psychological mechanisms that could prevent its growth. By the end of this chapter, the reader will have a broader understanding of the background on which this research is based on.

1.1. Borderline personality disorder (BPD): an overview

The first description of BPD took place in the 30's (Stern, 1938) although the American Psychiatric Association (APA) only accepted it as a mental health disorder in 1980. It was initially conceptualized as a condition standing on the "borderline" between neurosis and psychosis (Paris, 2014). The Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) includes ten personality disorders separated into three clusters: A, B, and C. BPD is encompassed in cluster B, considered the dramatic, emotional, and erratic cluster (APA, 2013).

In this first point some considerations about the BPD diagnosis (considering both categorical and dimensional approaches) and prevalence in the general population and clinical settings will be addressed. Moreover, the BPD onset, development and course, gender differences, a description of the most plausible etiological factors and, finally, the challenges and burdens of the actual treatments will be discussed.

1.1.1. Diagnosis

The DSM-5 (APA, 2013) presents the categorical approach of BPD, which is the most common orientation for mental health professionals. Firstly, it is important to clarify the criteria for a personality disorder, which presents an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture. This pattern is manifested in two (or more) of the following areas: cognition, affectivity, interpersonal functioning, and impulse control. The enduring pattern is inflexible and pervasive across a broad range of personal and social situations and leads to clinically significant distress or impairment in important areas of functioning. The pattern is stable and of long duration, and its onset can be traced back at least to adolescence or early adulthood.

BPD is a personality disorder with a pervasive pattern of instability of interpersonal relationships, self-image and affects and marked impulsivity beginning by early adulthood and present in a variety of contexts as indicated by five (or more) of the following criteria:

1. Frantic efforts to avoid real or imagined abandonment.
2. A pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation.
3. Identity disturbance, markedly and persistently unstable self-image or sense of self.
4. Impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance use, reckless driving, binge eating).
5. Recurrent suicidal behaviors, gestures or threats, or self-mutilating behavior.
6. Affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability or anxiety usually lasting a few hours and only rarely more than a few days).
7. Chronic feelings of emptiness.
8. Inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights).
9. Transient, stress-related paranoid ideation or severe dissociative symptoms.

Diagnosing BPD is not simple because of some resemblances with other disorders, particularly mood disorders (Biskin & Paris, 2012). However, it is essential to keep in mind that despite the overlapping of some symptoms, BPD is

a single disorder different from major depression, bipolar disorder, or posttraumatic stress disorder. As borderline features include affect, relationship, impulse and cognition issues, one way to differentiate BPD from other conditions is by paying attention whether a significant amount of these symptoms occur concomitantly (APA, 2013; Biskin & Paris, 2012). Another note is the fact that the BPD diagnosis include nine multisymptomatic criteria which represent 126 different combinations, reflecting then a heterogeneous disorder. That is why factor analysis of BPD resulted in four groups of symptoms: affectivity, impulse control, cognitive and interpersonal functioning (APA, 2013; Hallquist & Pilkonis, 2012). Additionally, borderline functioning tends to be manifested at early ages and it is difficult to identify a discrete-time point after which the disorder started to develop (APA, 2013).

1.1.2. Categorical and dimensional approaches

The DSM-5 (APA, 2013) preconizes the possibility of classifying personality disorders according to the categorical and dimensional approaches. The first approach has a long history, accompanying the medical tradition of classifying pathologies as present or absent. Taking BPD as an example, according to this approach, a person either has the disorder, or does not, according to the number of criteria met. From this perspective, it seems that personality disorders are qualitatively distinct and discrete clinical syndromes (Trull & Durrett, 2005). This approach presents important advantages, such as simplifying the assessment and clinical decisions about appropriate treatments, as well as simplifying communication and conceptualization (Stein, 2012; Trull & Durrett, 2005).

More recently, a greater consensus has been established towards the dimensional approach to personality disorders. Some of the arguments supporting this perspective are the fact that patients diagnosed with the same condition may present relatively different clinical displays, and personality disorders tend to be comorbid with each other, as well as with other mental illnesses. Moreover, “other specified” or “unspecified” diagnostics are often more correct and accurate, although less informative (APA, 2013; Brown & Barlow, 2005). The dimensional approach defends that personality disorders reflect dysfunctional degrees of personality traits that vary in a continuum between healthy and unhealthy. This

perspective provides a coherent understanding of the heterogeneity of symptoms and the difficulty in establishing clear boundaries between diagnoses. Moreover, it allows capturing subclinical traits and symptoms (Trull & Durrett, 2005), allowing clinicians to describe the patient's pathology in a richer and more specific way. This approach improves communication between mental health professionals through more detailed descriptions instead of a simple presence or absence of a diagnosis. Even though the dimensional approach seems to suit better personality disorders, it also presents relevant drawbacks, for example, considering the diverse disorder categories, diagnostic reliability is not favorable, as well as the high diagnostic comorbidity (Brown & Barlow, 2005).

The dimensional model requests evaluating impairments in personality functioning in terms of the self (identity and self-direction) and others (empathy and intimacy). Personality functioning vary along a continuum. On the one side, an optimal functioning includes a complex, fully elaborated and well-integrated psychological world, with a positive sense of self, a well emotionally regulated life, and the capacity to be a productive member of society with satisfying relationships. On the opposite side of the continuum, someone with severe personality pathology has a poor sense of self, disorganized, unclear and with a conflicted psychological world. Also, a tendency to experience negative and dysregulated affect and an inadequate ability to develop fulfilling social relationships (APA, 2013).

Moreover, the dimensional model also involves the assessment of personality traits that are grouped into five polarized domains (negative affectivity vs. emotional stability, detachment vs. extraversion, antagonism vs. agreeableness, disinhibition vs. conscientiousness and psychoticism vs. lucidity). These five personality trait domains comprise a spectrum of more specific personality facets, in a total of 25.

The BPD criteria according to this approach are as follows:

A. Moderate or greater impairment in personality functioning, manifested by characteristic difficulties in two or more of the following four areas:
    1. **Identity**: Markedly impoverished, poorly developed, or unstable self-image, often associated with excessive self-criticism; chronic feelings of emptiness; dissociative states under stress.
    2. **Self-direction**: Instability in goals, aspirations, values, or career plans.

3. **Empathy**: Compromised ability to recognize the feelings and needs of others associated with interpersonal hypersensitivity (i.e., prone to feel slighted or insulted); perceptions of others selectively biased toward negative attributes or vulnerabilities.
4. **Intimacy**: Intense, unstable, and conflicted close relationships, marked by mistrust, neediness, and anxious preoccupation with real or imagined abandonment; close relationships often viewed in extremes of idealization and devaluation and alternating between overinvolvement and withdrawal.

B. Four or more of the following seven pathological personality traits, at least one of which must be (5) Impulsivity, (6) Risk taking, or (7) Hostility:

1. **Emotional lability** (an aspect of **Negative Affectivity**): Unstable emotional experiences and frequent mood changes; emotions that are easily aroused, intense, and/or out of proportion to events and circumstances.
2. **Anxiousness** (an aspect of **Negative Affectivity**): Intense feelings of nervousness, tenseness, or panic, often in reaction to interpersonal stresses; worry about the negative effects of past unpleasant experiences and future negative possibilities; feeling fearful, apprehensive, or threatened by uncertainty; fears of falling apart or losing control.
3. **Separation insecurity** (an aspect of **Negative Affectivity**): Fears of rejection by - and/or separation from - significant others, associated with fears of excessive dependency and complete loss of autonomy.
4. **Depressivity** (an aspect of **Negative Affectivity**): Frequent feelings of being down, miserable, and/or hopeless; difficulty recovering from such moods; pessimism about the future; pervasive shame; feelings of inferior self-worth; thoughts of suicide and suicidal behavior.
5. **Impulsivity** (an aspect of **Disinhibition**): Acting on the spur of the moment in response to immediate stimuli; acting on a momentary basis without a plan or consideration of outcomes; difficulty establishing or following plans; a sense of urgency and self-harming behavior under emotional distress.

6. **Risk taking** (an aspect of **Disinhibition**): Engagement in dangerous, risky, and potentially self-damaging activities, unnecessarily and without regard to consequences; lack of concern for one's limitations and denial of the reality of personal danger.
7. **Hostility** (an aspect of **Antagonism**): Persistent or frequent angry feelings; anger or irritability in response to minor slights and insults.

The levels of impairment on identity, self-direction, empathy, and intimacy are rated using the Levels of Personality Functioning Scale presented in the DSM-5 Section III. The rating scale is 0 for *little or no impairment*, 1 for *some impairment*, 2 for *moderate impairment*, 3 for *severe impairment* and 4 for *extreme impairment* (APA, 2013).

A person with BPD meets two (or more) criteria of group A (with impairment level of two or more) and four (or more) criteria of group B of which one of them is impulsivity (5), risk taking (6) or hostility (7).

1.1.3. Prevalence

The prevalence of BPD is estimated to be around 1.6% in the general population. However, this prevalence might reach 5.9%. In mental health institutions, the prevalence of BPD is around 10-12%, and 20-22% among inpatients of psychiatric facilities (APA, 2013; Ellison et al., 2018).

In adolescents, the prevalence of BPD is similar to adults, being approximately 1.3% to 5% (Johnson et al., 2008; Lewinsohn et al., 1997; Sharp & Fonagy, 2015). As expected, the prevalence increases with the severity of the clinical picture. In adolescent outpatients, the prevalence of BPD is around 22% (A. M. Chanen et al., 2008) and might reach 50% in inpatients (Grilo et al., 1996). If we consider hospitalized suicidal adolescents, the prevalence of BPD is around 62% (Knafo et al., 2015) and it increases to 76% if we consider adolescents attending the hospital emergency department for suicidal behaviors (Greenfield et al., 2014).

Based on our bibliographic review, a few studies have examined the prevalence of BPD in the Portuguese population. A study on primary health care reported that 14.1% of patients had BPD, being this the most prevalent personality disorder (Carraça, 2012). Brazão et al. (2015) found that 12.2% of male prison inmates had

a BPD diagnosis, although only 6.6% of those had BPD as a primary diagnosis. No studies were found about the prevalence of BPD in Portuguese adolescents.

1.1.4. Onset, development, and course

BPD is mainly hypothesized as a developmental disorder that begins in the adolescent age (Chanen & Kaess, 2012). Seventeen was identified as the mean age for seeking help due to borderline symptoms with six years as standard deviation, meaning that some people reported asking for help by the age of eleven (Zanarini et al., 2006). Eighteen was recognized as the mean age for first individual therapy of adults with BPD (Zanarini et al., 2001).

The course of BPD in adolescence does not seem very stable. Around 40% of adolescents with BPD maintained the diagnosis two years later (Chanen et al., 2004). Greenfield et al. (2014) found a higher percentage of BPD continuity but in suicidal youth. BPD diagnosis was consistent at baseline and four years later in 76% of participants. Moreover, Haltigan and Vaillancourt (2016) analyzed intra-individual and interpersonal risk factors in children and adolescents and the association with trajectories of borderline features. The authors identified three distinct trajectories: elevated/rising, intermediate/stable, and low/stable, revealing the borderline features' heterogeneous course in early adolescence.

Moreover, studies on BPD reveals developmental pathways characterized by heterotypic (changes across ages in the manifested psychopathology with a common underlying vulnerability) and homotypic continuity (one maintains a single diagnosis over time). While some studies (Beauchaine et al., 2009; Stepp et al., 2012) reported that adults with BPD had different disorders and mental health problems during their development (attention deficit hyperactivity disorder, conduct problems, substance abuse), other studies described a high degree of homotypic continuity from late adolescence to adulthood (Bornovalova et al., 2013; Greenfield et al., 2014; Winograd et al., 2008).

Evidence supports that BPD symptoms are likely to improve with age (Paris & Zweig-Frank, 2001; Skodol et al., 2005; Zanarini et al., 2005, 2012). In a sample of 175 adults with BPD, 85% remitted after ten years (Gunderson et al., 2011). There are potential reasons to explain this, for example, people grow out of the symptoms as they mature, which is congruent with less impulsive behaviors as

people get older (Oltmanns et al., 2014; Stevenson et al., 2003) and trying different treatments and developing coping skills might decrease the severity of symptoms and increase better management (Ng et al., 2019). Based on the aforementioned studies, a graphical representation of the BPD course is depicted in Figure 1.

Although it seems that BPD often remits with age, it is also important to notice that there are recurrence rates of 11-36% depending on the remission time (Skodol et al., 2005; Zanarini et al., 2005). These results suggest that BPD relapse is less likely when the remission lasts longer.

In sum, BPD usually begins in adolescence, and although it is not necessarily a lifetime disorder, many patients still have residual symptoms later in life (Biskin, 2015).

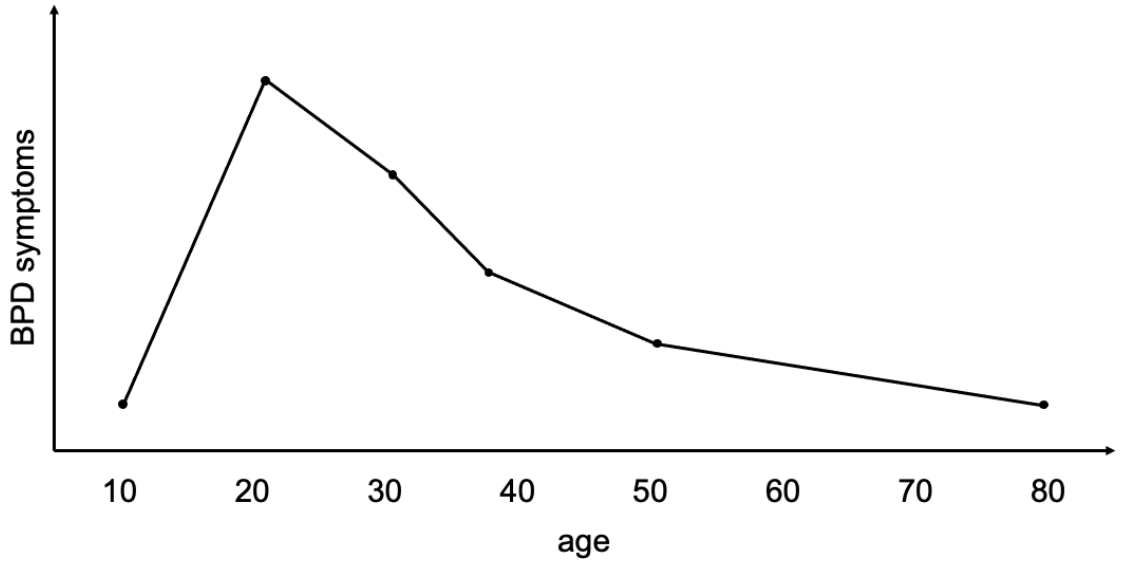

Figure 1. Graphical representation of the BPD course.

1.1.5. Gender differences

The DSM-5 (APA, 2013) indicates a 3:1 female to male ratio for BPD. This means that BPD is predominantly diagnosed in women (around 75%). Some authors have debated and proposed explanations for this difference (Sansone & Sansone, 2011; Simmons, 1992; Skodol & Bender, 2003). Firstly, the diagnostic experts on the DSM-III Task Force were mostly men. This might have influenced the assumptions of what is healthy and unhealthy, and female behaviors falling outside the gender stereotypes might have been considered pathological. Secondly, women are more likely than men to seek treatment for psychological

difficulties, which might overrepresent women in mental health services. Moreover, research on BPD shows a gender disproportion in sampling. Thirdly, some BPD criteria are more socially and culturally related to women. For example, intense and inadequate anger might be more socially acceptable for a man and not considered abnormal; feelings of abandonment and displays of emotional dependency might be more culturally expected in women.

In spite of a strong body of evidence showing that BPD occurs more frequently in women (Silberschmidt et al., 2015; Swartz et al., 1990; Trull et al., 2010), other studies reported no differences in the prevalence of BPD among both genders (Aragonès et al., 2013; Golomb et al., 1995; Morey et al., 2002). Maybe a closer look into specific gender differences of BPD would be more valuable than looking at global symptomatology. On the one hand, men with BPD are more likely to have substance use disorders, schizotypal, narcissistic and antisocial personality disorders, and explosive temperament and higher novelty-seeking levels. On the other hand, women are more likely to have post-traumatic stress disorder, eating disorders, identity disturbance, hostility and relationship disruption (Johnson et al., 2003; Sansone & Sansone, 2011; Silberschmidt et al., 2015). The gender differences align with those found in general psychopathology epidemiological studies and so they do not seem exclusive of BPD. In sum, the distribution of BPD among males and females might be relatively equal, although gender should play a role in slightly distinctive behaviors and the display of such symptoms.

As far as we know, these gender differences in BPD were explored in samples of cisgender people (probably assumed by the researchers), which do not represent the gender diversity (e.g., non-binary, trans people). As gender minorities, people are gaining increased visibility in society and clinical settings. Studies with people who do not identify as cisgender man or woman and its relationship with BPD are needed.

1.1.6. Etiology: interactions between genes, environment, and neurobiology

Over the last 30 years, research on BPD etiology has identified several possible factors that might explain the causes and origins of this disorder. Roughly

speaking, we might consider the interactions between genes, environment, and neurobiology to understand the basis of BPD development.

Mental disorders run in the families, which means that the presence of a familial history of mental disorders increases the likelihood of the offspring having the same disorders (Friedel et al., 2018). BPD is no exception. First degree relatives of someone with BPD have three to four times more probability of developing the same disorder compared to people with no BPD familial history (Friedel et al., 2018). Belsky et al. (2012) explored the etiology of borderline related features in a sample of 1 116 same-sex twins assessed from age 5 to 12. Results showed that inherited liability and harsh treatment (physical maltreatment and maternal negative expressed emotions) explained borderline personality related characteristics at age 12. The probability of monozygotic twins to belong in the extreme borderline personality associated characteristics group was 52%, whereas this probability was 7% for dizygotic twins, which suggests that genetic factors contribute significantly to borderline features. Considering the four main domains of BPD (affect instability, identity disturbance, unstable relationships and impulsivity/NSSI), heritability estimates range between 26% to 35% (Distel et al., 2010). Research to identify specific genes of BPD has been inconsistent and frustrated, with many genes with small effects pointing to BPD development. Modest results have been found for several genes involved in the serotonergic and dopaminergic systems (e.g., COMT gene, 5-HTTLPR) (Ni et al., 2009; Tadić et al., 2009). A recent gene-wide study showed encouraging findings about chromosome 5, but there is still a long road ahead (Lubke et al., 2013).

In sum, sound evidence shows that genetic factors might predispose a person to BPD. Still, it is crucial to consider epigenetic modifications. These are changes in gene activity not caused by nucleotide sequence modifications (Friedel et al., 2018). There is the hypothesis that early life negative events might influence borderline features through epigenetic changes of developmental or stress-related genes (Perroud et al., 2011, 2016). From the same premises, recent evidence suggests that BPD treatment might influence epigenetic processes in patients (Perroud et al., 2013).

In 1993, Linehan presented the biosocial model of BPD in her book “Cognitive-Behavioral of Borderline Personality Disorder”. The author affirmed that emotional and environmental vulnerabilities, as well the interaction between them, are

essential to understand the development of BPD. Typical borderline behaviors are a result of a dialectical transition between biological (emotional dysregulation) and environmental (invalidating contexts) aspects, which influence each other reciprocally. On the one hand, exhibiting emotional dysregulation increases the likelihood of other people being emotionally invalidating; on the other hand, invalidating environments increases the likelihood of emotional dysregulation if one has already a genetic predisposition. The biological mechanisms that underly emotional dysregulation imply a significant disturbance in the physiological processes that compose the emotional regulation system (Linehan, 1993). There is evidence that some borderline patients have a low threshold to activate the limbic structures (Cowdry et al., 1985; Lis et al., 2007). Because regulation of attention and of mood-dependent behavior is so critical to overall emotional regulation, biological deviations in the attentional system or in brain systems involved in impulse control may also be important. According to Linehan (1993), some biological conditions predispose people to:

- Being more reactive to emotional stimuli: one's emotional response is rapid and intense.
- Having high emotional sensitivity: an extensive range of emotional stimuli triggers an above-average emotional response.
- Slow return to baseline: the emotional activation slowly decreases to normal levels.

The higher the emotional vulnerability, the higher the need to regulate emotions. As environmental vulnerability, Linehan (1993) defined invalidating contexts, by which people did not learn to identify emotions, to be with them or regulate them, and were not able to trust their emotional responses. An invalidating environment is intolerant about those internal experiences, especially when others perceive those emotions as inadequate for the context. In an invalidating environment, the expression of a person´s private experiences especially those having to do with emotions, are consistently disapproved or ignored; difficulties meeting environmental demands are trivialized; the ease of problem-solving is oversimplified and there is an unrealistic emphasis on positive thinking. This type of environment fails to teach the individual how to label and regulate emotional arousal, how to tolerate distress, and when to trust their responses as a valid

reaction to life events. This results in oscillation between emotional inhibition and extreme emotional activation. Linehan (1993) identified three broad family types that increase the risk of BPD: chaotic families (little time or attention is given to the child), perfect families (intolerance towards negative emotion displays) and typical families (poor fit for a child who is emotionally sensitive and impulsive). A brief note on the meaning of invalidation environments: this has become a popular term in the literature, yet there has been no uniformity in its operationalization and measurement. A recent systematic review examined 77 studies and recommended greater scientific rigor in the measurement of invalidation to better understand of its role of invalidation in BPD development (for a review, see Musser et al., 2018).

More recently, an essential contribution was added to the biosocial theory previously described (Crowell et al., 2014; Crowell et al., 2009). The authors proposed that the impulsivity trait increases the risk for BPD (as well as other disorders related to behavioral dysregulation) along with emotional vulnerability. Impulsivity can be seen as a multifinal factor, which means that its presence might end up in a wide range of outcomes, including BPD. In fact, this trait has been indicated as one of the main predictors for this disorder. Not surprisingly, borderline features comprise many behaviors with marked impulsivity, such as non-suicidal self-injury, risk behaviors (reckless driving, binge eating, compulsive buying, etc.) or relationship conflicts. Another hypothesis added was that emotional dysregulation is shaped and maintained by familiar environments, specifically invalidating ones. This type of domestic context includes rejecting or dismissing emotional responses and expressions; intermittently reinforcing intense emotions; for instance, supporting the child when he/she is doing an extreme tantrum. These repetitive interactions increase emotional dysregulation and slow the return to baseline. Adolescence is a particular period where the interaction between biology and the environment fosters maladaptive coping strategies, which might result in the early exhibition of borderline features. Crowell and colleagues (2014) also indicate that non-suicidal self-injury is a precursor to BPD in adulthood and that having borderline features in adolescence increases the risk of having BPD later. The biosocial model of the development of BPD is presented in Figure 2.

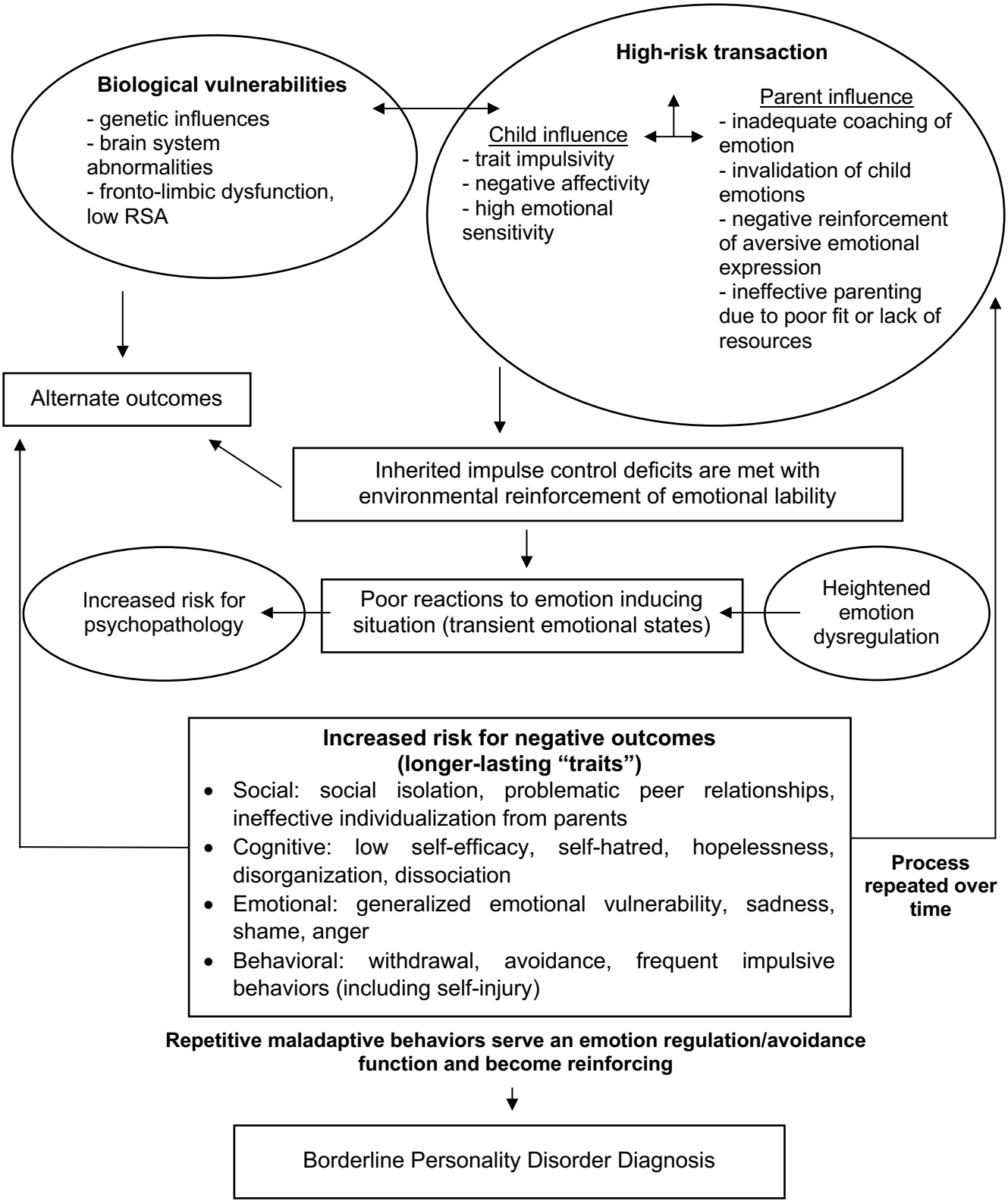

Figure 2. Biosocial theory for the development of BPD (Crowell et al., 2009, 2014).

Besides the previously described invalidation environments, other familial contexts have been suggested as related to BPD functioning. A family household with parents with severe psychopathology might contribute to borderline features of their offspring (certainly, genetic factors should also be accounted for here). Parents' conduct disorder, antisocial behavior, nicotine dependence, alcohol drug use, paternal BPD traits, parental conflict, lack of attention and poor involvement predicted child borderline features (Fatimah et al., 2020). Also, childhood maltreatment, including emotional and physical abuse, has been pointed to as a critical environmental factors for BPD (Bornovalova et al., 2006).

Another important component to consider when talking about BPD etiology, is the neurobiology of this disorder. A systematic review of the neurobiological underpinnings of childhood and adolescence BPD has already been performed (Winsper, Marwaha, et al., 2016) to examine the neurobiological correlates of early borderline symptoms. High levels of heritability were found, as well as evidence for gene-environment interactions. The authors suggested that the neurobiological abnormalities identified in adult BPD might be similar in childhood, indicating a neurobiological diathesis (hereditary or constitutional predisposition to a disorder). Considering the complexity of BPD, with a wide range of criteria from emotional and self-related constructs to behaviors and social functioning, neurobiological studies often explore the neuroactivity and brain circuits in different aspects such as emotional dysregulation, impulsivity, disturbances of perception, cognition, and interpersonal impairment (Friedel et al., 2018). Reviewing the neurobiological studies extensively on all these aspects would fall outside the scope of this introduction. Accordingly, we will present some of the main findings, particularly on emotion dysregulation and self-identity, which are our focus on point 1.3. Emotional regulation (modulation of our emotions, moods, feelings and expression to reach affective balance or homeostasis) occurs in the frontolimbic regions of the brain (Davidson & Irwin, 1999; Kebets et al., 2021). These regions comprise the amygdala, hippocampus, hypothalamus, dorsolateral and right dorsomedial prefrontal cortices, orbital frontal cortex, anterior cingulate cortex, and insula, amongst others. To intentionally regulate negative affect, these functionally connected structures are activated and so frontolimbic circuitry underlies emotional regulation (Banks et al., 2007; Davidson et al., 2000; Goldin et al., 2008). As emotion regulation neural activity is a key point in BPD, studies on this matter

showed that in comparison to control groups, people with BPD exhibit limbic hyperreactivity, with greater amygdala, insula and parahippocampal activation, and reduced anterior cingulate cortex activation when exposed to emotionally challenging tasks (e.g., remembering unsolved life events) or emotional pictures, fearful faces, and abandonment scripts (Beblo et al., 2006; Buchheim et al., 2008; Donegan et al., 2003; Herpertz et al., 2001; Minzenberg et al., 2008; Schmahl et al., 2003; Schnell et al., 2007). These findings align with the assumption than BPD patients have poor capacities to activate prefrontal regions involved in emotion modulation. Moreover, it has been suggested that people with BPD are less apt to self-monitor and self-assess their own emotional states than healthy controls (Friedel et al., 2018).

Evidence leans towards the ventromedial prefrontal lobes and the right anterior parietal lobe as the brain areas involved in BPD identity disturbance (Friedel et al., 2018). In the XIX century, the case of Phineas Gage was revolutionary for medicine. This railroad worker presented drastic changes in attitudes and behaviors after an accident in which an iron bar perforated his skull and affected his ventromedial prefrontal lobes. People who knew Gage considered him a skilled, committed and socially mature person. However, after the accident he started being irreverent, capricious, impulsive, disrespectful of social norms and offensive to others (Damásio, 1994). Some of these are observable behaviors of BPD. Moreover, the anterior cingulated and the frontal insular cortices could also be involved in BPD considering that these brain regions contain the von Economo neurons. When these neurons are lost, for instance due to early dementia, people exhibit less empathy, social awareness, and self-control (Allman et al., 2011).

The take-home message of this point is that BPD seems to have different factors that contribute to its cause. Genes appear to have a significant contribution but the environmental events that a person is subject to might increase the likelihood of developing BPD, and lead to epigenetic changes. Reichborn-Kjennerud et al. (2013) concluded that one highly heritable general BPD factor influenced all diagnosis criteria, whereas environmental effects influenced mainly interpersonal and the affective dimension. Moreover, research on BPD suggests certain neurobiological processes that also interact with the genes and environmental factors, making it hard to decide which occurred first. Chicken-and-egg situations

are not uncommon in science and longitudinal studies including all these variables are essential to find answers.

1.1.7. Treatment: a heavy reality and burden

BPD is a very demanding condition, with sporadic relapses, difficulties in social relationships, hostility, parasuicide behaviors and worrying suicide rates (Paris, 2019). The burden associated with BPD increases as borderline symptoms are severer and persistent. Besides the person with BPD, this burden affects carers (e.g., parents, partners, siblings, children), hospital staff (e.g., clinical assistants, patient services assistants), mental health professionals (e.g., psychiatrists, psychologists, specialist nurses) and the mental health system (e.g., psychiatric facilities, emergency departments, hospitals).

People with BPD might involve the family in financial problems (e.g., insurance, treatments), household disturbance, and poorer social functioning (for example, major changes in work and social life) due to meeting the needs of their relatives with BPD. Additionally, family and carers might experience social stigma, feelings of guilt, worry or embarrassment (Bailey & Grenyer, 2013; Goodman et al., 2011).

When not attending a certain treatment program or long-term follow-up, BPD patients usually use mental health services in times of crisis (Lazzari et al., 2018). BPD people are particularly vulnerable to natural losses, conflicts with others, or triggered memories of past abuse. Often, these crises might lead them to hospital admissions depending on the severity of their symptoms. Feelings of abandonment or emotional dysregulation along with impulsivity might trigger self-harm behavior, suicide ideation or even suicide attempts. Healthcare professionals and staff need to be attentive throughout the hospitalization due to the high likelihood of self-harm or suicide behaviors (Lazzari et al., 2018).

The fact that BPD patients have several relapses and often drop out from long-term treatments gives the idea that they will never recover, making them a stigmatized group in the mental health care system (Kealy & Ogrodniczuk, 2010). Treatments are often frustrated by the difficulty that these patients have in establishing a therapeutic relationship (mistrust/abuse believes), by inadequately questioning medical decisions and sabotaging their own care plans (Lazzari et al., 2018). People with BPD easily enter a self-fulfilling prophecy cycle by provoking

what they fear in other people as they interact with them. For example, they fear being abandoned and often exhibit control or manipulation towards other people, which in turn might lead to other people's distancing. The same applies to the therapist-patient relationship. BPD patients might respond to the decisions and actions of the therapist with attitudes and behaviors that would confirm negative expectations towards these patients, possibly leading the therapist to finish the treatment sooner, distancing behaviors or rejection attitudes (Aviram et al., 2006). Furthermore, it is very hard to implement an integrated approach to articulate between the hospital and the community due to lack of means and resources (Lazzari et al., 2018).

Mental health professional need to have proper knowledge, skills, and training with BPD to deal with these patients. Otherwise, they will see the borderline functioning as deliberate and controlled instead of a complex result of genes, unhealthy social environment, trauma, and cognitive-emotional dysregulation. Although people with BPD can be manipulative, threatening, challenging and demanding, only professional with knowledge and experience (as well as sensitive to such features and motivated to help them) would be able to provide adequate treatment, putting aside prejudice and stigma that perpetuate the negative view of these people (Aviram et al., 2006).

Personality disorders are associated with a great economic burden for being highly demanding for psychiatric, health, and social care services. BPD was associated with increased total costs by receiving, for instance, more individual and group psychotherapy, day treatment, psychiatric hospitalization, and halfway house residence than other personality disorders (Soeteman et al., 2008). A German study showed that each BPD patient had a cost of 8 508 € per year for health care services (Bode et al., 2017). The authors added that even though BPD is less prevalent than major depression disorder, it is the most life-threatening mental disorder with severe psychosocial consequences (Bode et al., 2017).

Considering that BPD tends to have the onset in adolescence, early interventions might change the path to developing a full BPD diagnosis. The BPD functioning history is shorter at earlier ages than in adulthood (Bozzatello et al., 2019). Preventing the evolution of borderline features as soon as possible would decrease the need for demanding, challenging, and onerous treatments later in life, either for patients, carers, mental health professionals or the care system.

1.2. Borderline features in adolescence

Although the diagnosis of personality disorders in youth has faced a certain reluctance from some mental health professionals, such as psychologists and psychiatrists, Westen et al. (2003) concluded that personality disorders are similar in adolescents between 14-18 years and adults. Nonetheless, criteria developed to assess adults might not be optimal to evaluate youth. This study reported that only 28% of adolescents were given a personality disorder diagnosis when 76% of participants met the criteria for a personality disorder (assessed with objective diagnostic measures). Moreover, the main diagnostic features predictive of BPD in youth have already been reported to be identity disturbance, inappropriate/intense anger, paranoid ideation, feelings of emptiness and self-harm behaviors (Sharp & Fonagy, 2015).

The idea that adolescents are moody, impulsive, careless, or disruptive might lead to a misunderstanding of borderline features considering a possible overlapping. Therefore, an accurate assessment by an expert mental health professional is essential to evaluate the frequency, severity, and duration of borderline features in comparison to “normal” adolescent development (Miller et al., 2008). Some authors have reported that marked borderline features can be identified in adolescents and that dysfunctional cognitive, affective and behavioral patterns are usually early exhibited in youth (Bradley, Conklin, et al., 2005; Crick et al., 2005; Carla Sharp & Bleiberg, 2007; Westen & Chang, 2000).

1.2.1. Adolescence: growth and risk

Research on adolescence has gained a considerable focus in the last decades. Some reasons for this have been discussed and presented. Firstly, attention has been given to lifespan periods of considerable changes, and adolescence is a stage of development with evident challenges, modifications, and variations. Secondly, the interest in a biosocial perspective of development lead researchers to study adolescence which is a period with well-documented variation in both biology and social context. Thirdly, the priority of research funding to social problems, which often begin their manifestations in adolescence (e.g., drug use, antisocial behavior). Fourthly, several longitudinal studies in the 80’s started their baselines in the adolescence developmental stage (Steinberg & Morris, 2001).

Adolescence is the developmental period between 10 and 19 years of age (World Health Organization, 2021). As mentioned above, this stage is marked by various changes in several domains (biological, physical, psychological, cognitive, behavioral, and social) with crucial implications for adulthood functioning (Nelson et al., 2005). Cognitive capacities are improved (e.g., abstract thinking, reasoning), peers start having a central role in the life of adolescents, they become more independent from their parents, and body and appearance change (puberty) (Nelson et al., 2005).

This is the period when people start exploring and observing their psychological characteristics and traits. The sense of self is progressively built, as adolescents learn and discover who they really are and how they may fit in the social context around them. This goes in line with Erikson's theory (1968), by which adolescents face challenges to develop their sense of self. They form their identity by analyzing what they believe in, their goals, and their values. The psychosocial conflict in this stage is between identity and confusion, and to succeed this crisis, adolescents must develop a strong sense of self and identity. Adolescents develop more abstract perceptions of themselves, organizing who they are, where they fit in and who they want to be. The tendency is to form a more coherent and consistent view of the self in several domains (e.g., personality, appearance, social relationships, moral conduct) (Steinberg & Morris, 2001).

Although adolescence is a time of growth and development, it is also a time of significant risk. All these transformations may cause an additional stress that make adolescents vulnerable to experience psychological difficulties (Nelson et al., 2005; Wolfe & Mash, 2006). Evidence has shown that adolescence is associated with depressive symptoms, anxiety, aggression, rule violation, conduct problems, irritability, self-harm behaviors and substance use (Hemphill et al., 2010; Mendle, 2014; Oldehinkel et al., 2004; Patton et al., 2004, 2007). Moreover, adolescence is also a sensitive time for developing personality disorders, particularly BPD (Cohen et al., 2005; Sharp et al., 2018; Sharp & Fonagy, 2015).

In fact, some adolescence challenges might predispose youth to some borderline symptoms, for example, building their own social network with quality relationships, developing romantic connections while keeping close relationships with friends and family and maintaining academic performance (Sharp & Fonagy, 2015). Mentalizing skills are particularly relevant for interpersonal interactions and

connections and difficulties in mentalizing have been suggested as an explanation for interpersonal disturbances in adolescent BPD. Adolescents with borderline personality symptoms seem to present hypermentalizing (overinterpretation and complex inferences about others' mental states) that may lead to emotional dysregulation and poor social connections (Sharp et al., 2011). The rapid socio-emotional development in youth is concomitant with important functional and structural brain transformations, in particular the overactivation of the amygdala (Hare et al., 2008; Monk et al., 2003). These normative adolescent challenges in interaction with predisposing factors are depicted in Figure 3, representing the etiological factors in the development of adolescent BPD (Sharp & Fonagy, 2015).

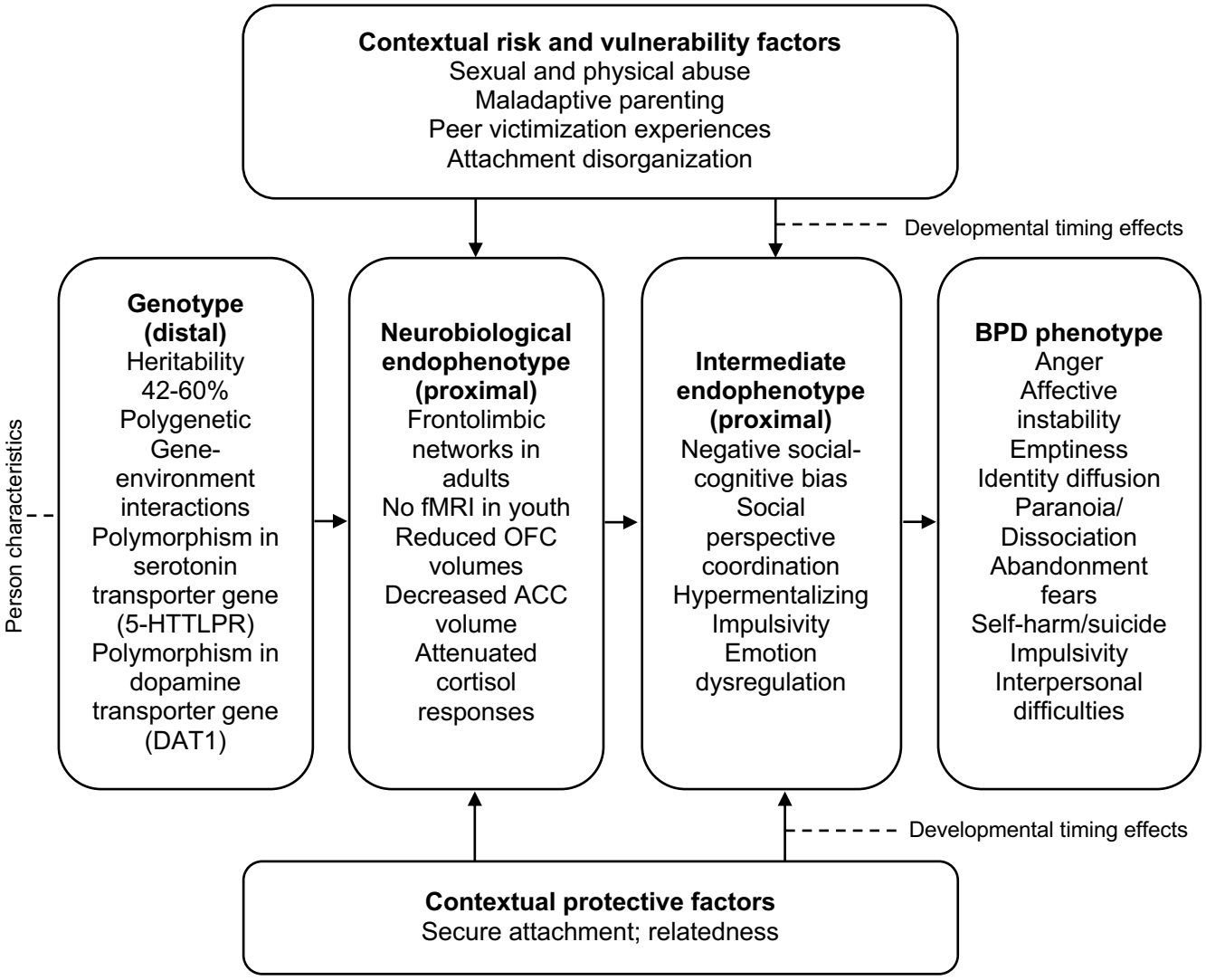

Figure 3. Etiology for the development of BPD in adolescence (Sharp & Fonagy, 2015).

1.2.2. Homotopic features: core symptoms across ages

As a personality disorder, BPD has a developmental trajectory. One of the main difficulties in developmental psychopathology is the heterotypic continuity, which is the fact that some symptoms might manifest differently throughout the developmental phases. In contrast, core symptoms might remain the same (Sharp et al., 2019). Considering the maturational changes in affective and social systems and processes as one develops, it is expected that borderline symptoms would display differently across ages.

Sharp and colleagues (2019) compared clinical samples of adolescents, young adults and adults to understand which borderline features differed across ages. In all BPD criteria were found differential item functioning (DIF) between adolescents and young adults/adults. Adolescents endorsed higher impulsivity, suicidal behaviors, affective instability, uncontrolled anger, and paranoid ideation. These BPD criteria are thoughts and behaviors often reported by adolescents in general, and so it might be difficult to differentiate what is considered normative and BPD-like. The heterotopic features are mainly behavioral and state dependent, being difficult to draw the line between BPD and other usually comorbid disorders (e.g., depression, bipolar disorder, substance use disorders). Other studies have supported the idea that BPD impulsivity decreases with age (Stepp & Pilkonis, 2008; Stevenson et al., 2003).

On the opposite, fears of abandonment, unstable interpersonal relationships, identity disturbance, and feelings of emptiness were similar between adolescents and adults. Such results indicate that these might be the homotopic features of BPD, which are more related to the self and interpersonal functioning (Sharp et al., 2019). These results are consistent with Meares et al. (2011) study that identified self/identity disturbance, emptiness and fear of abandonment as the core symptoms of BPD. Years before, Stevenson et al. (2003) have also reported nonsignificant differences on affect disturbance, identity disturbance and interpersonal problems between younger and older patients with BPD. The core borderline symptoms across ages seems to be related to the concept of self and others, which are more trait dependent, aligning with the classification of personality disorder in the DSM-5 (APA, 2013).

1.2.3. Heterotopic features: the case of non-suicidal self-injury (NSSI)

As described in the previous point, the borderline features that differs across developmental stages are those more “behavioral”, which seem to be more displayed in adolescence in comparison to adult age. Impulsivity and suicide behaviors are closely linked to non-suicidal self-injury (NSSI), particularly prevalent amongst adolescents (Gillies et al., 2018). The more consensual definition of NSSI is the intentional and direct destruction of body tissue without suicide intention (Brown & Plener, 2017; Klonsky, 2007; Klonsky & Moyer, 2008). Self-harm behaviors are diverse, including cutting, burning, and scratching the skin, punching or biting part of the body, amongst others (Greydanus & Shek, 2009). Adolescence is a vulnerable stage of development for the onset of NSSI (Klonsky et al., 2011). In a metanalysis using community samples of 280 408 adolescents, the prevalence of these behaviors was about 16.9%. Moreover, 13 was the average age for the NSSI onset reported in this study (Gillies et al., 2018). In Portugal, a self-report survey in schools from the metropolitan area of Lisbon showed that around 7% of adolescents reported at least one episode of self-harm, being the self-cutting the most common behavior (Guerreiro et al., 2017).

Studies have pointed out that NSSI has a close relationship with several psychopathological symptoms in youth, including personality disorders (Ayodeji et al., 2015), eating disorders (Davico et al., 2019; Islam et al., 2015) and depression (Xavier, Pinto-Gouveia, Cunha, et al., 2016). Additionally, it is related to an increased risk of suicide attempts and suicide (Hargus et al., 2009; Nock et al., 2006). Moreover, a Portuguese study with a large sample of Azorean adolescents concluded that NSSI was associated with impulsivity and impaired emotion regulation (Carvalho et al., 2015)

Looking closer at NSSI and BPD, they seem to influence each other reciprocally (Bracken-Minor & McDevitt-Murphy, 2014; Vega et al., 2017). This means that previous borderline features might predict future engagement in NSSI (Gratz et al., 2014), but also that NSSI history predicts increased borderline symptoms in the future (Crowell et al., 2012; Crowell & Beauchaine, 2008; Paris, 2005). More than 90% of adolescents with BPD and a history of hospitalization report having

engaged in NSSI in the past, with more than 50% reporting at least 50 occurrences (Goodman et al., 2017).

Several functions for self-harming have been discussed in different studies, being affect regulation, anti-dissociation, self-punishment, influencing others, sensation-seeking are some of the main functions (Briere & Gil, 1998; Klonsky, 2007, 2009). The abovementioned Portuguese study indicated that youth engaged in NSSI mostly to generate or relieve emotional states, and to influence social relationships (Carvalho et al., 2015). Paying attention to these functions, it is not difficult to understand why NSSI and BPD are so related. Extreme emotional outbursts characterize BPD and NSSI is a strong (and maladaptive) grounding regulation strategy. Dissociation is frequently experienced by people with marked borderline symptoms, especially in high stress or dysregulation moments. Once more, NSSI causes physical pain, which might interrupt a dissociative episode and allow one to recover a sense of self. People with BPD usually have unstable relationships with marked idealization and devaluation and feelings of abandonment. NSSI might be used to control and influence people around. A way of manipulation through eliciting in others care, worry, and concern which, when attended to, leads to positive reinforcement of the self-injurious behaviors. Moreover, as a negative self-to-self relationship is often present in BPD, NSSI as self-punishment could represent an expression of anger or diminishment towards oneself.

1.2.4. Risk and protective factors

Several risk and protective factors have been identified for BPD throughout the years, both in adolescents and adults. Some risk factors have been described in point 1.1.6. (Etiology: interactions between genes, environment, and neurobiology), for example impulsivity, emotional vulnerability, and invalidation environments. A systematic review of risk factors prospectively associated with BPD was recently undertaken by Stepp et al. (2016) using 39 longitudinal studies. The authors divided the risk factors into broader social factors (e.g., low socioeconomic status, stressful life events), family factors (e.g., family psychopathology, low warmth, rejection, and low maternal satisfaction with the child), maltreatment and trauma (e.g., sexual abuse, neglect) and child factors

(e.g., low IQ, negative affectivity, impulsivity). Other risk factors for BPD are attention deficit hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD) symptoms (Burke & Stepp, 2012; Stepp et al., 2012), as well as experiential avoidance (Chapman et al., 2011; Sharp et al., 2015). Although there are several variables associated with increased borderline symptoms, there is a lack of specificity, which means that these factors predict BPD as well as other mental disorders (Sharp & Fonagy, 2015).

Not so many protective factors were identified in comparison to risk factors. The more evidence supported factors are high IQ, superior school performance, artistic talents (Helgeland & Torgersen, 2004), and coping strategies to regulate emotions (Chapman et al., 2011; Knafo et al., 2015). Psychological mechanisms as risk and protective factors to BPD are yet to explore. Identifying internal psycho-emotional mechanisms that could be cultivated or attenuated at early ages could have a great potential in preventing the evolution of borderline symptoms (Sharp et al., 2015).

1.2.5. Early assessment: current status and challenges

Assessing borderline features in youth is essential to detect the early presence of these dysfunctional traits. The main instruments used for this purpose are clinical interviews, self-report questionnaires and questionnaires for parents. This way, clinical information can be provided by clinicians, adolescents themselves, and parents, contributing to a more comprehensive and enriched assessment. Some well-known instruments to assess borderline features in adolescents are used internationally but none of these are validated for the Portuguese population.

The Childhood Interview for DSM-IV Borderline Personality Disorder (CI-BPD; Zanarini, 2003) was the first clinical interview specifically adapted to diagnose BPD in children and adolescents. Adapting this interview included simplifying the language, removing two forms of impulsivity because they did not apply to youth (promiscuity and reckless driving) and making it more structured. The nine items reflect the nine criteria of BPD according to the DSM-IV categorical approach (intense and inappropriate anger; emotional instability; chronic feelings of emptiness; identity disturbance; stress-related paranoid ideation or severe dissociative symptoms; fear of abandonment; recurrent suicidal behavior or self-mutilating behaviors; impulsivity; and pattern of unstable interpersonal

relationships). Items are rated by the interviewer using “0” (*absent*), “1” (*probability present*) and “2” (*definitely present*). At least five items scored with “2” are required for a full diagnosis of BPD. In a sample of 6,410 11-year-old English children, Zanarini et al. (2011) showed that CI-BPD had an inter-rater reliability with a kappa median of .88. Eighty-six percent of kappa values were above .75. Sharp et al. (2012), with a sample of adolescent inpatients, also showed good inter-rater reliability (kappa = .89), good internal consistency (α = .80) and adequate convergent validity.

The Borderline Personality Features Scale for Children (BPFS-C; Crick et al., 2005) is a self-report questionnaire composed of 24 items that constitute four factors: Affect instability (e.g., “My feelings are very strong. For instance, when I get mad, I get really, really mad. When I get happy, I get really, really happy”), Identity Problems (e.g., “I feel that there is something important missing about me, but I do not know what it is”), Negative Relationships (e.g., “I have picked friends who have treated me badly”) and Self-harm (e.g., “I get into trouble because I do things without thinking”). It was initially designed to assess borderline features in nine-year-old and older children. The authors modified the version of the BOR Scale of the PAI (Morey, 1991), which is a consistent and valid questionnaire used to evaluate borderline personality features in adults. Items are rated on a 5-point Likert scale from *never true* (1) to *always true* (5). Responses across items are summed, with higher sums indicating a greater level of borderline features. The original study of 24 items presented good internal consistency (α = .76; Crick et al., 2005). In 2014, Sharp et al. presented the 11-item version of BPFS-C, a shorter self-report questionnaire with equivalent psychometric quality (α = .85). A version for parents (Borderline Personality Features Scale for Parents; BPFS-P; Sharp et al., 2010) was also developed, contributing to a more complete assessment of borderline features in youth. This version is similar to the adolescent version in content and structure.

The early assessment of personality features, and particularly BPD in youth, has faced some reluctance and challenges. Firstly, there is a belief that psychiatric nomenclature does not allow personality disorder diagnosis in adolescence, which is not entirely true. For example, in the DSM-5, clinicians are allowed to diagnose BPD in adolescents if justified by a pervasive pattern of impairing symptoms in the last year (APA, 2013; Sharp, 2017). Secondly, some borderline-related

expressions and behaviors might be "normal" features of adolescents and not evident personality disturbances, and as youth get older, they will remit. Adolescence is a developmental stage that usually involves some turmoil or turbulence, and this might be a better reason to explain some feelings and behaviors when compared to a personality disorder (Larrivée, 2013). However, it seems that for some people, there is a certain stability of borderline features from childhood, and the 2% prevalence of BPD in youth justifies the actual existence of such traits at young ages (Sharp, 2017; Sharp & Tackett, 2014). Thirdly, there is the argument that other psychiatric disorders better explain the personality disorder symptoms. However, studies have shown that borderline features are unique and distinct in youth and not better explained by other internalizing or externalizing disorders (Sharp, 2017). Furthermore, there is a stigma associated with labelling children with a personality disorder; nevertheless, if adolescents with BPD are not detected and treated, they will contribute to the stigma associated with this disorder (Sharp, 2017; Sharp & Tackett, 2014). By late adolescence, youth with BPD can be diagnosed reliably (Miller et al., 2008; Winsper et al., 2016).

In sum, early detection of borderline features might be an essential step to referral for appropriate treatment and prevent the development of these maladaptive and impairing symptoms, with significant consequences on mental health and societal costs (Bozzatello et al., 2019; Hastrup et al., 2019; Swartz et al., 1990).

1.2.6. Prevention: a viable possibility and hope

In the 80’s (yet still pertinent and applicable nowadays), Gordon (1983) proposed an operational classification of disease prevention with three different measures: universal, selective and indicated. Universal prevention targets the general population or whole groups that have not been identified as at risk, being the prevention desirable for all members. Selective prevention targets people that have a higher risk than average of developing a disease, for instance by having a family history of such disease. Finally, indicated prevention involve individuals of high risk who present subthreshold symptoms that foreshadow a disorder. Even though they do not meet the full criteria for the disease, they are very likely to

develop it. Early detection and screening programs for initial signs of a disease is an example of indicated preventive measures.

Universal and selective preventive measures for BPD are difficult to implement considering the lack of risk factors with specificity for BPD in comparison to other mental disorders (Chanen & Thompson, 2014; Sharp & Fonagy, 2015). Some factors such as impulsivity or adverse childhood experiences are risk factors for BPD as they are for other mental disorders (multifinality) (Chanen & Thompson, 2014). The more trustworthy indicator is being biological offspring of mothers with the disorder (White et al., 2003). Accordingly, indicated prevention has gained strength for BPD (Chanen & Thompson, 2014). Useful instruments have been developed and widespread in different countries contributing to identify subclinical borderline features and to diagnose BPD at early ages (see point 1.2.5.). Indicated prevention measures for BPD might involve more demanding engagement and costs for participants but, at the same time, greater benefits.

Diagnosis and treatment of BPD are warrant when adolescents first meet the criteria for the disorder and early intervention needs to be routine in child and adolescent mental health practice, including for youth with subclinical features. Mental health professionals should be trained in evidence-based interventions to prevent the evolution of borderline symptoms, with individual and group sessions in mental health institutions, schools, and communities. These interventions should involve not only adolescents but also families as they are a key context in adolescents' life (Chanen et al., 2017).

A few preventive programs have been implemented in adolescents to decrease their propensity to develop BPD. In Australia, Cognitive Analytic Therapy (CAT) was administered to 78 adolescent outpatients (ages between 15 and 18 years) with a subclinical or clinical diagnosis of BPD. At 24 months, behavioral problems, depression and anxiety symptoms decreased after treatment, as well as NSSI and suicide attempts. Moreover, social and occupational functioning improved (Chanen et al., 2009). Emotion Regulation Training (ERT) has also been employed to prevent BPD in youth. Randomized controlled trial (RCT) results showed that ERT was not more effective than treatment as usual. Nonetheless, the study reinforced the need to implement early interventions for BPD symptoms in adolescents since both groups were receiving some kind of treatment, and there were important improvements in borderline symptoms severity, general psychopathology and

quality of life (Schuppert et al., 2012). Mentalization-Based Treatment for Adolescents (MBT-A) showed being effective in reducing self-harm, depression and risk-taking behaviors in adolescents consecutively admitted in mental health services with self-harm and comorbid depression, of which 73% had BPD (Rossouw & Fonagy, 2012). Finally, a systematic review examined the efficacy of dialectical behavioral therapy (DBT) for adolescents with self-harm, suicide ideation (primary outcomes) and borderline symptoms (secondary outcome) (Kothgassner et al., 2020). DBT seems to be a valuable treatment to decrease self-harm and suicidal thoughts but with less efficacy to reduce BPD symptoms at long-term. The RCTs included in this review varied in duration from less than one month to 12 months, with longer treatments showing higher efficacy.

Other intervention programs, especially DBT, have been adapted for adolescents with various psychiatric disorders besides BPD (e.g., mood disorders, externalizing disorders, eating disorders). Although there is a high comorbidity between BPD and other mental disorders, examining these studies would fall out of the scope of this introduction. To know more about this, please see MacPherson et al., 2013; Zapolski & Smith, 2017.

Preventing BPD from the start, when borderline symptoms begin to manifest, would have crucial implications, reducing the heavy burden and costs for families, mental health professionals and society. Studies show that preventive measures with evidenced-based interventions appear to be effective for youth with marked borderline symptoms (Chanen et al., 2009; Rossouw & Fonagy, 2012; Schuppert et al., 2012). Identification of personality pathology in children and adolescents and subsequent implementation of earlier evidence-based interventions might prevent the developmental course of BPD.

1.3. Preventing the evolution of borderline features from the inside out

Until this point, we have been addressing the main questions around BPD, how it is manifested in adolescence and the importance of implementing preventive measures. It is now clear that mental health professionals and researchers shall not only look for treatment of crystalized borderline symptoms in adult ages but also for prevention at early ages. In this line, the next points will present some

background about internal mechanisms that might be related to borderline features in adolescence, in the sense of being potential targets to prevent BPD in youth. Studying borderline features prospectively in community samples will allow us to identify internal risk and protective factors that might attenuate the evolution and intensification of those features into a personality disorder.

We focus on internal regulation mechanisms as they are valuable tools that can be cultivated and trained to carry throughout life steadily. We based on the affect regulation systems theorized by Gilbert (2005, 2009, 2010), and we propose that self-disgust would increase borderline features and self-compassion will buffer that development over time. Moreover, they have not been furtherly examined in BPD research.

1.3.1. Affect regulation systems

Using as cornerstone the research work by LeDoux (1998), Morrone-Strupinsky and Depue (2005) and Panksepp (1998), Gilbert (2005, 2010) developed a theory in which our brains contain three interacting types of emotion regulation systems: the threat and self-protection system, the drive-excitement system, and the soothing and safeness system. Sometimes these systems are not balanced as we are overusing one of them, usually the threat and drive systems to manage and deal with perceived threats. The systems are sensitive to specific stimuli that rise certain brain interactions (through specific neurotransmitters) that underlie the experience of emotions (Gilbert, 2005). We will now look in detail to each one of the three systems, which are depicted in Figure 4.

The threat/self-protection system is focused on detecting and responding to different types of threats. It includes stress-hormones such as cortisol and adrenaline. When a perceived threat is detected, this system responds quickly and automatically, originating a series of cognitive (e.g., thoughts, memories, images), emotional (e.g., fear, anger, disgust, shame), physiological (e.g., increased heartrate, breathing faster) and behavioral responses (e.g., fight, flight, freeze, submission). This system reacts to external perceived threats (e.g., stressful situations, humiliation, losses) as it does to internal perceived threats (e.g., emotions, thoughts, judgments, expectations).

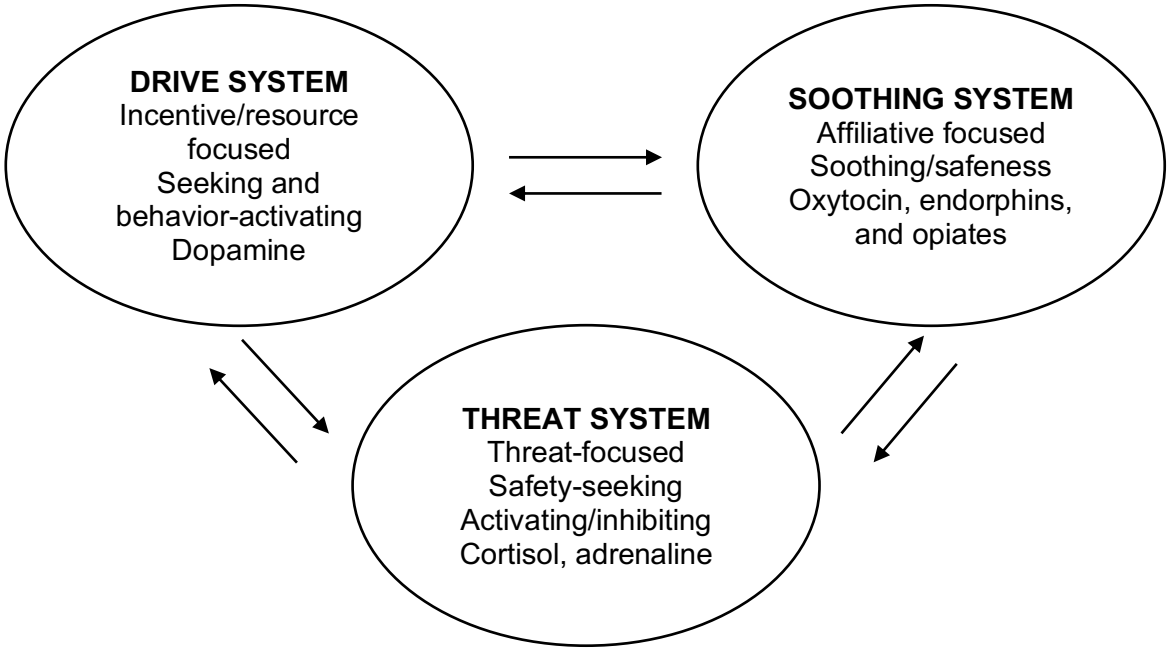

Figure 4. Affect regulation systems (Gilbert, 2005, 2009, 2010).

The drive system is about motivation towards what we need or want to flourish. It makes our attention focus on one purpose, helping us pursuing goals, seek opportunities and securing resources (e.g., food, sexual partners, alliances). In our society, humans tend to pursuit social rank, status and achievement. Dopamine is the brain chemical associated with this system, producing a sense of satisfaction, accomplishment, and gratification. Notwithstanding the importance of pursuing goals and feeling motivated, the drive system's overactivation might results in compulsive behaviors, perfectionism, stress, and burnout.

The soothing system works when no threats are around us and no goals must be chased. Thus, we feel safeness, calmness, and peace, because the oxytocin, endorphins and opiated neurochemicals are released. This system is related to experiences of care, acceptance, kindness, support and affiliation, as it is the mammalian caregiving system. 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 and perceived threat. Soothing can be an essential source of strength because being capable of supporting and caring for the self in times of failure would prevent diving into self-criticism, self-attack, and/or self-disgust. Accepting mistakes as part of the journey,

learning from them, rising, and trying again seems to be a more resilient form of facing difficult life events. Nonetheless, some people struggle to activate and understand the soothing system, either for being underactivated or blocked. Childhood adverse environments/experiences (rejection, bullying, hostility) and trauma might explain this. Optimistically, a large body of evidence has shown that people can learn, develop and cultivate self-soothing skills (Bluth et al., 2016; Gilbert & Procter, 2006; Muris, 2016; Neff & Germer, 2013).

1.3.1.1. Affect (dys)regulation of BPD

Similar to other mental health disorders, the affect regulation systems are pretty much unbalanced in people with BPD. The overactivation of the threat-protection system might be, in a first instance, explained by the overactivation of the amygdala, insula and parahippocampal regions, and underactivation of the anterior cingulate cortex (as previously described in point 1.1.6). The negative affect usually experienced by people with BPD (e.g., depressive symptoms, anxiety or panic attacks, anger) and difficulties in emotional regulation also reflect the overactivation of the threat-protection system. Around 90% of BPD patients experience co-occurrence of mood and anxiety disorders and, consequently, emotional dysregulation (Zanarini et al., 2004).

During episodes of intense emotional dysregulation, BPD patients might lose control of their behavior due to high emotional activation and intolerance to experience such emotions. This often results in harmful strategies that work to decrease emotional activation, for example drugs use, binge eating, or self-harm. These behaviors block or numb aversive emotions only in the short-term (Chapman et al., 2011). As the threat/self-protection system is extremely activated, the person feels overwhelmed, without control, or lost in the emotional world.

The difficulty in using the soothing system, essentially related to caring, kindness and altruism, does not seem surprising considering the usual background of people with BPD, whose developmental environments did not stimulate such skills. The insecure or ambivalent attachment might result in overestimating threats. Also, being protected and cared for could activate the threat-protection system itself. The fear of engaging in kindness, warmth, and affiliation behaviors has been called fear of compassion (Gilbert et al., 2014). This fear might raise, for example, from

believing that one is undeserving of love, or that compassion is a sign of weakness, or even from having memories of receiving both kindness and abuse from a significant person (Gilbert et al., 2014). For people with BPD, receiving compassion from others may be confusing and conflicting with the typical negative self-view. Therefore, receiving compassion from others may not have its expected benefits, and it might be hard to develop self-compassion (Loess, 2019). Nevertheless, and considering the above, activating the soothing system to regulate emotions in BPD could be particularly useful to reduce emotional activation, dissociation and harmful behaviors.

1.3.2. Self-identity of people with marked borderline features

Marsha Linehan (1993) described patients with BPD as people with a lack of emotional skin. As if one had burned skin and would be much more sensitive to temperature changes or wind, feeling agony at the slightest touch or movement. But what “self” would develop underneath such fragile skin?

Being emotionally unstable impacts on a person’s self-image since the self is seen as an insecure home. In a blink of an eye, a person with BPD can feel panic, loneliness or rage. Being very emotional can be extremely exhausting and weary, particularly when someone is not aware of their own triggers. A prospective study with a risk sample of 162 participants, who were assessed from childhood to adulthood, had already highlighted the significant effect of disturbances in self-functioning on later borderline features. Particularly, self-representation at age 12 mediated the relationship between early attachment disorganization (12-18 months) and BPD symptoms at age 28 (Carlson et al., 2009). Patients with BPD often describe inconsistency or disorganization in their sense of self. Sometimes they label themselves as “shattered” or “fragmented” (Fuchs, 2007). A qualitative study with five BPD patients presented evidence that people with this personality disorder tend to have multiple conceptualizations of the self instead of a single and unique identity (Agnew et al., 2016). Self-image disturbance might reflect in being very confusing about who the one is. In this line, people with borderline symptoms often describe a critical and insecure self-to-self relationship (Dammann et al., 2011). An interesting study by Winter et al. (2015) discussed the fact that women with BPD avoid seeing themselves in the mirror in comparison to healthy controls.

Their hypothesis was the impulse to avoid self-awareness because of the negative self-concept, expected rejection, shame, and negative body image perception. This might not be surprising considering the solid body of evidence showing that BPD patients tend to exhibit self-esteem instability, decreased self-concept (clarity about it as well), and poorer self-acceptance (Paradise & Kernis, 2002; Santangelo et al., 2020; Zeigler-Hill & Abraham, 2006).

This negative self-view might be primarily justified by the early experiences of abuse, trauma, neglect or invalidation usually reported by BPD patients (Bradley, Jenei, et al., 2005; Winsper et al., 2012; Zanarini et al., 2019). Absence of caring, stable, and validating experiences early in life might make it difficult to care for the self with a self-compassionate and self-kind attitude. These adverse experiences are an obstacle to build a self-to-self relationship of secure attachment, based on support, validation, compassion, and kindness.

1.3.2.1. Self-disgust: *me* as toxic

Disgust is one of the primary emotions, first described by Darwin (1872/1965) in the book “The Expression of the Emotions in Man and Animal”. This emotion has the function of defending the organism from ingestion of potentially harmful substances, and it is elicited either by real or perceived threats (Rozin et al., 2000). Additionally, it has a complex role in differentiating what is considered repugnant or attractive in society (interpersonal/moral disgust; Nussbaum, 2004). Despite some disagreements, disgust is deemed to be irrational, and it is associated with negative moral consequences (Russell & Giner-Sorolla, 2013). The acquisition of a disgust repertoire is shaped by sociocultural factors and learning (Rozin et al., 1999; Sawchuk, 2009)

Humans have the ability to think about themselves and create a self-image. Sometimes, people can feel disgust towards certain aspects of themselves. The feeling of disgust about one’s own physical appearance, personality or behavior can be defined as self-disgust (Carreiras et al., 2022; Ille et al., 2014; Overton et al., 2008; Power & Dalgleish, 1997). This emotional response carries the activation of the threat system, and it has a physiological, emotional, cognitive, and behavioral component (Carreiras et al., 2022). The physiological component of self-disgust includes shivers, rapid heartbeat, tingling, shortness of breath and

vomit; the emotional and cognitive components involve a profound grief for the self, motivation to escape, judgmental thoughts, feeling inferior and hate or repugnance towards what is perceived as disgusting; finally, the behavioral component comprises excluding the disgusting parts (e.g., cutting, burning) and avoiding them (e.g., dissimulation, inhibition and not looking to one's body; Carreiras et al., 2022).

Self-disgust is still an understudied emotion even though a growing body of evidence supports that it plays a critical role in an extensive variety of mental illnesses (Guiomar, 2015; Ille et al., 2014; Overton et al., 2008). Increased levels of self-disgust were reported in association with high levels of depression (Overton et al., 2008; Ypsilanti et al., 2019) and in people with eating psychopathology (Glashouwer & de Jong, 2021; Marques et al., 2021; Palmeira et al., 2017). Studies on self-disgust and BPD have also been conducted, showing that self-directed disgust may be central to this disorder (Guiomar, 2015; Ille et al., 2014; Rüsch et al., 2011; Schienle et al., 2013).

In this context, it seems that thoughts and feelings of self-hatred, self-loathing and self-disgust often occur in people with BPD, possibly being difficult to deal with and triggering other emotions (Guiomar, 2015). After cumulative experiences of invalidation and rejection in a body emotionally unstable, a narrative of such thoughts and feelings seems plausible. Being chronically invalidated and hurt might cause a sense of being undesirable and unlovable. These attitudes of contempt, disgust, and disdain for oneself may include a persistent feeling of being irrevocably bad, repulsive, or flawed (Krawitz, 2012a). Additionally, from the BPD functioning, some targets of disgust or repulsion are thoughts (e.g., having devaluating and critical ideas about other people), emotions (e.g., anger, fear), feelings (e.g., abandonment, emptiness) and reactions (anger outbursts, panic attacks, fights). Also, the whole personality functioning might be seen as repulsive and toxic. Krawitz (2012a) proposed a self-loathing cycle by which self-loathing occurs as a classically conditioned response reinforced by continued serving functions (Figure 5).

Self-loathing might function to reduce external punishment, avoiding primary emotions and personal stagnation, and to confirm the negative self-image. The author suggests self-validation, self-acceptance, and self-compassion as ways to interrupt the self-loathing cycle (Krawitz, 2012a, 2012b).

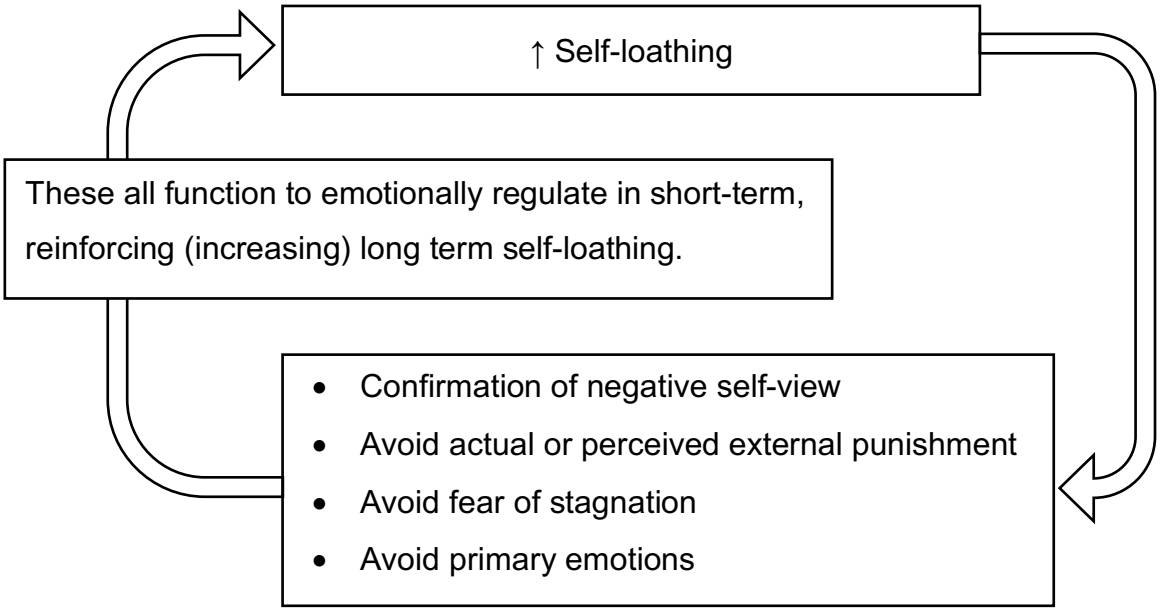

Figure 5. Self-loathing cycle (adapted from Krawitz, 2012a).

1.3.2.2. Self-compassion: *me* as caring

A growing body of evidence has been establishing that self-compassion is an essential psychological mechanism to prevent and counter psychopathological symptoms and foster well-being and quality of life (Barnard & Curry, 2011; Cunha et al., 2015; Gilbert & Irons, 2005; Gilbert & Procter, 2006; Kelly et al., 2014; Mullarkey et al., 2018; Neff & Germer, 2013). The concept of compassion towards the self (and others) emerged from the Buddhist philosophy based on the Buddhist writings (Chödrön, 2001; Neff, 2003a). Compassion towards others, though, is more popular throughout western societies (Goetz et al., 2010). Neff (2003a, 2003b) stepped towards operationalizing and introducing the construct of self-compassion in the field of educational psychology has gradually led to a large body of research over the last fifteen years and has increased the popularity of this construct.

Self-compassion is being sensitive and aware of one's own suffering in difficult situations (people occasionally face life challenges, losses, stress, frustration, pain). It is done not from a judgmental and critical stance but with gentle kindness and compassion. Moreover, being self-compassionate includes an authentic and genuine commitment and motivation to alleviate suffering as it is part of a shared human experience (Neff, 2003b).

Neff (2003b) conceptualized self-compassion as three facets that interact with each other: self-kindness (versus self-judgement), mindfulness (versus overidentification) and common humanity (versus isolation). The three components combined result in a self-compassionate frame of mind.

Self-kindness, means being kind and supportive to oneself, using a gentle, understanding and encouraging inner dialogue. It involves acknowledging that we are doing the best we can, and that sometimes we will not achieve the outcome we wanted. Being self-kind is the opposite of being self-critical, harsh and using internal statements such as “You are stupid!” or “All you do is wrong!”. Although it seems unlikely that we say this sort of things to a friend who is struggling, often people do use this language towards the self (Neff, 2003a, 2003b; Neff & Dahm, 2017).

Mindfulness is paying attention and being aware of our internal experiences (e.g., thoughts, emotions, sensations) using a balanced and distanced approach. Being completely mindful is openly experiencing the present moment without judgement, suppression, or avoidance (Bishop et al., 2004). From this stance, we are able not to overidentify with our internal experience, recognizing that we are not our thoughts, feelings, and sensations. This psychological mechanism helps people to detach from their critical, inadequate, and judgmental storyteller mind (Neff, 2003a, 2003b; Neff & Dahm, 2017).

The last component is common humanity and reflects the recognition that all people suffer, fail, and make mistakes. That we are not alone and isolated in our own failure and suffering. Since we are born, we are all sharing a human experience that our lives will never be perfect, nor will we. Instead, these shared imperfections and struggles are what make us humans. It is common to feel abnormal, alone, that something is not right with us, but mostly we forget that this is part of common humanity. Furthermore, every time we forget we are not alone in our suffering, it becomes worse (Neff, 2003a, 2003b; Neff, 2011; Neff & Dahm, 2017).

Gilbert (1989, 2005) proposes another conceptualization of self-compassion, in the light of evolutionary psychology and particularly attachment theory. Then, self-compassion involves kindness and caring, feelings of connectedness and soothing towards the self. Individuals who grow up in safe environments, with parents able to provide adequate care, support, emotional validation and promote autonomy are

more likely to be caring and soothing with themselves afterwards. On the opposite, family environments of insecurity and instability, stressful of threatening, with violence or aggression tend to promote children with higher self-criticism, self-attack, and self-punishment. The underdevelopment of the ability to self-sooth and self-calm makes it harder to cultivate self-compassion (Gilbert & Procter, 2006). Self-compassion was reported as a mediator between maternal support and well-being in adolescents and young adults, meaning that family might influence individuals' functioning by promoting self-compassionate or self-critical inner talk (Neff & McGehee, 2010).

The compassion circle directed towards others and the self includes a set of attributes such as attention to individuals' well-being, sensitivity to distress and needs, sympathy, distress tolerance, empathy, and non-judgment. Training the compassionate mind encompasses developing qualities of wisdom, authority and strength, motivation, compassionate motive and commitment, and warmth and kindness (Gilbert & Choden, 2014).

Self-compassion has been identified as a protective factor for several mental health problems in adolescents, such as depression and NSSI, being associated with well-being (Bluth et al., 2018; Bluth & Blanton, 2014; Marsh et al., 2018; Mullarkey et al., 2018; Neff & McGehee, 2010; Xavier et al., 2016). However, studies about the effect of self-compassion on borderline symptoms in younger people are very scarce and limited. Based on our bibliographic review, the existing literature on this topic included samples of young adults (Keng & Wong, 2017; P. Loess, 2015). Important to mention the positive effects of self-compassion found in samples of adults with BPD (Donald et al., 2019; Feliu-Soler et al., 2017; Scheibner et al., 2017).

Gilbert and Irons (2005) proposed that activating compassion towards the self might work as a mechanism to deactivate the threat/self-protection system (sense of insecure attachment and defensiveness) by activating the soothing system (secure attachment and safeness). Evidence of this essential mechanism to regulate negative affect has been gradually added to the literature (Bluth & Blanton, 2014; Johnson & O'Brien, 2013; Trompetter et al., 2017).

Chapter 2

Aims and methods

This chapter clarifies the general and specific aims of the current research, as well as the general methods. Ethics and research principles, procedures, design, participants, measures/instruments and data analyses are presented and discussed. In the end, we provide a brief reflection about the impact of the COVID-19 pandemic on this research.

2.1. General and specific aims

The current research project intended to study borderline features in adolescents. To do so, three main aims were drawn, each one with specific aims. Firstly, to adapt and validate for the Portuguese population important assessment instruments of borderline features and self-disgust. Secondly, to describe borderline features in Portuguese adolescents and identify potential risk and protective factors, as well as the relationships between them. Thirdly, with longitudinal data, to explore the different trajectories of borderline features and test the effect of some psychological variables over time. Table 1 depicts how the studies of this project respond to the different general and specific aims.

Table 1. Overview of the general and specific aims of the current research and respective studies.

General aims	Study	Specific aims
1. To adapt and validate for the Portuguese population important assessment instruments about and related to borderline features	I	To validate a self-report questionnaire to assess borderline features in adolescents (Borderline Personality Features Scale for Children) and to validate a questionnaire for parents to assess adolescents' borderline features (Borderline Personality Features Scale for Parents).
	II	To adapt for adolescents a questionnaire to assess self-disgust on its different components (Multidimensional Self-Disgust Scale for Adolescents).
	III	To develop a clinical interview for the diagnosis of borderline personality disorder in adolescents (Clinical Interview for Borderline Personality Disorder for Adolescents).
	IV	To translate, adapt and cross-validate de Clinical Interview for Borderline Personality Disorder for Adolescents to English.
2. To describe borderline features and identify potential risk and protective factors, as well as the relationships between them.	V	To characterize borderline features in the Portuguese population using a large sample and identify the relationship with sociodemographic and psychopathological variables.
	VI	To test gender differences on borderline features and the predictive effect of depression, self-compassion, self-disgust, and impulse.
	VII	To explore the role of the different self-compassion components in the relationship between adverse experiences in childhood and current borderline features.
	VIII	To examine the potentially positive role of self-compassion in the relationship between self-disgust and borderline features.
3. To assess the longitudinal effect of psychoemotional variables in the evolution of borderline features.	IX	To test the protective effect of self-compassion on the development of borderline features by adolescents with previous history of self-harm.
	X	To identify different trajectories of borderline features in adolescents and test the role of gender and self-disgust over time.

2.2. General methods

Here are presented general considerations on the methodology of the current research project, which comprises different empirical studies. This section provides an overview of the methods used. Further details of the descriptive and empirical studies are discussed in Chapter 3, within each study.

2.2.1. Ethical standards and research principles

This research was analyzed and approved by the following entities: Portuguese Data Protection Authority (authorizing number 6713/2018), Ministry of Education (registration number 0082000013) and Ethics Committee of the Faculty of Psychology and Educational Sciences of the University of Coimbra. After the appropriate approvals by these entities, the Head Teachers of several schools were contacted via e-mail asking to collaborate in this research. The researcher met with the school board that agreed to collaborate, to provide further details about the procedures and aims of the studies. This project also followed the recommendations of the Declaration of Helsinki 1964, the American Psychological Association, and the Code of Ethics of the Portuguese Psychologists Association.

An informed consent form was sent to the parents of adolescents with the following information: research title, promotor entity, research team, contacts, study aims, procedures, data to be collected, benefits, voluntary participation, and confidentiality. The adolescents whose parents authorized to participate in the studies were also informed about the research and signed a paper form as they were willing to collaborate.

Data were only used for research purposes and only the researchers involved had access to databases and completed questionnaires. A unique code was generated for each adolescent who participated in the longitudinal studies to aggregate the individual information collected at different time points. Thus, no name or any personal information was used to identify subjects as they were coded in the database.

The dissemination of results (e.g., conferences, articles, presentations) followed the principles of scientific integrity and responsibility. Data used in the different studies are freely available to the scientific community.

2.2.2. Procedures

Adolescents' data were collected between May 2018 and September 2020, in schools from center and north regions of Portugal. The schools that collaborated in the cross-sectional studies were: Escola Secundário Adolfo Portela (Águeda), Escola Dom Duarte (Coimbra), Escola Inês de Castro (Coimbra) and Escola de Taveiro (Coimbra). For the longitudinal studies, the schools that colaborated in this research were: Escola Secundária Marques de Castilho (Águeda), Escola Secundária Infanta Dona Maria (Coimbra), Escola da Sé (Lamego) and Escola Secundária José Estevão (Aveiro).

After approvals and written informed consents, the data collection was scheduled with the school board and the researcher. The educational psychologist and school staff were often involved in managing rooms and locating the adolescents. Whenever possible, questionnaires were completed in curricular units that did not jeopardize the students' performance or without final evaluation, for example *Cidadania* or *Direção de Turma*. The researcher went to schools every 6 months to collect the longitudinal data.

The inclusion criterion was age between 12 and 19. Exclusion criteria were: (a) questionnaires without information about sociodemographic variables; (b) questionnaires with missing or invalid answers, for example the same answer to all items; (c) adolescents with cognitive impairment.

The online questionnaires were created in the LimeSurvey platform, an online statistical survey tool for research institutes and universities.

2.2.3. Research design

The studies associated with the first two general aims of this project (studies I, II, III, IV, V, VI, VII and VIII) have a cross-sectional design, that is data were collected in one single moment. Although this type of designs does not allow inferring causality between variables, they are very useful to study psychometric properties and identify the relation between variables taking into consideration the theoretical background on the subject. This type of research design encompasses less costs (e.g., time, human resources) and allow capturing multiple variables without participants burnout.

Longitudinal research is a type of correlational research that examines variables systematically over a period (in this case, with a 6-month interval). This method allows a unique insight by studying the influence of time (stability or change) and controlling for the effect of the dependent variables at baseline. Although this design is very demanding in terms of time and effort, with not so motivating dropout rates, they capture wealthy and valuable information on a topic. In this research, the studies IX and X (associated with the third main aim) used two and three waves of assessment, respectively. In Table 2 are presented the designs used in the current research studies.

2.2.4. Participants

In this research are included data of 1254 adolescents, by which 491 agreed to participate in the longitudinal studies, and 43 were assessed with the CI-BOR-A. Ages were between 13 and 19 years old and they were from 7th to 12th grade. It is also included data from 259 parents, 23 Portuguese and five English experts in child and adolescent's mental health (psychologists and pedopsychiatrists). An overview of the samples used in this research project is represented in Table 2 and each study of Chapter 3 presents a detailed description of the participants.

Adolescents completed the self-report questionnaires in the classroom, in the presence of the researcher and the teacher, to provide any clarification when needed and to guarantee independent responses. The adolescents who were interviewed with the CI-BOR-A were with the researcher in a private room, usually a free classroom or an office at school.

Parents who participated in the investigation completed self-report questionnaires that adolescents took to their homes and returned at school.

Experts were invited to participate via e-mail. The clinical interview and the online questionnaire were sent to those who accepted to participate. Then, they critically analyzed the interview and completed the questionnaire about the different sections of the instrument.

Table 2. Overview of the samples and designs used in the different studies.

Study	Population	N	Format	Design
I	Adolescents and Parents	256 259	Paper and pencil	Cross-sectional
II	Adolescents	540	Paper and pencil	Cross-sectional
III	Adolescents and Experts	43 23	Interview and online	Cross-sectional
IV	Experts	5	Online	Cross-sectional
V	Adolescents	1005	Paper and pencil	Cross-sectional
VI	Adolescents	440	Paper and pencil	Cross-sectional
VII	Adolescents	422	Paper and pencil	Cross-sectional
VIII	Adolescents	655	Paper and pencil	Cross-sectional
IX	Adolescents with history of NSSI	139	Paper and pencil and online	Longitudinal
X	Adolescents	158	Paper and pencil and online	Longitudinal

2.2.5. Measures

Several self-report questionnaires were selected to assess interest variables for this PhD research. This selection was based on bibliographic review and considering the required variables to validate the questionnaires. Besides the self-report questionnaires for psychological and emotional variables, adolescents completed a page for sociodemographic data (e.g., gender, age, years of education, school performance).

All the studies (Chapter 3) describe all the instruments used. Next, we can find a brief description of the instruments employed in this research to assess adolescents:

- Sociodemographic questionnaire. Self-report questionnaire to collect sociodemographic data (e.g., age, gender, socioeconomic status).

- Borderline Personality Features Scale for Children (BPFS-C; Sharp et al. 2014; Carreiras et al., 2020). Self-report questionnaire to assess borderline features in youth (Appendix 1).
- Early Life Experiences Scale (ELES; Gilbert et al., 2003; Pinto-Gouveia et al., 2016). Self-report questionnaire to assess memories of subordination and threat in childhood.
- Depression, Anxiety and Stress Scales (DASS-21; Lovibond & Lovibond, 1995; Pais-Ribeiro et al., 2004). Self-report questionnaire to assess depression, anxiety, and stress symptoms.
- Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents (ISSIQ-A; Carvalho et al., 2015). Self-report questionnaire to assess impulse, self-harm, functions of self-harm, risk behaviors and suicide ideation.
- Self-Compassion Scale (SCS-A; Neff, 2003; Cunha et al., 2015). Self-report questionnaire to assess self-compassion (self-kindness, self-judgement, common humanity, isolation, mindfulness and overidentification).
- Multidimensional Self-Disgust Scale (MSDS-A; Carreiras, Pinto, et al., 2022; Carreiras, Guilherme, et al., 2022;). Self-report questionnaire to assess self-disgust (defensive activation, cognitive-emotional subscale, avoidance, and exclusion) (Appendix 2).
- Fear of Compassion Scale (FCS; Gilbert et al., 2011; Duarte et al., 2014). Self-report questionnaire to assess fear of compassion for others, fear of compassion from others and fear of compassion for self.
- Social Safeness and Pleasure Scale (SSPS; Gilbert et al., 2009; Dinis et al., 2008). Self-report questionnaire to assess the extent to which people experience their social world as safe, warmth and soothing
- Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A; Sharp et al., 2012; Carreiras, Cunha, et al., 2022). Semi-structured interview for clinicians to assess BPD in adolescents (Portuguese version in Appendix 3 and English version in Appendix 4).

The questionnaires used for parents were:

- Borderline Personality Features Scale for Parents (BPFS-P; (Sharp et al., 2010; Carreiras et al., 2020). Questionnaire to assess borderline features in youth, according to parents' perspective (Appendix 5).
- Strengths and Difficulties Questionnaire for Parents (Goodman, 2001; Fleitlich et al., 2005). Questionnaire to assess adolescents' difficulties (emotional symptoms, conduct problems, hyperactivity-inattention, peer problems, prosocial behavior), according to parents' perspective.

Experts completed a tailored questionnaire to assess CI-BOR-A in pertinence, clarity, accuracy, and/or completeness. The questionnaire also had general questions about the interview (e.g., organization, flexibility) and open question to qualitative data.

In Table 3 is presented an overview of the measures used in this research project.

2.2.6. Data analyses

Each study presents a detailed description of how data was analyzed, including the statistical software used, statistical analyses and reference cut-off points. In general, data were analyzed with the Statistical Package for the Social Sciences – SPSS, version 23 (IBM Corp., Armonk, NY, USA) to examine descriptive statistics, group differences (independent and paired samples students t-tests and ANOVA), correlations, and simple and hierarchical regressions. The Process Macro (for SPSS; Hayes, 2013) was used to test mediation and moderation models. Finally, AMOS (Arbuckle, 2014) and MPLUS (Muthén & Muthén, 2007) were used to conduct Structural Equation Modeling (SEM).

Table 3. Overview of the instruments used in the different studies.

Instruments	Studies									
	I	II	III	IV	V	VI	VII	VIII	IX	X
Self-report questionnaires										
Sociodemographic questionnaire	•	•			•	•	•	•	•	•
Borderline Personality Features Scale for Children	•	•			•	•	•	•	•	•
Early Life Experiences Scale							•			
Depression, Anxiety and Stress Scales	•	•			•	•				
Self-Compassion Scale	•	•				•	•	•	•	
Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents		•			•	•			•	
Multidimensional Self-Disgust Scale		•				•		•		•
Fear of Compassion Scale	•									
Social Safeness and Pleasure Scale	•									
Parent-report questionnaires										
Borderline Personality Features Scale for Parents	•									
Strengths and Difficulties Questionnaire for Parents	•									
Clinician-rated instruments										
Questionnaire to assess the CI-BOR-A			•	•						
Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A)			•							

2.2.7. The impact of the COVID-19 pandemic

The outbreak of the COVID-19 pandemic in Portugal (March 2020) had a significant impact on the current research. The longitudinal data collection was severely affected by the schools' closure preventing the researcher from being with the participants, either for collecting the self-report questionnaires or administer interviews. By that time, only waves one and two had been collected. For that reason, we contacted the schools' Head Teachers to ask participants to continue collaborating on our studies via online. The questionnaires were converted to an online format and were sent to the participants via e-mail at the appropriate time. Notwithstanding these efforts, the adherence rate was low (around 35%), which drastically reduced the total sample for the longitudinal studies. Moreover, the interviews stopped being administered because we had no direct contact with participants (e-mail or phone number) to schedule online meetings. Besides, as they were minors, any changes to the procedures previously consented had to be approved by their parents.

Some adjustments were undertaken, for example, reducing the time length of the longitudinal studies and using a panel of experts to evaluate the clinical interview rather than validating the instrument with a large sample of adolescents. Furthermore, the following article (Appendix 6) was written and published in an international journal about the perceived impact of the COVID-19 pandemic on Portuguese adolescents:

Carreiras, D., Castilho, P., & Cunha, M. (2022). Portuguese adolescents' perception of the COVID-19 pandemic: Gender differences and relation with psychopathological symptoms. *Psicologia: Teoria e Prática*, *24*(1), 1-13. https://doi.org/10.5935/1980-6906/ePTPCP14125.en

Part II

Descriptive and empirical studies

Chapter 3

New assessment tools for borderline features in adolescents and related constructs

Chapter 4

Characterization of borderline features in Portuguese adolescents, potential risk and protective factors and relationship between them

Chapter 5

Longitudinal effect of psychoemotional variables on the developmental trajectory of borderline features in adolescents

Chapter 3

New assessment tools for borderline features in adolescents and related constructs

Chapter overview:

Study I: Validation of the Borderline Personality Features Scale for Children (BPFS-C) and for Parents (BPFS-P) for the Portuguese population

Study II: Measuring Self-Disgust in Adolescence: Adaptation and validation of a new instrument for the Portuguese adolescent population

Study III: The Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR): Development, acceptability, and expert panel evaluation

Study IV: Translation, adaptation, and construct validity of the Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A) to English

Study I

Validation of the Borderline Personality Features Scale for Children (BPFS-C) and for Parents (BPFS-P) for the Portuguese Population

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*, 1–11. https://doi.org/10.1007/s10826-020-01800-7

Validation of the Borderline Personality Features Scale for Children (BPFS-C) and for Parents (BPFS-P) for the Portuguese Population

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& Paula Castilho

Abstract

Borderline Personality Disorder (BPD) is a severe disorder characterized by impulsivity, instability, emotional dysregulation and Non-Suicidal Self-Injury (NSSI). These features might be identified in adolescence and develop over time. Early identification is the first step to prevent the development of borderline features to a personality disorder. The purpose of this study was to validate the Portuguese versions of the Borderline Personality Features Scale for Children (BPFS-C) and the Borderline Personality Features Scales for Parents (BPFS-P). The psychometric properties of the scales were tested in two samples of adolescents (*N* = 256; N = 441) and a sample of parents (*N* = 259). Each scales' confirmatory factor analysis revealed the same unidimensional structure of the original versions, showing adequate fit indices and an acceptable internal consistency. Correlation results demonstrated satisfactory convergent validity for both versions. Measurement invariance of the BPFS-C across sex showed configural, metric and partial scalar invariance. Overall, the BPFS-C and BPFS-P are both valid and reliable measures to assess borderline features in adolescents. Employing them in clinical and educational settings might contribute to early detection and initial referral to adequate treatment.

Keywords: borderline features, adolescents, confirmatory factor analysis, psychometric properties

Introduction

Borderline Personality Disorder (BPD) is a severe disorder characterized by a pervasive pattern of impulsivity, instability of interpersonal relationships, self-image, affect and emotional dysregulation (American Psychiatric Association [APA], 2013; Leichsenring et al., 2011). This disorder is associated with Non-Suicidal Self-Injury (NSSI; Brown et al., 2009; Zanarini et al., 2008), functional impairment, substantial health services utilization (Skodol et al., 2002) and alarming suicide rates ranging between 4% and 10% (Paris, 2009). In the general population, the prevalence of BPD is around 1.6% and may be up to 5.9% (APA, 2013). As most studies on this disorder have focused on the precursors of BPD in adults, the conclusions about its aetiology and development are more difficult to attain.

Since dysfunctional cognitive, affective and behavioral patterns arise under the age of 18 years, studying borderline features in adolescents is crucial (Crick et al., 2005). Several authors suggest that marked borderline features and symptoms can be found in adolescence (Bradley et al., 2005; Sharp & Bleiberg, 2007; Chanen et al., 2017; Westen & Chang, 2000). In fact, people with borderline traits reported asking for help with a mean age of 17.3 years (*SD* = 6.2 years; Zanarini et al., 2006), which emphasizes the importance of studying these features among adolescents to better understand the development of BPD. Considering this evidence and according to the 5th Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; APA, 2013), BPD can be diagnosed in adolescents when there is a clear and recurrent pattern of symptoms occurring for more than a year. The prevalence of BPD in adolescents ranges between 1% and 5% (Sharp & Fonagy, 2015).

Zanarini et al. (2006) found that adolescents with higher levels of borderline symptoms presented lower levels of social function and life satisfaction from mid-adolescence and through mid-adulthood. Furthermore, the authors found that borderline symptoms predicted lower academic and occupational achievement, less partner involvement and less attained adult developmental milestones. Borderline symptoms in adolescence were associated with borderline diagnosis, general impairment and services use at the age of 33. Carlson et al. (2009) found that borderline symptoms were significantly associated with emotional dysregulation behaviors and interpersonal relationships impairment in adulthood

(e.g. self-harm, dissociation, drug use, dysfunctional relationships, criminal activity, domestic violence, suicidal ideation and history of maltreatment and family disruption). The results suggested that self-functioning disturbances in adolescence may mediate the relationship between early relational disturbance and later personality disorder. In a longitudinal study carried over the course of one year, Sharp et al. (2014) identified experiential avoidance as a predictor of borderline features, while controlling baseline levels of borderline symptoms, anxiety and depression. This study reinforced the importance of exploring underlying psychological processes, such as experiential avoidance, in the development of borderline features. Self-compassion (being kind instead of critical toward oneself, perceiving one's experiences as part of the larger human experience, and holding painful feelings in mindful awareness; Neff, 2003, 2016) has been identified as a cognitive-emotional process with benefits for people with BPD (Feliu-Soler, 2017; Scheibner et al., 2017).

Given the evidenced severity of borderline features in adolescence, and its impact years later, it is essential to develop instruments to assess and detect these features in adolescents. For a more accurate assessment of borderline features, information about the adolescents might be collected with them and complemented with other significant sources (Morey & Meyer, 2014). Parents, caregivers or teachers might be important sources of information about feelings and behaviors of their children and, as result, informant-based questionnaires methods are often used (Morey & Meyer, 2014). Siever et al. (as cited in Fossati, 2014) concluded that parents of patients diagnosed with BPD in adulthood reported that their children presented a distinct pattern of unusual sensitivity, moodiness and self-soothing throughout their development, in comparison with their siblings.

Against this background, questionnaires were developed to assess borderline features in youth (Paris, 2014). The Borderline Personality Features Scale for Children (BPFS-C; Crick et al., 2005) was initially designed as a dimensional measure of borderline pathology in youth and was tested in a community sample of adolescents. The authors modified the adult measure of Borderline Pathology Subscale (BOR) of the Personality Assessment Inventory (PAI; Morey, 1991) and adapted it for use in children aged 9 years and older. This version included 24 age-appropriate items to reflect four domains: affect instability, identity problems, negative relationships and self-harm. Gender differences

showed that girls presented higher levels of borderline features comparing to boys. Later, Sharp et al. (2014) tested the original structure with four domains in a community sample and concluded that a unidimensional short-version (with 11 items) of the BPFS-C would be a more reliable and valid measure to assess borderline features in adolescents. A clinical sample was also collected to test construct validity and the BPFSC-11 showed good sensitivity and specificity. Translation and validation of the BPFS-C are currently underway in multiple languages and countries, which will allow important cross-cultural studies (Crick et al., 2005; Sharp et al., 2010; Sharp et al., 2014). The Italian version of the BPFSC-11, tested in a community sample, presented adequate internal consistency and confirmatory factor analysis supported a bi-factor model with all items significantly loading a general factor. The invariance test revealed gender invariance (Fossati et al., 2019). The version for parents (BPFS-P) developed by Sharp et al. (2010) is similar to the BPFS-C. The items of both scales have similar content but a different subject, which means that adolescents rate the items according to their internal experience, and parents according to what they think about their children's behaviors and feelings. Results showed a modest and positive correlation between BPFS-C and BPFS-P. However, positive and strong correlations were found between BPFS-P and CBCL (Child Behavior Checklist) and moderate and positive correlations between BPFC-P and YSR (Youth Self-Report). The significantly higher score of borderline features reported by youths (BPFS-C), in comparison with the mean of borderline features reported by parents (BPFS-P), indicated that adolescents perceived more difficulties than their parents did. Both BPFS-C and BPFS-P appeared to be useful instruments to detect borderline features.

Therefore, and considering a dearth of questionnaires in Portugal to assess personality pathology in adolescents and specifically borderline features, the present study aimed to translate, adapt and validate the Portuguese versions of the BPFS-C and BPFS-P.

Methods

Participants

The sample of this study was composed by 256 Portuguese adolescents from general population who were in the same high school, and 259 parents of adolescents with ages between 14 and 17 years. Adolescents were 146 girls (57%)

and 110 boys (43%), with ages between 14 and 18 years. In average, the sample was 15.90 years old (*SD* = 1.23) and had been in school for 9.45 years (*SD* = .87). All participants were single and there were non-significant differences regarding age ($t_{(254)}$ = .91, p = .36) and years of schooling ($t_{(254)}$ = 1.61, p = .11) between boys and girls. Parents were 215 (83%) females and 44 (17%) males and the mean age was 46.2 years (*SD* = 5.72). Around 10% of parents was unemployed and the mean of years of schooling was 12.81 (*SD* = 4.3). The sample of adolescents and parents were non-related. Parents were a convenience sample recruited independently, and inclusion criterion was being a parent of an adolescent with age between 14 and 19 years.

In order to assure a recommended minimum of 200 subject for each group when testing measurement invariance of the BPFS-C across sex, 58 girls and 97 boys were included in the sample of adolescents described above. Invariance analysis was conducted with a group of 204 girls with a mean age of 15.79 (*SD* = 1.20) and a group of 207 boys with a mean age of 15.61 (*SD* = 1.13). Non-significant age differences were found between groups ($t_{(409)}$ = 1.62, p = .11).

Procedures

A request was sent to the authors of the BPFS-C (Crick et al., 2005; Sharp et al., 2014) and BPFS-P (Sharp et al., 2010) asking permission to validate both scales for the Portuguese population. Once permission granted, a Portuguese native speaker Clinical Psychologist and Researcher proficient in English, translated the original scales for Portuguese language. Subsequently, the translated version was back translated to English by another Portuguese Researcher, also proficient in English. At the end, the paper's authors gathered to review and consensually agreed on a final version to be tested while taking into account the backtranslations and the original scales. A convenience sample of 15 adolescents (ages between 13 and 18 years) responded and provided feedback about the overall scale and identified the need for minor semantic changes to improve understandability. For instance, as suggested by participants, some words were replaced for others more accessible and broadly used amongst adolescents.

Data was collected in May of 2018 in high schools located in the central region of Portugal. Schools' head teachers, teachers, parents and participants were informed about the goals of the study and gave their informed consent. Questionnaires were completed in classroom and adolescents were informed

about aspects of confidentiality and voluntary participation. Researchers and teachers were in the same room with the adolescents to provide clarification and ensure independent responding. In order to collect the parents' sample, a different group of adolescents were asked to hand questionnaires to their parents, which were later collected by researchers at school. These questionnaires' front page clarified the purpose of the study, ethical questions, informed consent, confidentiality, data protection and voluntary participation.

Measures for Adolescents

The Borderline Personality Features Scale for Children (BPFS-C; Crick et al., 2005; Sharp et al., 2014) is composed by 24 items that constitute 4 factors (*Affect Instability, Identity Problems, Negative Relationships and Self-harm*) and assess how participant feel about themselves and others (Sharp, et al., 2014; Sharp, et al., 2015). Items are rated on a 5-point Likert scale from *never true* (1) to *always true* (5). Responses across items are summed, with higher sums indicating a greater level of borderline features. The original study of 24 items presented good internal consistency (α = .76; Crick et al., 2005), as well as the 11-item version (α = .85; Sharp et al., 2014). The psychometric properties of the Portuguese version are further discussed in this study.

The Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995; Portuguese version by Pais-Ribeiro et al., 2004) has 21 items to assess depression, anxiety and stress, rated on a 4-point Likert scale from *did not apply to me at all* (0) to *applied to me very much, or most of the time* (3). Higher scores indicate higher negative affect. The original version revealed good internal consistency (α = .91 for *Depression*, α = .84 for *Anxiety*, α = .90 for *Stress*). The Portuguese version also presented good internal consistency (α = .85 for *Depression*, α = .74 for *Anxiety* e α = .81 for *Stress*). In this study the Cronbach's alpha was .87 for *Depression*, .75 for *Anxiety* and .82 for *Stress*.

The Fear of Compassion Scale (FCS; Gilbert et al., 2011; Portuguese version for adolescents by Duarte et al., 2014) is composed of 38 items rated on a 5-point Likert scale from *don't agree at all* (0) to *completely agree* (4). Items are divided into three subscales: *Fear of Compassion for Others* (10 items assessing the fear of expressing compassion for others; e.g. "Being too compassionate makes people soft and easy to take advantage of"), *Fear of Compassion from Others* (13 items measuring the fear of responding to the expression of compassion from others;

e.g. “If people are kind I feel they are getting too close”) and *Fear of Compassion for Self* (15 items assessing the fear of expressing kindness and compassion towards the self; e.g. “I fear that if I start to feel compassion and warmth for myself, I will feel overcome with a sense of loss/grief”). The Portuguese version showed good internal consistency: α = .88 for *Fear of Compassion from Others*; α = .86 for *Fear of Compassion for Others*, and α = .93 for *Fear of Compassion for Self* (Duarte et al., 2014). In this study, Cronbach’s alpha was .83 for *Fear of Compassion from Others*, .88 for *Fear of Compassion for Others* and .92 for *Fear of Compassion for Self.*

The Self-Compassion Scale (SCS; Neff, 2003; Portuguese version for adolescents by Cunha et al., 2015) was designed to assess self-compassion, which can be defined as the capacity to be kind and understanding towards oneself in difficult moments. The 26 items constitute 6 subscales: *Self-kindness* (5 items; e.g., “I’m kind to myself when I’m experiencing suffering.”), *Isolation* (4 items; e.g., “When I’m really struggling I tend to feel like other people must be having an easier time of it.”), *Common Humanity* (4 items; e.g., “When I’m down and out, I remind myself that there are lots of other people in the world feeling like I am.”), *Self-judgement* (5 items; e.g., “I’m disapproving and judgmental about my own flaws and inadequacies”), *Mindfulness* (4 items; e.g., “When I’m feeling down I try to approach my feelings with curiosity and openness.”) and *Over-identification* (4 items; e.g., When I’m feeling down I tend to obsess and fixate on everything that’s wrong.”). Items are rated on a 5-point Likert scale from *almost never* (1) to *almost always* (5). A total score is obtained by reversing the scores of *Isolation*, *Self-judgement* and *Over-identification* subscales and then calculating a total mean with the 6 subscales. Higher scores reflect higher level of self-compassion. SCS presented good internal consistency in the original version (α = .92) and in the Portuguese version (α = .85). In the current study, Cronbach’s coefficient for the total scale was α = .89.

The Social Safeness and Pleasure Scale (SSPS; Gilbert et al, 2009; Portuguese version for adolescents by Dinis et al., 2008) assesses how people feel in several social interactions. It is composed of 11 items, rated on a 5-point Likert scale from *almost never* (1) to *almost all the time* (5). The original version presented very good internal consistency (α = .91), as well as the Portuguese version (α = .92). In the present study, Cronbach’s alpha was .93.

Measures for Parents

The Borderline Personality Features Scale for Parents (BPFS-P; Sharp et al., 2010) was designed to assess borderline features in adolescents according to the parents' perspective. The scale is composed of 24 items rated on a 5-point Likert scale from *never true* (1) to *always true* (5) and higher scores reflect higher levels of adolescents' borderline features. Psychometric properties of the Portuguese version are presented in this study.

The Strengths and Difficulties Questionnaire – for Parents (SDQ-Por; Goodman, 2001; Portuguese version by Fleitlich et al., 2005) was developed to assess psychological adjustment of children and youths from parents' perspective. The 25 items are rated on a 3-point Likert scale from *not true* (0) to *certainly true* (2) and compose 5 subscales (*Emotional Symptoms*, *Conduct Problems*, *Hyperactivity-Inattention*, *Peer Problems*, *Prosocial Behavior*). Total difficulties are calculated with a sum of all subscales except for prosocial behavior. Goodman (2001) found good internal consistency for the SDQ – for parents, with a Cronbach's coefficient of .82 for total difficulties. In the present study, Cronbach's coefficient for total difficulties was .77.

Data Analyses

The present study intended to translate and adapt the Portuguese version of the BPFS-C and BPFS-P, with the ultimate goal of establishing its psychometric properties through (a) confirming its unidimensional factor structure; (b) examining reliability; and (c) analyzing convergent validity.

Confirmatory factor analysis (CFA) is a common statistical test used to investigate construct validity. Specifically, a CFA tests whether the data fit a theorized measurement model focusing on modeling the relationship between manifest indicators and underlying latent factors (Gallagher & Brown, 2010). We conducted a CFA for the BPFS-C and BPFS-P using MPLUS software version 6.2 (Muthén & Muthén 1998-2011). Chi-square was used to test model fit. The following recommended fit indexes were used: Tucker-Lewis Index (TLI); Comparative Fit Index (CFI); Standardized Root Mean Residual (SRMR); Root Mean Square Error of Approximation (RMSEA). Model fit was considered adequate using the cut-offs suggested by Hair et al. (1998): RMSEA < .07; CFI > .90; TLI > .90; SRMR < .08. Measurement invariance is conducted to examine the equivalence of a construct across heterogeneous groups. In other words, to

demonstrate whether an instrument presents the same psychometric properties to different groups (Putnick & Bornstein, 2016). We tested measurement invariance of the BPFS-C across sex through a sequence of increasingly restrictive models: equally requiring number of factors between boys and girls (configural invariance), then equally requiring item factor loadings (metric invariance) and equally requiring item intercepts (scalar invariance). We used the recommended criterion of a −.01 change in CFI, combined with changes in RMSEA of .015 and SRMR of .030 (for metric invariance) or .015 (for scalar invariance; Chen, 2007).

Descriptive statistics, Pearson correlations and comparison between males and females (Student's t-test) were analyzed with IBM SPSS Statistics version 23. Reliability was examined through Cronbach's alpha (overall correlation between the items), item-total correlations and alpha change (particularly increase) if an item was deleted. Composite reliability was also examined (Peterson & Kim, 2013). We considered good reliability when Cronbach's alphas were above .70 (Field, 2013). Additionally, convergent validity was assessed through Pearson correlation coefficients between the BPFS-C and BPFS-P scores and other related constructs. According to Dancey and Reidy (2017), Pearson correlation coefficients between .10 and .39 were considered weak, between .40 and .69 moderate and above .70 strong. Student's t-test were conducted to examine sex differences and 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.

Results

Descriptive Results

Univariate outliers were identified, and analyses were conducted with and without these cases. Since no significant changes were found, we decided to keep the outliers. Skewness and Kurtosis were analyzed, and no severe violations were found in both samples (|Sk| < 3 and |Ku| < 8; Kline, 2011). Due to the use of Structural Equation Modeling (SEM), multivariate normality was examined. In both samples, data did not follow a normal distribution. For adolescents, Mardia's multivariate skewness statistic was 92.53 (p < .001) and Mardia's multivariate kurtosis statistic was 684.04 (p < .001). For parents, Mardia's multivariate skewness statistic was 119.25 (p < .001) and Mardia's multivariate kurtosis statistic was 734.89 (p < .001). Thus, we opted to use the Robust Maximum Likelihood

(MLR) estimation method for CFA. As recommended, items presenting crossloading values greater than .32 were excluded (Tabachnick & Fidell, 2013). Parametric tests were performed since they are robust to normality assumption violations and both samples have an acceptable size (Marôco, 2010).

Confirmatory Factor Analysis of BPFS-C

A CFA with the original 24 items divided into 4 subscales proposed by Crick et al. (2005), was conducted and results revealed an unacceptable adjustment, as obtained by Sharp et al. (2014). In our data, fit indexes were RMSEA = .07; CFI = .79; TLI = .77; SRMR = .07.

Then, the unidimensional model proposed by Sharp et al. (2014) was tested (Table 1). Using the 11 items of the BPFSC-11, chi-squared test presented a significant result (χ^2 (44, N = 256) = 111.54, p < .001). Other fit indexes for the unidimensional model also showed unacceptable fit (RMSEA = .08; CFI = .85; TLI = .81; SRMR = .06). Internal consistency would not increase if any item was deleted, however item 20 (“Lots of times, my friends and I are really mean to each other.”) presented a loading of .28 (under the recommended .32; Tabachnick & Fidell, 2013), and so it was removed. Considering the modification indexes, error of item 11 was correlated with error of item 15 (both have content about impulsivity) and error of item 14 was correlated with error of item 18 (both evaluate emotional lability).

Table 1. Mean (M), Standard deviation (SD), Item-total correlation (r), Cronbach's alpha if item deleted (α) and standardized factor loadings (λ) of the 11 items of BPFS-C (*N* = 256).

Items (abbreviated content)	*M*	*SD*	*r*	*α*	*λ*
2. Feel very lonely	2.27	0.96	0.38	0.75	0.50*
6. Let people know... hurt me	3.04	1.28	0.36	0.76	0.38*
8. Feelings are strong	3.26	1.04	0.30	0.76	0.33*
9. Something important missing	2.89	1.14	0.56	0.73	0.68*
11. Careless with things	2.23	0.99	0.36	0.76	0.40*
13. People...let me down	2.71	1.04	0.54	0.73	0.65*
14. Back and forth between feelings	2.68	0.97	0.57	0.73	0.61*
15. Get into. . . do without thinking	2.12	0.98	0.39	0.75	0.41*
16. Worry that people will leave...	3.90	1.11	0.34	0.76	0.39*
18. How I feel about myself changes	2.85	1.03	0.57	0.73	0.57*
20. Friends and I are mean to each other	2.27	0.96	0.38	0.75	0.50*

Note. * $p < .001$. Bold items indicate the items maintained to the final version.

In the final solution of 10 items (Figure 1), chi-squared test was significant (χ^2 (33, N = 256) = 61.94, p = 0.002), as well as all factor loadings (p < 0.001). Fit indexes revealed a better adjustment (RMSEA = 0.06; CFI = 0.93; TLI = 0.90; SRMR = 0.05) when compared with the 11-item solution. Results showed that the BPFS-C had an acceptable construct validity.

Reliability of BPFS-C

In Table 1 are presented means of the items, standard-deviations, item-total correlations, Cronbach's coefficient and Cronbach's coefficient if item is deleted. Generally, results revealed an adequate reliability, with a Cronbach's alpha coefficient of .77. Item-total correlations ranged between .30 and .57, which can be considered weak and moderate according to Dancey and Reidy (2017). Composite reliability obtained for the total scale was .77.

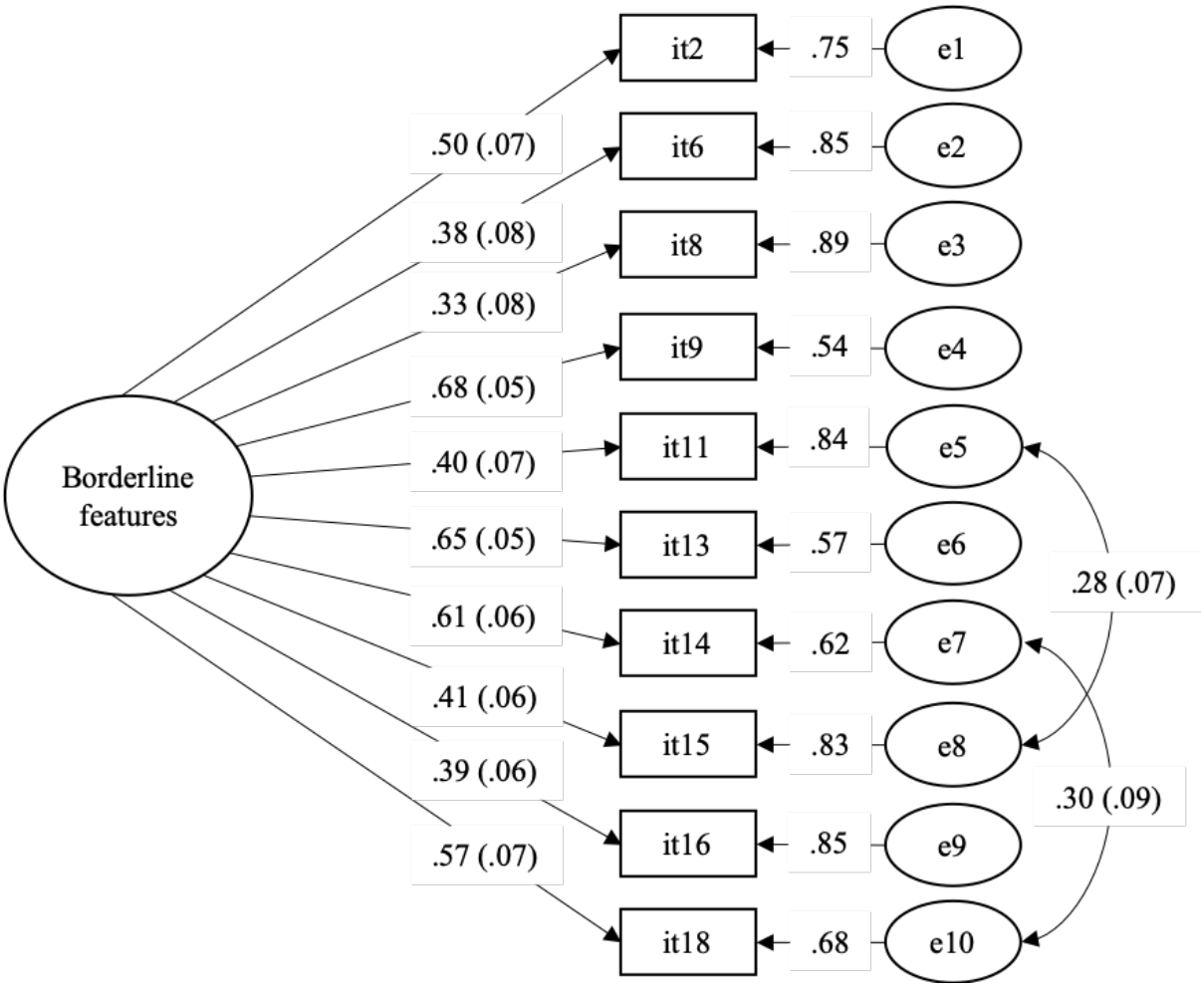

Figure 1. CFA results for the BPFS-C (*N* = 256). Standardized coefficients and measurement errors are presented.

Convergent Validity of BPFS-C

Convergent validity was tested through correlations between borderline features (BPFS-C) and other related constructs such as depression, anxiety, stress, self-compassion, fears of compassion and social safeness (Table 2). Pearson coefficients were significant ($p < .01$), as expected. Results showed moderate positive correlations between borderline features (BPFC-S) and depression, anxiety and stress (DASS-21); weak positive correlations with fear of compassion for others (FSC) and fear of compassion for self (FCS), moderate positive correlations with fears of compassion from others (FSC); moderate negative correlations with self-compassion (SCS) and weak negative correlations with social safeness (SSPS).

Table 2. Pearson correlations BPFS-C and other variables in study (N = 256).

	Borderline features (BPFS-C)
Self-compassion (SCS)	-.58*
Depression (DASS-21)	.55*
Anxiety (DASS-21)	.53*
Stress (DASS-21)	.60*
Fear of compassion for others (FSC)	.24*
Fear of compassion for self (FSC)	.38*
Fears of compassion from others (FSC)	.50*
Social safeness (SSPS)	-.31*

Note. * p < .001. SCS = Self-Compassion Scale; DASS-21 = Depression Anxiety Stress Scale; FSC = Fear of Compassion Scale; SSPS = Social Safeness and Pleasure Scale.

Borderline Features, Gender and Age

Differences in borderline features between boys and girls were explored thorough a student's t-test. Results ($t_{(254)}$ = 3.15, p < .01) showed that adolescent girls reported higher levels of borderline features (M = 28.98, SD = 5.90) in comparison to adolescent boys (M = 26.62, SD = 5.94), with a small effect size (d = .40). A nonsignificant correlation was found between borderline features and age (r = .00, p = .97).

Invariance Analysis

Measurement invariance of the BPFS-C across sex was tested. Configural invariance was established based on acceptable fit indexes attained in the group of boys (N = 207; CFI = .94, RMSEA = .06, SRMR = .05) and girls (N = 204; CFI = .95, RMSEA = .06, SRMR = .05) separately. Then, metric invariance was tested, and results supported metric invariance, with item factor loadings equivalence constraints only producing minimal decrease in model fit (ΔCFI = .00, ΔRMSEA = .00, ΔSRMR = .01). Partial scalar invariance was achieved after allowing the intercepts of items 4, 5 and 8 (ΔCFI = .01, ΔRMSEA = .00, ΔSRMR = .00) to vary between groups.

Confirmatory Factor Analysis of BPFS-P

A CFA with the 24 items of the BPFS-P was performed using the Maximum Likelihood Robust estimation method. In this model, chi-squared test presented a

significant result (χ^2 (252, *N* = 259) = 739.90, *p* < .001) and fit indexes indicated a poor fit to the empirical data (RMSEA = .09; CFI = .70; TLI = .67; SRMR = .09). All items with loadings under .32 (Tabachnick & Fidell, 2013) were removed and a 11-item solution was obtained. Given the modification indexes, some items were correlated in the model. Item 19 was correlated with item 17, which is acceptable given that both relate to impulsivity and difficulties in controlling behaviors. Item 18 was correlated with item 14 because both evaluate emotional lability and oscillation between different feelings.

In the final 11-item solution (Figure 2), chi-squared test was significant (χ^2 (42, *N* = 259) = 82.03, *p* < .001). Fit indexes revealed good adjustment (RMSEA = .06; CFI = .95; TLI = .93; SRMR = .05) and all factor loadings were significant (*p* < .001). Results showed that the BPFS-P had an acceptable construct validity.

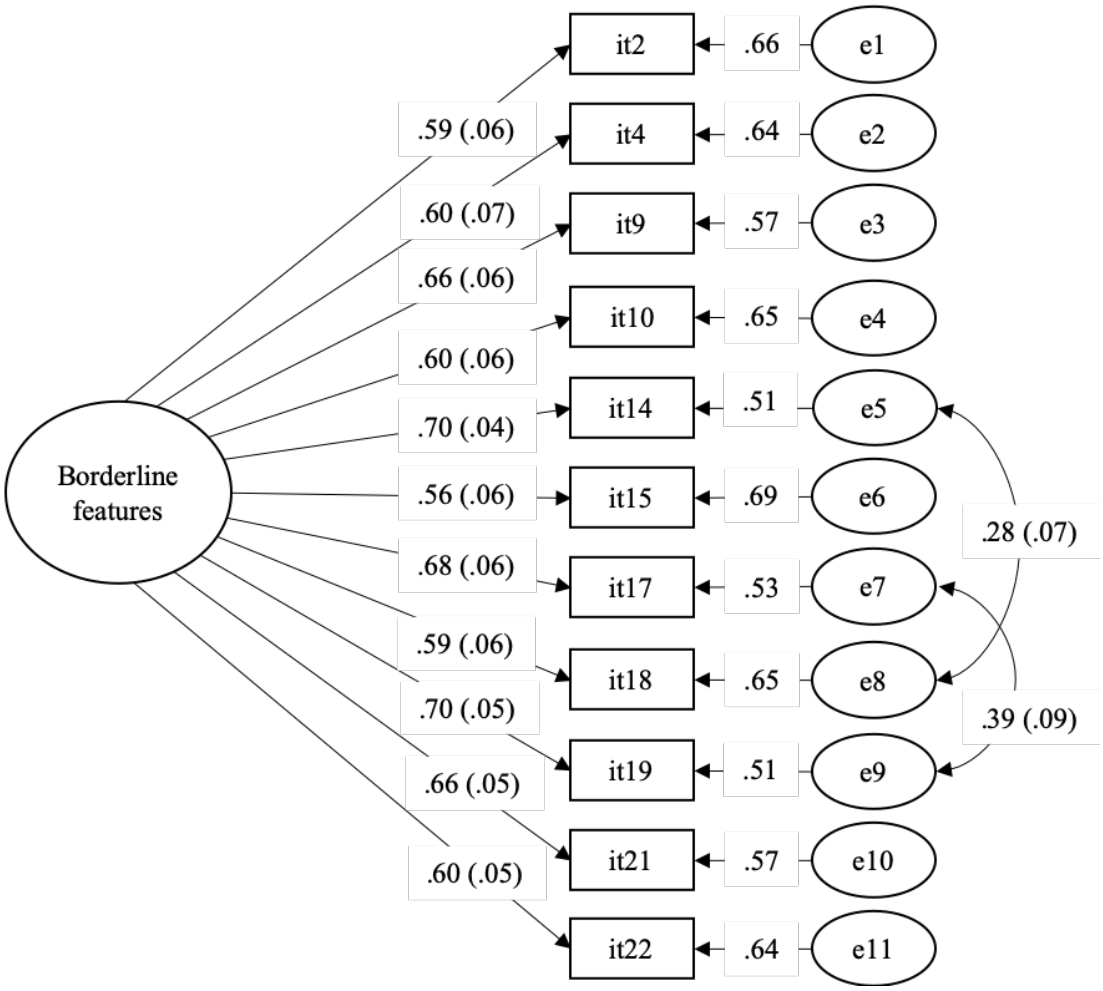

Figure 2. CFA results for the BPFS-P (*N* = 259). Standardized coefficients and measurement errors are presented.

Reliability of BPFS-P

Cronbach's coefficient for the BPFS-P of 11 items was good (α = .88). In Table 3 are presented means of the items, standard-deviations, item-total correlations, and Cronbach's coefficient if item is deleted. All item-total correlations ranged between .53 and .68. Composite reliability was .88 for total scale.

Convergent Validity of BPFS-P

Convergent validity was analyzed testing the correlation between borderline features (BPFS-P) and total difficulties (SDQ-for Parents), which includes items about emotional symptoms, conduct problems, hyperactivity-inattention and peer problems. It was found that borderline features had a significant, moderate and positive correlation with total difficulties (r = .50; p < .001).

Table 3. Mean (*M*), standard deviation (*SD*), item-total correlation (*r*), Cronbach's alpha if item deleted (*α*) and standardized factor loadings (*λ*) of all items of the BPFS-P (*N* = 259).

Items (abbreviated content)	*M*	*SD*	*r*	*α*	*λ*
2. Feel very lonely	1.92	0.92	0.54	0.87	0.59*
4. Do things ... wild/out of control	1.61	0.88	0.57	0.87	0.60*
9. Something important missing	2.27	1.15	0.60	0.87	0.66*
10. Friends . . . treated him/her badly	1.50	0.80	0.54	0.87	0.60*
14. Back and forth between feelings	1.97	0.97	0.68	0.86	0.70*
15. Get into trouble . . . without thinking	1.41	0.72	0.53	0.87	0.56*
17. When mad, can't control…	1.85	1.02	0.66	0.86	0.68*
18. How he/she feels … changes	2.02	0.97	0.58	0.87	0.59*
19. Upset, he/she does things . . . good	1.56	0.84	0.68	0.86	0.70*
21. Get so mad, … can't let all anger out	1.65	0.89	0.62	0.87	0.66*
22. He/she gets bored very easily	2.08	1.02	0.55	0.87	0.60*

Note. * p < .001.

Discussion

The current study aimed to translate, adapt and validate the BPFS-C and BPFS-P for the Portuguese population. Based on our bibliographic review, there was no instrument in Portugal to assess borderline features in people under the

age of 18. Hence, these new scales add an important contribution, especially for early detection of borderline traits.

The 24-item BPFS-C with four domains developed by Crick et al. (2005) was tested in the current study and showed an unstable factor structure. Thus, a unidimensional version of 11 items suggested by Sharp et al. (2014), was tested and confirmed through a CFA. The final solution resulted in a 10-item scale with adequate construct and convergent validity and satisfactory internal consistency. As we intended to validate a measure with robust psychometric quality, the item "Lots of times, my friends and I are really mean to each other" was removed for showing a poor factor loading. The original author of the 11-item version did not oppose this decision. The correlations between the errors of items 11 and 15 (both having content about impulsivity) and 14 and 18 (both evaluating emotional lability) was not considered an issue due to the similar content of the items (Brown, 2015). All items presented acceptable factor loadings and they are representative of thoughts, feelings and behaviors related to borderline features. Measurement invariance across sex was tested, and results showed that the basic organization of the BPFS-C was supported for boys and girls (configural invariance) and each item contributed similarly to the latent construct (metric invariance). Partial scalar invariance was attained after allowing three item intercepts to vary between groups, which means that seven of the ten factor loadings and intercepts are equal for boys and girls. These results support a general measurement invariance of the BPFS-C across sex, similar to the Italian version (Fossati et al., 2019), which means that it does not require gender-specific adaptations.

In terms of convergent validity, results demonstrated significant correlations between the BPFS-C and negative affect, aligning with previous studies (Hepp et al., 2018; Sharp et al., 2014). Our results showed moderate and significant correlations between borderline features and depression, anxiety and stress. Self-compassion was negatively and significantly associated with borderline features, which support previous research about the benefits of self-compassion in BPD (Feliu-Soler, 2017; Scheibner et al., 2017) and in adolescents with non-suicidal self-injury (Xavier et al., 2016). Additionally, results showed that adolescents with high levels of borderline features tend to fear compassion in different forms: they fear being compassionate to other people, fear to be compassionate with themselves and, above all, they fear compassion from others. This last point may

be related to the negative relationship between borderline features and social functioning (Zanarini et al., 2006). Adolescents with high borderline features may experience the world as unsafe and have difficulties in stablishing intimate relationships with other people, and seem resistant to kind and warm social interactions.

As previously discussed in some studies, females presented higher borderline features in comparison to males in adolescence (Chabrol et al., 2001; Crick et al., 2005; Haltigan & Vaillancourt, 2016) and adulthood (Trull et al., 2010). Our results showed the same tendency, with girls showing higher levels of borderline features. Moreover, according to DSM-5 (APA, 2013), women are three times more diagnosed with BPD than men, however there is no solid consensus since some studies have found no gender differences in BPD (Grant et al. 2008). Although the age-range of the adolescents' sample was narrow (between 14 and 18 years old), the relationship between age and borderline features was explored, showing a non-significant correlation.

Concerning the BPFS-P, a similar process was conducted, and the 24-item scale proposed by Crick et al. (2005) was tested through a CFA. Having eliminated some items with unacceptable factor loadings and correlating error of item 17 with error of item 19 and error of item 14 with error of item 18, a final 11-item solution was achieved. The correlations between these errors were not deemed problematic due to their similar content. We hypothesized that some of the covariance not explained by the latent variable was dependent on a common external cause (Brown, 2015). Content of item 17 and 19 are both related to impulsivity and struggles to control dysfunctional behaviors, and items 14 and 18 relate to emotional lability and instability. The final model presented good fit indexes and construct validity, acceptable convergent validity and very good internal consistency.

Borderline features reported by parents were associated with adolescents' general difficulties, namely emotional symptoms, conduct problems, hyperactivity-inattention and peer problems. These results corroborate that the higher the levels of borderline features, the higher the difficulties. As discussed above, negative affect is associated with borderline traits, and so are the emotional symptoms (fears, worries, dependence and unhappiness), conduct problems (fights, tempers, lies, steals and disobedience), hyperactivity-inattention (distractibility, low

persistence and reflection, restlessness and fidgetiness) and peers problems (interpersonal issues).

Overall, our results suggest that the short form versions of the BPFS-C and BPFS-P are psychometrically reliable and valid measures for assessing borderline features in adolescents. Although both versions assess adolescents' borderline features, we noticed that different content is assessed by the BPFS-C and BPFS-P. The version for adolescents has more items related to thoughts and feelings, which entails the intrapersonal experiences of borderline features. On the other hand, the version for parents includes items with a more observable content, such as behaviors and feelings expression, indicating that it is probably easier for parents to accurately rate items about what they can observe in their children. It appears that the two scales can complement each other by giving more information regarding the adolescents. Therefore, using both instruments is encouraged to attain a more accurate and complete assessment, in clinical and educational settings. Early detection and initial referral to adequate intervention of adolescents with borderline features may contribute to prevent the development of these features. A good advantage of the two versions is their short length and quick response time.

Limitations

Some limitations of this study are acknowledged to help guiding future research. Firstly, it is important to evaluate the temporal reliability of Portuguese versions of the BPFS-C and BPFS-P through a test-retest analysis. While this has been done in other samples (e.g., Fossati et al., 2019), it needs to be addressed in the newly developed Portuguese versions. Additionally, convergent validity was examined in an acceptable but sub-optimal way due to our sample size, and there was no other measure in Portugal to assess borderline features to include in the convergent validity analysis. Secondly, this study's adolescent community-based sample does not allow to draw conclusions about the validity of the Portuguese version in clinical samples; therefore, future studies are encouraged to analyze the psychometric properties of the BPFS-C and BPFS-P in clinical samples and to explore their sensitivity and specificity. The fact that these instruments are available in different languages allow the realization of transcultural studies, which could make important contributions to a better understanding of the expression of borderline features among adolescents from different cultures. Additionally,

parents and adolescents who participated in the current study did not have a kinship bond, so we could not test cross-informant concordance (child self-report vs. parent-report). Since these data was collected in a suboptimal controlled environment without the direct interaction between researchers and parents, future research might address this shortcoming.

Compliance with Ethical Standards

This investigation has been supported by the Ph.D. Grant (grant number: SFRH/BD/129985/2017) 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. Written informed consent was obtained from all individual participants and their parents.

Authors' Contributions

DC: collected data, conducted the data analyses, and wrote the paper. ML: collaborated with the data collection and writing of the paper. MC: reviewed the final manuscript. CS: reviewed the final manuscript. PC: collaborated with the design and reviewed the final manuscript.

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Study II

Measuring self-disgust in adolescence: Adaptation and validation of a new instrument for the Portuguese adolescent population

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Measuring self-disgust in adolescence: Adaptation and validation of a new instrument for the Portuguese adolescent population

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Abstract

Self-disgust is a complex emotion related to feeling aversion or revulsion about internal and personal physical attributes, personality, functioning and behaviors. The aim of the present study was to adapt, validate and examine the psychometric properties of the Multidimensional Self-Disgust Scale, in a sample of Portuguese adolescents (MSDS-A). Participants were 540 adolescents (*n* = 308 females, 57%), with ages between 13 and 18 years. Data were analysed through SPSS and MPLUS was used to perform a Confirmatory Factor Analysis (CFA). Self-report questionnaires were used to assess several indicators of psychopathology and self-compassion. Results from the CFA showed that a 4-factor model with a second order factor presented good fit indices. The full scale and its factors showed good internal consistency, adequate temporal stability, and good convergent, divergent and incremental validity. The MSDS-A seems a valid measure to assess self-disgust in adolescents, with important implications to clinical context and research.

Keywords: adolescence; self-disgust; confirmatory factor analysis; assessment

Introduction

Adolescence is a crucial developmental stage involving several biological, emotional, cognitive, and social changes with unique implications for adulthood functioning (Nelson et al., 2005). In this stage, people tend to be more aware of what people think about themselves and relationships with peers become more significant (Gilbert, 2005). Indeed, people develop their emotional and cognitive systems in interaction with others. Self-disgust and self-criticism are psychological phenomena associated with interpersonal scripts. In other words, we learn to relate to ourselves (for example, with self-criticism or self-disgust) based on the way other people have related and interacted with us (Baldwin, 1992, 1997). Having negative interactions of rejection with parents and friends might result in feeling excluded, embarrassed, humiliated, or ridiculed, which in turn can contribute to the development of a sense of self as undesirable, unwanted and with feelings of self-directed disgust (Carreiras, 2014; Gilbert & Irons, 2009; Guiomar, 2015). All these possibilities make the adolescent more vulnerable to developing different and multiple problems in the present and future (Wolfe & Mash, 2006).

Despite various concepts and disagreements, disgust or aversion is considered a basic, universal, and innate emotion (Darwin, 1972/1965; Ekman, 1992). It is irrational, devoid of cognitive, behavioral and situational flexibility, and it is associated with negative moral consequences (Russell & Giner-Sorolla, 2013). Disgust has the evolutionary function of protecting human beings from getting intoxicated and has a complex role in differentiating what is considered repugnant or attractive in society (interpersonal/moral disgust; Nussbaum, 2004). The acquisition of a disgust repertoire is shaped by sociocultural factors and learning (Rozin et al., 1999; Sawchuk, 2009). Disgust involves a set of physiological sensations (e.g., nausea, vomiting, revulsion), an expressive component that comprises multiple manifestations in the hands, face and body, behavioral reactions (e.g., withdrawal, escape, rejection, freezing) and a variety of distinct negative cognitions (e.g., "It makes me sick"; Ekman, 1992; Overton et al., 2008; Powell et al., 2015; Rozin et al. 1999).

Self-disgust can be assumed as a self-focused, maladaptive, and persistent generalization of disgust, in which integral and stable characteristics of the self are the aversive object (Olatunji et al., 2012; Powell et al., 2015). That said, self-disgust involves a devaluation of physical appearance, personality, and behavior patterns

(Ille et al., 2014; Ypsilanti et al., 2019). It is not an isolated phenomenon, and instead, it exhibits different degrees of association with emotional and cognitive events (Powell et al., 2015). Power and Dalgleish (1997) argued that self-disgust is a dominant psychological mechanism to the origin and maintenance of negative cognitions. It may create distortions that perpetuate vicious cycles of global dysfunctional cognitive patterns, in which ruminations and negative thoughts precede experiences of self-disgust (Davey et al., 1998).

Recently, there has been a growing interest in the empirical study of self-disgust in adults and adolescents. The relationship between self-disgust and depression is well established (Ille et al., 2014; Overton et al., 2008; Powell et al., 2013, 2014). Perceiving the self as undesirable and repulsive seems to contribute to explain depressive symptoms. Moreover, self-disgust also seems to largely contribute to suicide risk (Akram et al., 2019; Schienle et al., 2020). Moreover, self-disgust seems to be associated with impulsivity (Carreiras et al., 2020) and to contribute to explain non-suicidal self-injury in youth (Smith et al., 2015). Accordingly, several studies showed that self-disgust is related to specific psychological problems (Clarke et al., 2018; Powell et al., 2013; Ypsilanti et al., 2019), which consequently leads to a decrease of psychological wellbeing (Azlan et al., 2017; Brake et al., 2017). Given that high levels of self-disgust are a risk factor for the onset and maintenance of various mental disorders and associated symptoms, it is imperative to assess and understand this phenomenon in adolescence.

The growing interest in self-disgust research led to the development of specific self-report questionnaires, namely, Self-Disgust Scale (SDS; Overton et al., 2008), Disgust Scale-Revised in Adolescents (DS-R; Kim et al., 2012), Questionnaire for the Assessment of Self-Disgust (QASD; Schienle et al., 2014), and Multidimensional Self-Disgust Scale (MSDS; Carreiras et al., 2022). The DS-R (Kim et al., 2012) consists of 22 items divided into three factors (contagion, mortality, and contact disgust) and the QASD (Schienle et al., 2014) is composed of two factors (personal and behavioral disgust). The SDS (Overton et al., 2008) was studied in a sample of university students and has two factors: disgusting self (disgust directed towards stable aspects, independent of appearance or personality) and disgusting ways (disgust to the behavior of others). The SDS evidenced a strong internal consistency ($\alpha = .91$), a strong test-retest reliability and

positive correlations with other theoretically related measures. However, the items mainly cover thoughts and evaluations leaving out other relevant dimensions (e.g., physiological). To fill this gap, Carreiras et al. (2022) developed a new instrument, the Multidimensional Self-Disgust Scale (MSDS), which allow the evaluation of four factors of the emotional response of self-disgust: defensive activation, cognitive-emotional, avoidance and the exclusion. This scale was developed and validated with a sample of university students and workers aged 18-60 years. The results showed that the final version consists of 32 items, with good internal consistency, convergent validity and good predictive effect on psychopathology and suicidal ideation. The self-disgust subscales presented moderate correlation between one another (*r* between .47 and .64).

Since there are currently no measures developed or adapted to assess self-disgust in adolescents, the present study proposes to adapt and validate the Multidimensional Self-Disgust Scale for Adolescents (MSDS-A). Specifically, we confirmed the original factorial structure and examined items' properties, convergent, divergent, and incremental validity, internal consistency, and temporal stability. Moreover, we analyzed gender differences in adolescents' self-disgust.

Methods

Participants

The sample of the present study consisted of 540 adolescents, 232 males (43%) and 308 females (57%), aged between 13 and 18 years (M = 15.53; SD = 1.08). They were attending middle and high school and had an average of 10.15 years of schooling (SD = 0.89). Of these, 17.8% were under the 10th grade, 47% were in the 10th grade, 31.3% were in the 11th and 3.1% were in the 12th grade. Girls had more years of education than boys ($t_{(405)}$ = -2.77, p = .01), with a small effect size (d = -.25; Cohen, 1988). Additionally, 79% of participants reported a medium socioeconomic status, while 2.6% reported a low and 18.4% a high socioeconomic status.

Procedures

The present study was authorized by the Ministry of Education and the National Commission for Data Protection of Portugal (number: 6713/ 2018). All ethical principles of the Helsinki declaration (1964) and its later amendments or comparable ethical standards were followed. A convenience sample was collected

in public schools in the north and center regions of Portugal. Inclusion criteria were having between 12 and 18 years old and Portuguese nationality. The schools' headteachers, parents and adolescents were informed about the study's aims, confidentiality, and voluntary participation, and gave their written informed consent. Then, adolescents anonymously completed the questionnaires in the classroom, with the presence of the teacher and the researcher to clarify any questions and assure independent responses. They took an average of 30 minutes to complete the questionnaires in paper form. For test-retest analysis, 65 adolescents from three random classes were selected to complete the MSDS-A a second time, four weeks later. Questionnaires with missing items were excluded from the analyses.

Adapting the MSDS for Adolescents

Initially, items were adapted considering adolescents' linguistic and developmental stage. We tried to use simple terms and a more juvenile language; for example, "conceal" was replaced by "hide", and "expose" was replaced by "show". We also added examples to clarify some of the items, for example, "I get aroused (e.g., more alert)". Generally, the content of the items and the original structure of the scale were preserved. Every item was preceded with "When I feel self-disgust…" so the adolescents had in mind that they were responding about the emotion of self-disgust in every statement. Subsequently, a convenience sample of 31 adolescents (ages between 12 and 18 years) was asked to complete the questionnaire and give feedback about the semantic comprehensibility of instructions and items. Slight changes were made to improve understandability, for example, using other words more broadly used amongst youth.

Measures

The Multidimensional Self-Disgust Scale (MSDS; Carreiras et al., 2022) is a self-report questionnaire designed to measure disgust towards the self, regarding physical, behavioral and functional aspects. The scale consists of 32 items organized into four factors: defensive activation (physiological component of emotion), cognitive-emotional (thoughts and feelings that reflect the relationship of aversion, hostility and disgust with self), avoidance (actions and behaviors that aim to hide and avoid aspects of the self that are considered disgusting and toxic) and exclusion (behaviors that seek to exclude and eliminate the disgusting and aversive aspects of the self). Items are rated on a 5-point Likert scale (0 = *never*; 4 = *always*), with higher scores indicating higher levels of self-disgust. In the

original version, in a non-clinical sample of university students and workers, the measure showed good internal consistency across all factors, ranging from .77 to .97 and good convergent and incremental validity (Carreiras et al., 2022). The psychometric properties of the adolescent version will be presented in this article.

The Self-Compassion Scale (SCS; Neff, 2003; Portuguese version for adolescents by Cunha et al., 2016) is a self-report questionnaire to assess self-compassion through 6 subscales: self-kindness, self-judgment, common humanity, isolation, mindfulness and over-identification. Each item is rated on a 5-point Likert scale (1 = *almost never*; 5 = *almost always*) and higher scores mean higher levels of self-compassion. In the Portuguese version for adolescents, the measure showed good levels of internal consistency for the total scale (α = .88), for the six subscales the values ranged from .70 to .79 (Cunha et al., 2016). In the present study, SCS-A had α = .90 for the total scale.

The Stress, Depression, and Anxiety Scale (DASS-21; Lovibond & Lovibond, 1995; Portuguese version by Pais-Ribeiro et al., 2004) consists of 21 items organized in 3 subscales: stress, depression, and anxiety. Each item is rated on a 4-point Likert scale (0 = *did not apply to me at all*; 3 = *applied to me very much or most of the time*) about the last week. The original version presented good internal consistency (α = .91 for depression, α = .84 for anxiety and α = .90 for stress; Lovibond & Lovibond, 1995). In the Portuguese version, the internal consistency obtained was equally good (α = .85, α = .74 and α = .81, respectively; Pais-Ribeiro et al., 2004). The internal consistency obtained in the present study was α = .90 (depression), α = .86 (anxiety) and α = .89 (stress).

The Impulse, Self-Harm, and Suicide Ideation Questionnaire for Adolescence (ISSIQ-A; Carvalho et al., 2015) is a self-report questionnaire composed by four modules: impulse; self-harm, risk behaviors, and suicide Ideation. The ISSIQ-A also assesses functions of self-harm in a nominal scale (*yes* or *no*). Items of the four modules are rated on a 4-point Likert scale (0 = *never happens to me*; 3 = *it always happens to me*). In the original study, the different subscales presented good internal consistency (α = .77 for impulse, α = .90 for self-harm, α = .81 for risk behaviors, α = .82 for suicide ideation; Carvalho et al., 2015). In the present study, the following Cronbach's alphas were obtained: .77 for impulse, .81 for self-harm, .73 for risk behaviors, and .83 for suicide ideation.

Data analyses

The present study has a cross-sectional design and statistical procedures were performed using IBM SPSS Statistics 22.0 (IBM SPSS; Chicago, IL). Additionally, MPLUS version 8 (Muthén & Muthén, 1998-2017) was used to perform a CFA. Normality was tested through Kolmogorov-Smirnov test and Skweness (Sk) and Kurtosis (Ku) analysis. No severe violations were considered for $Sk < 3$ and $Ku < 10$ (Kline, 1998). Parametric tests were used due to their robustness and the high number of subjects in our sample (Marôco, 2010). Student's t-tests for independent samples were performed to explore mean differences.

A Confirmatory Factor Analysis (CFA) was performed using the Robust Maximum Likelihood (MLR) estimation method, considering that the data did not follow a normal distribution. To analyze the overall quality of CFA, the chi-square test ($\chi 2$) was observed, and the following cutoff points indicated by Hair et al. (2010) were analyzed: RMSEA < .07; CFI > .90; TLI > .90; SRMR < .08. The re-specification of the model was made from the modification indices (greater than 11; $p < .001$), respecting the theoretical considerations (i.e., item content). For model comparison purposes, AIC (Akaike) and BIC (Bayesian) were used. The quality of local adjustment was assessed by factor weights and individual item reliability (which indicates the consistency and reproducibility of the measurement). As recommended, all items with factor saturation < .3 were eliminated (Tabachnick & Fidell, 2013). Cronbach's alphas were calculated to test internal reliability. We used as reference values the indices suggested by Pestana and Gageiro (2008): less than .60 inadmissible alphas; between .61 and .70 weak alphas; between .71 and .80 reasonable alphas; between .81 and .90 good alphas; and over .90 very good alphas.

Pearson's correlation coefficients were calculated to analyze test-retest reliability and convergent validity, using as reference the indices described by Dancey and Reidy (2017): coefficients between .10 and .39 weak; between .40 and .69 moderate; higher than .70 strong. Incremental validity was analyzed through hierarchical regression models. The assumptions of normality, homogeneity (analysis of the normal probability graph) and residue independence were considered (Durbin-Watson test). Absence of multicollinearity problems

between the variables were considered when Variance Inflation Factor (VIF) were < 5 (Marôco, 2010; Pestana & Gageiro, 2008).

Results

Preliminary Data Analysis

Kolmogorov-Smirnov test showed that our data did not follow a normal distribution. Nevertheless, no variable presented asymmetry and kurtosis values indicating severe violations to the normal distribution (*Sk* < 3 and *Ku* < 10; Kline, 1998). Outliers were analyzed with Mahalanobis square distance (D2), and by the graphical representation of the results (Extremes Diagram and Box-Plot Quartiles). Few extreme values were identified, but we decided to maintain them to keep the natural variability and because removing them did not interfere with the statistical analyses performed (Tabachnick & Fidell, 2013). In the hierarchical regression analysis, Durbin-Watson values ranged from 1.91 to 1.97 and there was no evidence of multicollinearity between variables (VIF < 5; Marôco, 2010).

Confirmatory Factor Analysis of the MSDS-A

The factorial structure of the MSDS-A scale was analyzed through a CFA, testing the hypothesis that this data would fit the factorial structure of four factors (defensive activation, cognitive-emotional, avoidance and exclusion) and 32 observed variables, as indicated by the original work of Carreiras et al. (2022). Thus, the following models were compared (Table 1): Model 1, the four intercorrelated latent factors; Model 2, the four intercorrelated latent factors, with the elimination of items 9 and 4 and the correlation of the errors of items 3 and 7; Model 3, Second-order hierarchical model, with a global latent factor "Total Self-Disgust", four interrelated latent factors and 30 manifest variables (elimination of items 4 and 9; correlation of errors of items 3 and 7).

Initially, the adjusted model (Model 1) revealed a reasonable fit quality in some indicators (X^2/df = 2.57, χ^2 = 1172.61; df = 456; p < .001; CI RMSEA 90% [.050, .058]; P(rmsea) p < .005 = .052; RMSEA = .054; CFI = .89; TLI = .88; SRMR = .051; AIC = 38264.160; BIC = 38701.900). Subsequently, the modification indices were analyzed and considered to improve the adjustment, and Model 2 was tested. In the second model, item 9 ("When I feel self-disgust, I feel an urge

Table 1. Comparison of the fit indices of the models tested through Confirmatory Factor Analysis.

Models tested	χ^2	df	X^2/df	SRMR	TLI	CFI	RMSEA	90% CI RMSEA	AIC	BIC
Model 1 (4 factors)	1172.61*	456	2.57	.051	.88	.89	.054	[.050, .058]	38264.16	38701.90
Model 2 (4 factors: elimination of items 9 and 4; correlation of errors of items 3 and 7)	911.25*	398	2.28	.048	.91	.92	.049	[.045, .053]	36273.35	36689.64
Model 3 (1 second order factor, 4 first order factors, elimination of items 9 and 4, correlation of errors of items 3 and 7)	924.96*	400	2.31	.050	.91	.91	.049	[.045, .053]	36297.62	36705.32

Note. *p < .001. df = degrees of freedom; SRMR = Standardized Root Mean Residual; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; AIC = Akaike; BIC = Bayesian.

to burp") was eliminated due to the low factor loading (.256). Item 4 ("When I feel self-disgust, I get inhibited") was also eliminated because it saturated in the Defensive Activation subscale (instead of Avoidance subscale), which was not theoretically sustained, considering the item's content. Additionally, and according to the modification indices obtained in Model 1, the error of item 3 ("When I feel self-disgust, I have shortness of breath") and 7 ("When I feel self-disgust, my heart beats fast") were correlated. These correlations are justified since the content of the items is similar and both belong to the same factor (Defensive Activation).

After these modifications, we verified that Model 2 showed a better adjustment, with adequate CFI and RMSEA values (CFI ≥ 0.90 and RMSEA ≤ 0.08). AIC and BIC values were below to those of the original model. Additionally, by testing Chi-square differences, it was found that Model 2 had a significantly higher quality of adjustment than Model 1.

Second-order Factor Analysis

According to the assumptions of factor analysis, the previously obtained results suggest the existence of a superior hierarchical factor. Thus, a second-order model named "Self-Disgust" was tested, based on certain criteria (a) the theoretical conceptualization of self-disgust as an emotion predicts the existence of a latent factor, and (b) the significant correlations observed between the four multidimensional components of MSDS-A. Based on Model 2, which had better adjustment indices, a second order hierarchical model with a latent Self-Disgust factor was tested (Model 3). The adjustment indices are presented in Table 1. The adjusted model showed a good fit (X^2/df = 2.31; χ^2 = 924.96; df = 400; p < .001; CI RMSEA 90% [.045, .053]; P(rmsea) p < .005 = .60; RMSEA = .049; CFI = .91; TLI = .91; SRMR = .050; AIC = 36297.620; BIC = 36705.319). Comparing Model 2 and Model 3, we observed that some adjustment values underwent unfavorable changes, however the results indicated that the paths between the second-order factor "Self-Disgust" and the subscales were significant and had high factor weights, specifically, self-disgust for defensive activation λ = .83, self-disgust for cognitive-emotional λ = .99, self-disgust for avoidance λ = .94 and self-disgust for exclusion λ =. 82. Thus, although there were some minor changes in the adjustment quality indices, the addition of the second-order factor is supported by the correlational structure observed.

After the constitution of Model 3, we analyzed the factor loadings of the items (λ) associated with the four factors to ascertain the amount of variance observed that the underlying construct explained. All items met the assumption of λ ≥ .3 (Tabachnick & Fidell, 2013) and the factor loadings of the 30 items are presented in Table 2. All items revealed high factor loadings, ranging between .51 (item 27) and .85 (item 12).

Table 2. Factors and factor loadings (λ). Mean (*M*), standard deviation (*SD*), item-total correlations (*r*) and Cronbach's alpha if the item was deleted (*α*) (*N* = 540).

Factors	λ	*M*	*SD*	*r*	*α*
Defensive Activation (α = .93)		**7.16**	**9.37**		
1. … shivers in my body.	.67*	0.59	0.91	.64	.93
3. … breathing fast.	.73*	0.64	1.04	.73	.92
7. … heart beats fast.	.77*	0.72	1.07	.76	.92
10. …I feel facial tension …	.56*	0.62	0.97	.54	.93
13. … fainting or losing the strength...	.79*	0.50	0.90	.75	.92
14. … body contracts.	.73*	0.47	0.87	.71	.93
15. … body trembles.	.81*	0.43	0.90	.78	.92
17. … feeling in my stomach.	.74*	0.68	1.04	.71	.93
19. … I feel dizzy.	.72*	0.32	0.73	.69	.93
22. … gastrointestinal changes…	.70*	0.37	0.87	.66	.93
23. … get aroused.	.54*	0.55	0.92	.52	.93
24. … going to vomit.	.64*	0.28	0.77	.62	.93
28. … knot in my throat.	.78*	0.67	1.09	.74	.92
32. … tingling sensations...	.67*	0.31	0.73	.66	.93
Cognitive-emotional factor (α = .94)		**9.44**	**9.87**		
2. … run away from myself.	.80*	0.89	1.20	.77	.94
5. … deep grief.	.83*	1.05	1.24	.81	.94
8. … feel diminished, inferior…	.79*	1.18	1.28	.78	.94
11. … something "bad about me".	.84*	1.21	1.31	.82	.94
16. … I feel dirty.	.66*	0.49	0.97	.63	.94
18. … cannot stop thinking…	.75*	1.39	1.32	.73	.94
21. …I feel hate.	.82*	0.83	1.17	.80	.94
24. …I feel angry.	.80*	1.00	1.27	.78	.94

29. … I am a "stain/blot".	.84*	0.67	1.11	.81	.94
31. … criticize myself…	.79*	0.72	1.19	.76	.94
Exclusion (α = .75)		**2.64**	**2.93**		
12. … urge to cut, burn or eliminate…	.85*	0.48	1.01	.65	.59
20. … hurt or eliminate some parts…	.78*	0.39	0.95	.69	.53
27. … I drink, take drugs…	.51*	0.22	0.66	.46	.80
Avoidance (α = .77)		**1.09**	**2.18**		
6. …I disguise those aspects…	.66*	1.08	1.22	.54	.75
25. … I avert my eyes from...	.71*	0.59	1.05	.59	.70
30. … I avoid exposing myself…	.82*	0.96	1.27	.68	.58
Total Self-Disgust (α = .97)		**20.33**	**22.16**		

Note. *ρ < .001

Item's Properties and Internal Consistency

Descriptive statistics for each item, correlation with the total scale and Cronbach's Alpha if item deleted are presented in Table 2. Cronbach's Alpha of each factor and total scale are also presented. These results showed that removing the item 27 ("When I feel self-disgust, I drink, take drugs and take pills") would increase the internal consistency of Exclusion subscale. However, we found that this item had an acceptable factor loading and it was theoretically plausible, so it was retained. In summary, the total scale had a Cronbach's Alphas of .97 and the four factors had Cronbach's Alphas ranging between .75 and .94, which were reasonable and very good values (Pestana & Gageiro, 2008).

Convergent and Divergent Validity

Pearson's correlation coefficients between the MSDS-A and other variables were tested (Table 3). The results showed significant correlations between self-disgust and other variables, specifically, higher levels of self-disgust were associated with higher levels of depression, anxiety, stress, impulse, self-harm and suicide ideation and with lower levels of self-compassion.

Table 3. Pearson's correlation coefficients between the variables under study (*N* = 540).

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Total Self-Disgust (MSDS-A)	1											
2. Defensive Activation (MSDS-A)	.92**	1										
3. Cognitive-emotional (MSDS-A)	.95**	.78**	1									
4. Exclusion (MSDS-A)	.87**	.73**	.84**	1								
5. Avoidance (MSDS-A)	.76**	.68**	.68**	.60**	1							
6. Depression (DASS-21)	.67**	.58**	.68**	.58**	.52**	1						
7. Anxiety (DASS-21)	.68**	.65**	.62**	.59**	.51**	.73**	1					
8. Stress (DASS-21)	.65**	.59**	.64**	.59**	.44**	.75**	.80**	1				
9. Impulse (ISSIQ-A)	.47**	.41**	.44**	.41**	.46**	.45**	.44**	.46**	1			
10. Self-harm (ISSIQ-A)	.50**	.46**	.44**	.37**	.66**	.41**	.49**	.38**	.46**	1		
11. Suicidal Ideation (ISSIQ-A)	.72**	.58**	.73**	.65**	.60**	.74**	.63**	.62**	.47**	.49**	1	
12. Self-Compassion (SCS-A)	-.62**	-.49**	-.66**	-.54**	-.46**	-.62**	-.51**	-.57**	-.42**	-.36**	-.66**	1

Note. ** $p < .01$ MSDS-A = Multidimensional Self-Disgust Scale for Adolescents.; DASS-21 = Stress, Depression and Anxiety Scale; ISSIQ-A = Impulse Questionnaire, Self-Harm, and Suicidal Ideation for Adolescence; SCS-A = Self-Compassion Scale for Adolescents.

Gender Differences

Independent sample t-tests were computed to explore gender differences in total self-disgust and in the different components (Table 4). Significant gender differences were found in self-disgust, with females revealing higher scores for the total scale and subscales. According to Cohen (1988), the effect size was large for the total self-disgust (d = -.53; r = -.26), medium for the defensive activation factor (d = -.38; r = -.19), large for cognitive-emotional factor (d = -.59; r = -.28), medium for exclusion factor (d = -.22; r = -.11) and large for factor avoidance (d = -.64; r = -.31).

Table 4. Means (*M*), standard deviations (*SD*), and student's t-tests of Self-disgust and subscales for the total sample (N = 540), and differences between males (n = 232) and females (n = 308).

Variables	Total sample (N = 540)	Males (n = 232)	Females (n = 308)	*t*	*p*
	M (SD)	*M (SD)*	*M (SD)*		
Total Self-disgust (MSDS-A)	20.33 (22.16)	13.96 (18.67)	25.13 (23.37)	-6.17	< .001
Defensive activation (MSDS-A)	7.16 (9.87)	5.20 (7.89)	8.64 (10.11)	-4.44	< .001
Cognitive-emotional (MSDS-A)	1.09 (2.18)	6.30 (8.13)	11.80 (10.41)	-6.89	< .001
Exclusion (MSDS-A)	1.09 (2.93)	0.83 (1.92)	1.30 (2.34)	-2.55	.001
Avoidance (MSDS-A)	2.64 (2.93)	1.63 (2.37)	3.40 (3.09)	-7.52	< .001

Note. MSDS-A = Multidimensional Self-Disgust Scale for Adolescents.

Incremental Validity

To explore the contribution of self-disgust, self-harm and impulse in predicting depression and anxiety, hierarchical regressions were computed. Considering the gender differences previously found, gender was inserted in the first step of both regression equations. Model 1 [$F_{(1, 538)}$ = 14.49, p < .001], with

gender as the only independent variable, explained 2% of the variance of depressive symptoms. Subsequently, in the second step, self-harm, impulse and self-disgust were inserted as predictors, producing a significant model, [$F_{(3, 535)}$ = 155.20, p < .001], explaining 48% of depressive symptoms. Self-disgust was a significant predictor (β = .57; p < .001) followed by impulse (β = .16; p < .001).

Regarding anxiety, the same procedure was done. The first model [$F_{(1, 538)}$ = 27.35, p < .001] explained 5% of anxiety. In the second step, the predictor variables produced a significant model [$F_{(3, 535)}$ = 166.59, p < .001], explaining 51% of the dependent variable. Self-disgust was a significant predictor (β = .51; p < .001), as well as self-harm (β = .19; p < .001), impulse (β = .12; p < .001), and gender (β = .10; p < .001).

Test-retest Reliability

Temporal stability of the MSDS-A was calculated for each factor and for the total scale. For this purpose, we invited a group of adolescents (N = 65) to respond to the MSDS-A in two moments with a 4-week interval. Strong correlation coefficients were obtained for defensive activation (r = .85, p < .001), cognitive-emotional (r = .89, p < .001), exclusion (r = .82, p < .001) and avoidance (r = .83, p < .001), as well as for the total scale (r = .89, p < .001).

Discussion

Literature has identified self-disgust as a persistent feeling of revulsion, aversion and repugnance towards some parts of the self (physical, psychological and behavioral), which includes defensive responses related to innate mechanisms of freeze and flight (Roberts & Goldenberg, 2007). People can focus excessively on these disgusting perceived parts (Powell et al., 2013) and try to avoid them to reach a more socially accepted and valued self (Gilbert, 2015). Although recent research with adolescents has been adding important contributions of internal processes such as shame, shame memories (Xavier, 2016; Cunha et al., 2017) and self-criticism (Xavier, Cunha et al., 2016), there is a lack of studies about the pervasive role of self-disgust in this population.

In this regard, the present study tested the factorial structure of the MSDS-A through a CFA, in a sample of 540 Portuguese adolescents. Results showed a 4-factor model with the following intercorrelated factors: defensive activation, cognitive-emotional subscale, avoidance and exclusion, aligning with previous

results attained by Carreiras et al. (2022). However, some changes were made. Firstly, item 9 ("When I feel self-disgust, I feel an urge to burp.") was deleted due to a low loading value, as well as item 4 ("When I feel self-disgust, I get inhibited.") because it saturated in defensive activation subscale, which is not theoretically supported. The content of the item seems to assess a specific behavioral response associated to the threat system (fight, flight, freeze; Gilbert, 2005; LeDoux, 1998) and not to a physiological sensation. According to Powell and colleagues (2015), self-disgust is a unique dysfunctional phenomenon with a stable pattern of cognitive-affective responses based on disgust and repugnance. Thus, when feeling self-disgust, a person activates a set of physical sensations (e.g., nausea, vomit, repulse), a specific facial expression, behavioral reactions (e.g., escape, flight, rejection, freeze, blocked) and several distinct negative cognitions about the self (Overton et al., 2008; Rozin et al., 1999). Secondly, error of item 3 ("When I feel self-disgust, I have shortness of breath.") and 7 ("When I feel self-disgust my heart beats fast.") were correlated due to their similar content and fitting in the same factor (Defensive Activation). Thirdly, a second-order factor named "Self-Disgust" was tested because the four factors were highly and significantly intercorrelated. They were also strongly correlated with the second-order factor.

After the modifications described, a final solution of 30 items showed good fit indices, indicating good construct validity. Subsequently, the factor loadings of the items were analyzed, and all were above the recommended references. These results confirm the original multidimensional structure of the MSDS (Carreiras et al., 2022) in adolescents. In terms of reliability, results presented good internal consistency for all subscales and good temporal stability (test-retest analysis).

Convergent validity was tested, and as expected results indicated that adolescents with higher levels of self-disgust report higher levels of psychopathology: symptoms of depression and anxiety (Ille et al., 2014; Overton et al., 2008; Powell et al., 2013, 2014). On the other hand, divergent validity was confirmed through a negative correlation between self-disgust and self-compassion. These results are in line with previous results that suggested that people with high levels of self-disgust present higher psychological inflexibility and higher self-criticism (Carreiras, 2014). Gilbert (2005, 2009) had previously suggested that disgust activates the threat system, preventing the development of a compassionate attitude towards the self.

Regarding self-harm, impulsivity and suicide ideation, results suggested that adolescents with higher levels of self-disgust report more self-injurious behaviors, more impulsivity and thoughts about suicide, which align with previous research (Akram et al., 2019; Carreiras et al., 2020; Schienle et al., 2020). Some studies added evidence that self-disgust had a unique role in self-harm behaviors and that patients with personality disorders, with thoughts and feelings of disgust towards the self, feel the urge to hurt and punish themselves and struggle to generate feelings of self-warmth and self-acceptance (Guiomar, 2015; Steele et al., 2015). A strong association between hated-self and self-harm in adolescents was already evidenced (Xavier, Pinto-Gouveia et al., 2016), as well as that adolescents with memories of threat and subordination in childhood tend to present higher levels of negative affect and higher engagement in non-suicidal self-injury (Xavier, 2016).

In this study, gender seemed to influence the levels of self-disgust since girls presented higher levels in comparison to boys. Specifically, girls presented higher physiological activation, more thoughts about self-disgust, more ways to exclude disgusting parts of the self and more avoiding behavior, such as inhibition, avert of the eyes and hide from others. Other studies have already indicated that women, from clinical and non-clinical samples, present higher levels of self-disgust than men (Ille et al., 2014; Palmeira et al., 2019). Carreiras (2014) found gender differences only in the Exclusion subscale, with men scoring higher. Overall, our results align with literature that showed that female adolescents appear to have higher risk to develop psychopathology and negative emotions than male adolescents (Kim et al., 2012; Xavier, Cunha et al., 2016). Maybe the fact that girls experience some imposed social pressure to present determined behaviors and to attain certain body and beauty standards is contributing to these increased feelings of self-disgust. Perceiving the self (or some aspects) as undesirable and aversive might appear as a maladaptive emotional response when the person thinks that they do not match some social and cultural standards. Moreover, self-disgust might work to prevent social rejection, especially when physical characteristics are divergent from the ones prevailing in the group.

The incremental validity of the MSDS-A was tested through linear regression and self-disgust showed to be a significative predictor of depression and anxiety symptoms, when controlling the effect of gender. This is congruent with previous studies (Overton et al., 2008; Power & Dalgleish, 2008; Powell et al.,

2013) that showed that self-disgust is a stable predictor of depression. Moreover, it might explain the association between dysfunctional patterns of thinking, the negative evaluation of the self and the world, and depressive mood. Additionally, two studies have also exposed that self-disgust had a predictive role in the development and maintenance of depression (Powell et al., 2016; Azlan et al., 2016).

Some limitations are now presented. Firstly, the cross-sectional design of this study does not allow to infer causality and, in the future, longitudinal studies on self-disgust, depression and anxiety symptoms are encouraged. Secondly, our sample was collected from the general population and clinical samples would be interesting to analyze and compare. Thirdly, to assess adolescents with an interview could be useful to collect more detailed data. Notwithstanding these limitations, our results showed that the MSDS-A has good psychometric properties and seems to be a valid and valuable instrument to assess self-disgust in adolescents.

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Study III

The Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A): Development, acceptability and expert panel evaluation

Carreiras, D., Cunha, M., Sharp, C., & Castilho, P. (2022). *The Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A): Development, acceptability and expert panel evaluation*. Under review

The Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A): Development, acceptability and expert panel evaluation

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Abstract

Borderline personality disorder (BPD) is a severe mental disorder with marked impulsivity, instability, emotional dysregulation, and self-harm. These features tend to develop over time and can be identified in adolescence. Early diagnosis is the first step to prevent the development of these features to a personality disorder. The purpose of this study was to develop the Clinical Interview for BPD for Adolescents (CI-BOR-A), a new instrument based on a sound clinical interview for BPD in youth (CI-BPD). We tested its acceptability with 43 adolescents and its content validity with the quantitative and qualitative evaluation of 23 experts in mental health. The CI-BOR-A is a semi-structured interview that considers both categorical and dimensional approaches of Personality Disorders of DSM-5, including 16 items, decision tables for diagnosis, and an appendix to explore self-harm history further. Adolescents accepted the interview, and none refused to complete the assessment. The expert panel considered the interview relevant, clear, accurate and complete. Important feedback was provided in terms of structure and content to improve the CI-BOR-A quality. In general, the CI-BOR-A is a rigorous interview to assess BPD in adolescents and adds an important contribution to early detection in clinical and community settings.

Keywords: assessment, CI-BOR-A, clinical interview, borderline personality disorder, adolescence

Introduction

According to the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association [APA], 2013), borderline personality disorder (BPD) is defined as a personality disorder with a pervasive pattern of instability in interpersonal relationships, self-image and affect, marked impulsivity, recurrent suicidal behavior or self-mutilating behaviors, chronic feelings of emptiness and difficulty in controlling anger. This disorder is associated with functional impairment, overuse of health services (Skodol et al., 2002) and suicide rates ranging between 4% and 10% (Paris, 2009). The prevalence of BPD in adults from the general population ranges between 1.6% and 5.9% (APA, 2013). In adolescents, the prevalence of BPD is similar, ranging between 1% and 5% (Johnson et al., 2008; Lewinsohn et al., 1997; Sharp & Fonagy, 2015). In clinical context, the prevalence of BPD in adolescent outpatients raises by around 22% (Chanen et al., 2008), and in inpatients it may reach 50% (Grilo et al., 1996).

Given the developmental nature of BPD and considering that dysfunctional cognitive, affective and behavioral patterns are manifested under the age of 18 (Crick et al., 2005), early detection of borderline features is crucial. Furthermore, recognizing adolescents with full criteria of BPD and referring them at earlier ages may lead to more effective interventions since there is a shorter history of dysfunctional symptoms (Chanen et al., 2017). According to DSM-5 (APA, 2013), clinicians may diagnose a person with BPD under the age of 18 since there is an evident and recurrent pattern of symptoms, at least for a year.

Categorical and Dimensional Approaches of Personality Disorders (DSM-5)

The DSM-5 (APA, 2013) offer the opportunity to classify mental disorders (including personality disorders) according to the categorical and dimensional approaches. The first approach represented in Section II of the DSM-5 has a long history, accompanying the medical tradition of classifying pathologies as present or absent. Through this lens and taking BPD as an example, a person either has the disorder or does not, according to the number of criteria met. From this perspective, it seems that personality disorders are qualitatively distinct and discrete clinical syndromes (Trull & Durrett, 2005). This approach presents advantages, such as simplifying the assessment and clinical decisions about appropriate treatments, as well as simplifying communication and conceptualization (Stein, 2012; Trull & Durrett, 2005). For diagnosing someone

with BPD, the clinician should assess whether the person meets the general criteria for personality disorder and then evaluate if at least five of the nine criteria for BPD are present (APA, 2013).

More recently, a greater consensus has been established towards the dimensional approach of mental disorders, especially personality disorders. Some of the arguments supporting this perspective are that patients diagnosed with the same disorder may present relatively different clinical displays and personality disorders tend to be comorbid with each other and with other mental illnesses. Moreover, "other specified" or "unspecified" diagnostics are occasionally more correct and accurate, although less informative (APA, 2013; Brown & Barlow, 2005). The dimensional approach suggests that personality disorders reflect dysfunctional degrees of personality traits that vary on a continuum between healthy and unhealthy. This perspective provides a coherent understanding of the heterogeneity of symptoms and the difficulty in establishing clear boundaries between diagnoses. Moreover, it allows capturing subclinical traits and symptoms (Trull & Durrett, 2005). Nevertheless, the dimensional approach also presents relevant drawbacks; for example, added difficulty of communication in everyday practice and the excessive complexity for clinical use (Bach, 2015; Brown & Barlow, 2005; Herpertz et al., 2017). As represented in Section III of the DSM-5's Alternative Model for Personality Disorders (AMPD), diagnosing someone with BPD through this approach involves an assessment of the personality functioning impairment (identity, self-direction, empathy, and intimacy) and an evaluation of pathological personality traits (emotional lability, anxiousness, separation insecurity, depressivity, impulsivity, risk-taking and hostility). Clinicians should also guarantee that a pervasive pattern over time, across a broad range of situations, is present and it is not better explained by other mental disorder, medical condition or sociocultural environment (APA, 2013).

Since both approaches can be used in the clinical context, with recognized advantages and disadvantages, we considered it relevant that the CI-BOR-A would cover these different perspectives, allowing clinicians to choose between using one of them or both when assessing BPD in adolescents.

Clinical Assessment of BPD in Adolescents

Based on our literature review, the Childhood Interview for DSM-IV Borderline Personality Disorder (CI-BPD; Zanarini, 2003) was the first semi-structured clinical

interview specifically designed for youth BPD. While other adult interview-based measures had been used previously in adolescents (see Sharp & Fonagy, 2015 for a review), the CI-BPD was specifically designed for use in adolescents. This version was based on the borderline module of the Diagnostic Interview for Personality Disorder (Zanarini et al., 1996). Additionally, language was simplified, two types of impulsivity were removed (it did not seem applicable to ask children about promiscuity behaviors and reckless driving), and it was more structured. The final version included nine criteria of BPD symptoms and the rating scale was 0 for *absent*, 1 for *probably present*, and 2 for *definitely present*. Nonetheless, there was no study specifically designed to examine the psychometric properties of the CI-BPD.

Years later, Sharp et al. (2012) tested the factorial structure, convergent and concurrent validity and reliability of the CI-BPD in a sample of 245 adolescent inpatients. Results supported a unidimensional factor structure of the nine criteria, showing a coherent combination of BPD symptoms in adolescents. The CI-BPD presented adequate convergent and concurrent validity, good internal consistency and high interrater reliability. In Portugal, we are not aware of any clinical interview developed or validated to assess BPD in adolescents.

Non-Suicide Self-injury (NSSI), Suicide Ideation and BPD in Adolescence

NSSI is the intentional self-inflicted damage to the body tissue with no suicidal intention, and it is mainly present in adolescence (Brown & Plener, 2017). An identified risk factor for NSSI in adolescents is the presence of cluster B personality disorders (Brown & Plener, 2017) and a consistent body of evidence showed an association between NSSI and BPD (Brown et al., 2009; Groschwitz et al., 2015; Zanarini et al., 2008). Gratz et al. (2016) reported that adolescents who have a history of borderline features are more likely to present NSSI. Indeed, 95% of adolescents diagnosed with BPD and hospitalized in the past, report engaging in self-harm behaviors (Goodman et al., 2017).

Notwithstanding the consistent association between NSSI and BPD, suicide ideation should also be considered on this topic. Although NSSI represents self-harm without the intention to die, it seems that this type of behavior can occur with suicidal ideation, as well as a suicide attempt (Cheung et al., 2013). In fact, adolescents with a history of suicide attempts report more severe NSSI (Tanner et

al., 2015) and adolescents with BPD seem to have an increased risk for suicidal behaviors (Yen & Spirito, 2013).

Aims of the Current Study

The current study's main aim was to develop a new clinical interview based on a sound interview already developed (CI-BPD; Sharp et al., 2012; Zanarini et al., 1996), with important implications for research and clinical practice. Specifically, we intended (a) to examine the acceptability of CI-BOR-A with adolescents and (b) subsequently test its content validity by submitting the interview to the quantitative and qualitative evaluation of a panel of experts in mental health, particularly with people with borderline symptoms.

Methods

Procedures

The current study is part of a PhD research project about the evolution of borderline features in adolescents from the general population. After being contacted and informed about the research, some schools in the center region of Portugal agreed to collaborate. The adolescents and their parents provided informed written consent after being aware of the study aims, confidentiality, and voluntary participation. The adolescents were assessed with the CI-BOR-A in a private room at school and provided information about how they accepted the interview.

Based on the information provided by the adolescents, minor changes agreed by the authors were made to the interview. Then, mental health professionals were invited to participate in the current study online (snowball sampling). The inclusion criteria were being a clinical psychologist or psychiatrist and having at least three years of experience in mental health settings with people with borderline symptoms. Experts were asked about their years of experience in BPD, and those who had less than three years were excluded. These professionals were invited to critically evaluate the CI-BOR-A items on four aspects: relevance, clarity of language to the adolescent population, accuracy, and completeness. They used a 5-point Likert scale for each of the four aspects, ranging between 0 = *not relevant/clear/accurate/complete* and 4 = *extremely relevant/clear/accurate/ complete*. Besides, experts were encouraged to give suggestions and comments, to improve the interview quality, especially if an item was rated with two points or

less. In the end, there were six general questions about the interview: organized format, understandable instructions, flexible structure, depth of content, usefulness, and general accurateness. These items were rated from 0 to 100. The CI-BOR-A in digital format and the access link to the online questionnaire were sent to the experts via e-mail. The online questionnaire was created in the LimeSurvey platform, an online statistical survey tool for research institutes and universities.

Development and Content of the CI-BOR-A

The CI-BOR-A assesses BPD from the categorical approach very similar to the CI-BPD (Sharp et al., 2012; Zanarini, 2003). The CI-BPD was translated to Portuguese by a clinical psychologist proficient in English. Then, another clinical psychologist back-translated it to English. Finally, considering the original interview and the back-translation, the group of researchers agreed on a final version. The language was also adapted to the Portuguese adolescent population, and additional statements were included to explore some of the criteria further. Considering that the CI-BPD was developed according to the DSM-IV and the APA released the DSM-5 in 2013, we opted to consider the latest version of the manual. We included the possibility to assess BPD according to the dimensional approach. Therefore, several aspects were added.

Structure. The CI-BOR-A first page comprises the instructions for the interviewer, initial/background questions, four sections of symptoms (affect, self, relationships, and impulsivity) with 16 items, decision tables for diagnosis, and an NSSI appendix. The time frame for the assessment is the last year. Considering that the CI-BOR-A allows assessing BPD independently according to the categorical and dimensional approach, the items needed for the categorical assessment were slightly shaded with grey color, so the clinician would visually understand which of the 16 items would have to be used if they decided to follow this approach. To assess BPD according to the dimensional approach, we recommend using all 16 items.

Instructions and information for clinicians. The interview has a first page with information and instructions for the clinicians. It includes important information about the BPD assessment in youth and provides instructions about how to use the CI-BOR-A.

Initial questions. An optional section was added with open questions after initial sociodemographic questions (e.g., age, gender, grade). Some examples are "How do you describe yourself as a person?", "What do you do in your free time?", "If you could change anything about your personality, what would it be?". We consider this part helpful to break the ice and make the adolescent more comfortable. Also, we considered these questions a helpful way to start deepening the conversation and collecting further information.

Rating Scales. All items are rated on an absent/present rating scale (0 = *absent*, 1 = *probably present*", 2 = *definitely present*) and in terms of impairment (the DSM-5 Section III impairing scale) with a 5-point Likert scale (0 = *Little or no impairment*; 4 = *Extreme impairment*).

BPD criteria sections. There are four criteria sections with 16 items. The first section was named *Affect* and includes five items related to emotions and feelings. Depressive symptoms, anxiety, rage/irritation, separation anxiety and emotional lability are assessed in this section. The section *Self* comprises four items about identity, feelings of emptiness, self-criticism, dissociation and self-direction. In the *Relationships* section, we can find four items related to relationships with other people around the adolescent. Lack of empathy, relationships/intimacy instability, paranoid ideation and feelings of abandonment are assessed. The last section of criteria was named *Impulsivity* and assesses difficulties in controlling the impulse with three items, including self-harm and risk behaviors (e.g., drug and alcohol use, binge eating, reckless driving, illegal actions).

Decision tables: After the 16 items, two decision tables facilitate the clinicians to decide about the BPD diagnosis. The clinician can transpose the scores given before to the decision tables and determine whether the subject presents a complete BPD diagnosis, a subclinical diagnosis, or no BPD diagnosis.

NSSI appendix: Considering the strong association between borderline features and NSSI, we attached an appendix to explore self-harm behaviors in detail. The clinician can decide to use the appendix or not, but it is recommended to use it if the subject reported having previously engaged in NSSI (item 15). A note was added to item 15 explaining that the interviewer could move forward to the appendix to explore NSSI further and then return to proceed with the interview. Only using item 15 allows the assessment of the NSSI criterion; nevertheless, the

use of the appendix is recommended to collect essential information regarding this sort of behavior. This optional appendix assesses the frequency of self-harm behaviors and the motivation and function of those behaviors. Some adolescents might engage in NSSI for emotional regulation, self-punishment, avoid suicide, communication, emotional expression, to block dissociation or prevent aggression from others. In the appendix, we can also assess suicide ideation and intention, when applied.

Participants

The sample of adolescents was composed of 43 youth from the general population, by which 25 were females (58%) and 18 males (42%). Their mean age was 15.98 years (*SD* = 0.86) and ranged between 13 and 18. The years of education ranged from 8th to 12th grade.

The expert panel was composed of 23 mental health professionals, of which 15 were clinical psychologists (65.2%), and eight were psychiatrists (34.8%). Of these experts, ten only had experience with adolescents (43.5%), four only with adults (17.4%) and nine with both adolescents and adults (39.1%) with borderline symptoms. The current expert sample presented an average of 14.91 years of experience (*SD* = 8.61).

Results

Adolescents' Acceptability of the CI-BOR-A

The interview took an average of 30 minutes to administer (depending on the number of symptoms presented). The adolescents' behavior throughout the assessment suggested that it was well accepted since none of them refused to complete the interview, and they seemed motivated and attentive. Considering that the adolescents were from the general population, some showed a certain strangeness about some items, such as self-harm or feelings of emptiness. In contrast, a few adolescents with higher scores reported feeling "well understood". In the end, they provided suggestions to improve the understandability of the items, for example, replacing or adding words more familiar to them. Considering this feedback, the authors made slight changes in the CI-BOR-A before submitting it to the expert panel evaluation. These changes did not influence the structure or main content of the interview.

Expert Panel Evaluation

The quantitative evaluation of the expert panel is depicted in Table 1. The experts had access to the latter version of the interview after adolescents' suggestions. The scores of all sections and general questions were above 75% of the highest possible score. The usefulness of the CI-BOR-A was rated 93 out of

Table 1. Expert panel quantitative evaluation of the CI-BOR-A sections and general questions.

		Total sample (*n* = 23)	Clinical psychologists (*n* = 15)	Psychiatrists (*n* = 8)
Highest possible score		*M (SD)*	*M (SD)*	*M (SD)*
Initial and optional questions	8			
Relevance		6.83 (0.98)	6.93 (0.96)	6.63 (1.06)
Clarity		6.48 (0.67)	6.47 (0.74)	6.50 (0.53)
Accuracy		6.26 (0.92)	6.60 (0.63)	5.63 (1.06)
Completeness		6.04 (1.11)	6.33 (1.05)	5.50 (1.07)
Affect section	20			
Relevance		17.87 (2.22)	18.47 (1.92)	16.75 (2.43)
Clarity		15.70 (2.14)	16.47 (1.80)	14.25 (2.05)
Accuracy		15.83 (2.61)	17.00 (2.20)	13.63 (1.77)
Completeness		15.43 (2.64)	16.47 (2.23)	13.50 (2.33)
Self section	16			
Relevance		14.04 (1.84)	14.40 (1.80)	13.38 (1.85)
Clarity		12.52 (2.13)	12.87 (2.33)	11.88 (1.64)
Accuracy		12.34 (2.21)	12.80 (2.54)	11.50 (1.07)
Completeness		12.48 (2.02)	12.73 (2.22)	12.00 (1.60)
Relationships section	16			
Relevance		14.26 (1.89)	14.80 (1.61)	13.25 (2.05)
Clarity		12.70 (2.57)	13.73 (1.75)	10.75 (2.82)
Accuracy		12.35 (2.81)	13.33 (2.19)	10.50 (3.02)
Completeness		12.57 (2.48)	13.60 (2.06)	10.63 (2.07)
Impulsivity section	12			
Relevance		10.87 (1.36)	11.07 (1.22)	10.50 (1.60)
Clarity		10.09 (1.65)	10.67 (1.40)	9.00 (1.60)
Accuracy		10.39 (1.44)	10.87 (1.25)	9.50 (1.41)
Completeness		10.30 (1.52)	10.80 (1.32)	9.38 (1.51)

Appendix (NSSI)	36			
Relevance		31.52 (4.61)	33.00 (3.95)	28.75 (4.71)
Clarity		31.35 (4.89)	32.93 (4.28)	28.38 (4.81)
Accuracy		30.39 (4.76)	32.00 (4.24)	27.38 (4.41)
Completeness		30.43 (4.64)	32.00 (4.17)	27.50 (4.21)
General Questions				
Organized format	100	79.83 (23.25)	82.07 (24.64)	75.63 (21.29)
Understandable instructions	100	82.87 (15.61)	82.53 (17.62)	83.50 (12.00)
Flexible structure	100	77.22 (15.99)	80.33 (15.20)	71.38 (16.78)
Deep content	100	89.43 (10.33)	90.67 (7.70)	87.13 (14.42)
Usefulness	100	92.57 (12.56)	98.33 (4.27)	81.75 (15.94)
Accurateness	100	87.22 (15.00)	91.47 (9.95)	79.25 (19.95)

Note. *M* = Mean; *SD* = Standard-deviation.

100 and the depth of content 89 out of 100. The expert panel also provided a qualitative examination in terms of structure (order of questions, space, size of text, verb tenses, wording, and phrasing) and content (alter, eliminate, or add content and meaning of the items) to improve the CI-BOR-A quality. There was a total of 66 suggestions, most of them about adding sentences to be more accurate and further exploring some criteria. A summary of the qualitative evaluation is presented in Table 2.

CI-BOR-A Final Version

Considering the adolescents' acceptability and the evaluation of the expert panel, we agreed on a final version. The differences from the initial version are as follows.

Four questions were added in the initial section, (1) asking about school performance and school absenteeism, (2) asking about a current romantic relationship, (3) if the adolescent had psychological or psychiatric treatment in the past and (4) the motive of that treatment.

The verb tenses were consistently conjugated in the past throughout the interview. In the *Affect* section were added some sentences and examples to clarify the emotional responses (e.g., for anxiety were given examples such as tachycardia and sweaty hand; for depressivity were added questions about demotivation and anhedonia). In the *Self* section, the dissociation was completed

Table 2. Summary of the expert panel qualitative evaluation of the CI-BOR-A sections.

Sections	Suggestions			
	in terms of structure	*n*	in terms of content	*n*
Initial and optional questions	The optional questions coming before the initial questions; verb tenses in the past; sentence construction.	3	Ask about love relationships; communicate with people online; ask about school performance; ask about previous psychological/psychiatric treatments; give more examples; complete some sentences.	10
Affect section	Order of questions; verb tenses in the past; sentence construction.	6	Add a timeframe for some specific questions; explore emotional expressions further; provide information about the emotional states; ask about emotional triggers; explore suicide ideation further.	12
Self section	Order of questions on self-direction item.	1	Add information to clarify the unstable identity, feelings of emptiness, dissociation, and self-direction.	6
Relationships section	Write the sentence in the positive; replace “call” for “try to contact”.	6	Add information to clarify empathy, paranoia, and abandonment.	7
Impulsivity section	Simplify one of the sentences about NSSI; typo detected.	2	Add information to clarify impulse and ask for examples of potentially dangerous behaviors. Ask about saying things without thinking.	5
Appendix (NSSI)	Ask for a mean and not a frequency of NSSI.	2	Add question about engaging in NSSI alone or in a group; if it was done just by habit; explore possible manipulation motive; clarify communication and stopping dissociation motives; clarify suicide ideations.	6

Note. n = number of suggestions.

with more statements such as “Feeling inside a bubble?” and “Do you remember what happened in those moments?”. The same applies to self-direction with the addition of “Do you have defined objectives in the short, medium and long term?” and “Thinking about your future after school makes you anxious or worried?”. In the *Relationships* section, empathy was clarified by adding, “Are you able to put yourself on someone else’s shoes? Has someone said to you the opposite?” as well as paranoia (e.g., feeling others as harmful or dangerous). Finally, in the *Impulsivity* section, the following sentences were added to specify verbal impulse “Have you said something you regretted? Can you give me examples?”.

In the NSSI appendix, the frequency of those behaviors was asked as a mean (“On average, how many times you usually have these behaviors?”). We also added the following questions “Did you do it alone or in a group? Does anyone know about these behaviors? Did you tell anyone?”. Regarding motives and functions of NSSI, we clarified *communication* (added “do you want to communicate to others that you are suffering?”) and *stopping dissociation* (added “do these behaviors help you feel alive?”). Moreover, we included two more motives: manipulating others and by habit.

Discussion

Despite the reluctance expressed by some clinicians and researchers about the BPD diagnosis in people under the age of 18, it seems that some youth might present clinical criteria for BPD (Crick et al., 2005; Paris, 2014; Sharp & Fonagy, 2015). The early diagnosis, or at least the early detection of impairing and pervasive borderline features, could be an essential first step to seek adequate treatment (Bozzatello et al., 2019). Therefore, the current study aimed to present the adaptation and development of the CI-BOR-A, which combines Section II and III formulations of BPD into one interview. Specifically, it retains the nine Section II items, but then adds four items to cover Criterion A and three items to cover the Criterion B traits relevant to BPD according to the AMPD model. In this preliminary study, our goal was to examine how adolescents accepted the interview and submit it to the evaluation of an expert panel in mental health.

Adolescents seemed to accept it well since none of them refused to complete the assessment and they appeared motivated and focused. Moreover, the strangeness felt about some items was expected considering they were part of a

community sample of adolescents. We expect that clinical samples of adolescents with marked borderline features would relate more with the items. Nonetheless, these suggestions about wording and meanings were taken into consideration to make the interview more suited to young people. This feedback also provided important indicators that the CI-BOR-A would be well accepted by adolescents. Preliminary data with correlations between the CI-BOR-A items and several psychological variables were already presented (Carreiras et al., 2020). Results showed that the items were associated in the expected direction with borderline features, depression, anxiety, stress, self-harm, impulsivity, suicide ideation and self-disgust (Carreiras et al., 2020).

Generally, the quantitative evaluation of the experts showed that the CI-BOR-A is a relevant, clear, accurate and complete interview for BPD diagnosis in adolescents. The scores of all sections were above 75% of the highest possible score. The same happened for the scores of general questions suggesting that CI-BOR-A has an organized format, understandable instructions, flexible structure, deep content, usefulness, and accurateness. We consider that these scores are a good indicator of the interview's quality. Moreover, the suggestions in terms of structure and content provided by the experts were considered and changes were conducted accordingly.

In sum, the CI-BOR-A is a clinical interview designed to assess BPD in adolescents based on the categorical assessment of the CI-BPD (Sharp et al., 2012; Zanarini, 2003) and with the possibility to assess BPD also according to the dimensional approach of the AMPD (APA, 2013). Clinicians are given the option to choose which one fits their practice and patients better or use both. The 16 items (divided into four sections: *affect*, *self*, *relationships*, and *impulsivity*) that compose the interview were rearranged and reformulated according to the suggestions of 23 mental health professionals making them more accurate and precise. The decision tables are particularly useful to decide about the diagnosis, and the optional NSSI appendix may be a supplementary tool to characterize self-harm behaviors. The CI-BOR-A is not time-consuming, being administered on average in 30 minutes. The time would be increased when adolescents present more borderline symptoms and NSSI, in number and severity. The feedback provided by adolescents and experts seems to indicate that the CI-BOR-A is accurate and complete to be used in research, clinical and community settings. We consider that

the CI-BOR-A is a very valuable instrument for assessing main difficulties, examining change, and evaluating the impact of therapeutic interventions in adolescents with borderline symptoms.

Notwithstanding the feedback of the adolescents and experts, the CI-BOR-A should be validated using a clinical sample of adolescents with BPD, testing factor structure, interrater reliability, convergent and divergent validity, sensitivity and specificity. The early assessment of borderline features could help prevent the evolution of BPD by facilitating professionals to refer adolescents for appropriate treatment.

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Study IV

Translation, adaptation, and construct validity of the Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A) to English

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Translation, adaptation, and construct validity of the Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A) to English

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Abstract

Borderline personality disorder (BPD) is a severe mental disorder with a developmental path that can be identified early in adolescence. Both categorical and dimensional approaches are currently used to assess personality functioning. The CI-BOR-A is a hybrid semi-structured interview that considers both approaches of Personality Disorders as they are presented in DSM-5. The interview includes 16 items, decision tables, and an appendix to explore self-harm and suicide ideation in detail. The purpose of this study was to translate, adapt, and cross-validate the Clinical Interview for BPD for Adolescents (CI-BOR-A) to English. The CI-BOR-A was translated and then back translated until a final version was agreed by the research team. Then, six experts (with a mean of 13 years of experience in adolescent BPD) evaluated the new English version in terms of clarity and accurateness. The expert panel considered the interview relevant and clear. In sum, the English version of the CI-BOR-A is equivalent to the original Portuguese version, and it can be used in countries with English as main language.

Keywords: assessment, CI-BOR-A, clinical interview, borderline personality disorder, adolescence

Introduction

Assigning the diagnosis of borderline personality disorder (BPD) to adolescents has been debated for a long time with initial reluctance from clinicians and researchers (Guilé et al., 2018; Larrivée, 2013). This reluctance was related to several reasons such as stigmatization and overlap of symptoms with typical adolescence behaviour (Larrivée, 2013). More recently, research as ascertain that a reliable BPD diagnosis can be assigned in adolescence (Kaess et al., 2014; Sharp & Fonagy, 2015), and that early intervention could be useful and helpful to prevent the worsening of borderline symptoms (Chanen et al., 2017; Chanen et al., 2008). BPD in youth seems to be relatively similar to BPD in adults on its intrapersonal features, including fear of abandonment, unstable relationships, identity disturbance, and feelings of emptiness (Sharp et al., 2019). The main differences, with adolescents presenting higher scores, encompass impulsivity, suicidal behaviour, affective instability, anger, and paranoid ideation. Considering that some of these behaviours can be particularly prevalent in adolescence (e.g., alcohol and drug consumption, sexual experiences) clinicians should be careful and conscious when assessing these specific BPD criteria in young ages (Sharp et al., 2019). Moreover, clinician should also pay attention to the personality functioning during the assessment, keep in mind the dimensional aspects of personality, address new and past difficulties, consider the context on which some issues occurred, ask questions to multiple informants, focus on the main problems and difficulties than on predefined categories and identify resources that might help adolescents (Shiner & Allen, 2013).

The assessment of personality disorders and personality functioning has also been debated with no consensus yet established (Morey et al., 2014). While some authors use and defend a categorical approach on which distinct personality disorders are well defined, other authors lean towards a dimensional view where the personality functioning lies on a continuum and the categories lose strength. The categorical model has been losing supporters in the last years, and some believe that it is a matter of time to shift from the categorical to the dimensional approach (Lee, 2007). Around 74% of experts defended that the categorical model of personality disorders should be replaced, 87% indicated that personality pathology is dimensional in nature, and 70% affirmed that a hybrid view is the best alternative (Morey et al., 2014). Nonetheless, the categorical model presents

important advantages such as clinical utility, easy communication and treatment planning, that promote and support its use (Morey et al., 2014; Widiger & Mullins-Sweatt, 2010).

The dimensional approach represents a more comprehensive and accurate reading of personality, although it carries more complexity and brings up greater heterogeneity among patients (Widiger & Mullins-Sweatt, 2010). Different dimensional models have been presented and discussed (e.g., Five Factor Model, Schedule for Non-adaptive and Adaptive Personality) and a debate is currently on to understand whether the criteria A and B of the Alternative DSM-5 Model for Personality Disorder (APA, 2013) are complementary or conditional (Sharp & Miller, 2022; Sleep & Lynam, 2022).

Considering that a consensus is not established between the categorical and dimensional approach and currently both views are clinically valid and used, a hybrid assessment tool of personality could give to the clinicians the possibility to use the perspective that most resonates with them. The Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A; Carreiras et al., 2022) was designed to assess BPD in youth according to both categorical and dimensional approaches of the DSM-5 (American Psychiatric Association, 2013). The CI-BOR-A includes 16 items divided into four sections (affect, self, relationships, and impulsivity), two decision tables (one for the categorical approach and another for the dimensional approach), and an optional appendix to use in case the adolescent presented non-suicidal self-injury behaviors (NSSI) and suicide intention. So far, this interview was accepted by Portuguese adolescents and enhanced with the feedback of Portuguese mental health professionals. The original version is written in Portuguese which limits its use to countries whose official language is Portuguese (e.g., Portugal, Brazil, Angola). Thus, the aim of this study was to to translate, adapt and cross-validate the CI-BOR-A to English using a sample of English native experts in child and adolescent mental health.

Methods

Procedures

The present study is part of the first author's PhD research project about adolescents' borderline features. All procedures follow the ethical standards of the Ethics and Deontology Commission of the Faculty of Psychology and Educational

Sciences of University of Coimbra and the National Commission for Data Protection of Portugal (number: 6713/ 2018). To create the English version of the CI-BOR-A, we carried out the five recommended steps proposed by Sousa and Rojjanasrirat (2011) to translate, adapt and cross-validate a health instrument.

The expert panel for this study was recruited through snowball sampling. The inclusion criteria were being a child and adolescent's mental health professional (e.g., (clinical psychologist, mental health nurse), having at least five years of experience with adolescents with borderline symptoms and being English native speaker. Experts were invited via e-mail, receiving information about the study aims, confidentiality and voluntary participation. The ones who accepted to participate were sent the English version of the CI-BOR-A and a link to complete an online questionnaire about relevance and clarity of the different sections of the interview. The online questionnaire was developed in the LimeSurvey platform, a free and open software to create online surveys, collect data, and export the results to other applications.

Translation and Adaptation of the CI-BOR-A

The translation and adaptation of the CI-BOR-A followed the recommended steps by Sousa and Rojjanasrirat (2011).

In step 1, two clinical psychologists symmetrically translated the CI-BOR-A original version (Portuguese) into English, which implies considering the faithfulness of meaning and the colloquial use in both languages instead of a literal translation. Both clinical psychologists were native in Portuguese and proficient in English, and each one generated a translated version.

In step 2, a third clinical psychologist native in Portuguese and proficient in English compared the two translated versions regarding ambiguities and discrepancies of words, sentences, and meanings. Then, the two clinical psychologists of step 1, the third clinical psychologist and the research team convened and agreed on a premilitary initial translated version of the CI-BOR-A.

In step 3, two independent people native in Portuguese and proficient in English translated back to Portuguese the premilitary version achieved in the previous step. They were both blind to the original version of the interview. In this step two back-translation versions were generated.

In step 4, the two back-translation versions were compared by the research team regarding format, wording, and grammar, similarity of meaning, and

relevance. Then, ambiguities and discrepancies between back-translations and the original interview were discussed and resolved consensually among the research team resulting in a pre-final English version of the CI-BOR-A.

In step 5, the pre-final English version of the CI-BOR-A was examined by a panel of experts in children and adolescent mental health to further determine the conceptual and content equivalence of the instructions, items, and rating scales. A minimum of six experts is recommended (Sousa & Rojjanasrirat, 2011).

Measures

The expert panel was asked to evaluate the instructions, rating scales and each CI-BOR-A sections in two separate dimensions: relevance and clarity. The rating scale was the following: 1 = *not relevant/clear*; 2 = *unable to assess relevance/clarity*; 3 = *relevant/clear but needs minor alteration*; 4 = *very relevant/clear*. Experts were asked to provide information on how to improve items when the score was one or two.

Participants

The expert panel was composed of five English professionals in child and adolescent mental health: two psychologists, one therapist/counselor and two mental health nurses. They had a mean of 14.6 years of clinical experience with adolescents with BPD symptoms (*SD* = 4.72; range: 7-20).

Results

Quantitative Evaluation

The quantitative evaluation of the CI-BOR-A instructions, sections and rating scale can be found in Table 1. The experts unanimously evaluated 62% of the items with the highest possible score. Although all items had at least one expert rating it as four, two items were rated as two (*unable to assess relevance/clarity*). The items were relevance and clarity of intimacy/relational instability.

In Table 2 is presented the quantitative evaluation of the appendix about suicidal behavior and non-suicidal self-injury. Eighty nine percent of the items were rated by all the experts with the maximum score. None was rated as one or two. Overall, 41 of the 55 items used to evaluate the relevance and clarity of the interview were rated by all the experts with the highest possible score.

Table 1. Expert panel quantitative evaluation of the CI-BOR-A.

Sections/items	Dimensions of assessment	Experts (*n* = 5)		
		M (SD)	*Min*	*Max*
Instructions	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
Initial and optional questions	Relevance	3.80 (0.45)	3	4
	Clarity	4 (0)	4	4
1. Anger/hostility	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
2. Anxiety	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
3. Separation anxiety	Relevance	3.80 (0.45)	3	4
	Clarity	3.80 (0.45)	3	4
4. Depression	Relevance	3.80 (0.45)	3	4
	Clarity	3.60 (0.55)	3	4
5. Emotional lability/instability	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
6. Unstable identity	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
7. Feelings of emptiness	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
8. Dissociation	Relevance	3.80 (0.45)	3	4
	Clarity	3.80 (0.45)	3	4
9. Undefined self-direction	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
10. Lack of empathy	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
11. Paranoia	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
12. Intimacy/relational instability	Relevance	3.60 (0.89)	2	4
	Clarity	3.60 (0.89)	2	4
13. Abandonment	Relevance	3.80 (0.45)	3	4
	Clarity	3.80 (0.45)	3	4
14. Impulse	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
15. NSSI	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
16. Risky behaviors	Relevance	3.60 (0.55)	3	4
	Clarity	3.60 (0.55)	3	4
Response scale	Clarity	3.80 (0.45)	3	4

Note. *M* = Mean; *SD* = Standard-deviation

Table 2. Expert panel quantitative evaluation of the CI-BOR-A appendix.

Appendix sections/items	Dimensions of assessment	Experts (n = 5)		
		M (SD)	*Min*	*Max*
Frequency	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
Motives: emotional regulation	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
Motives: self-punishment	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
Motives: communication	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
Motives: emotional expression	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
Motives: dissociation avoidance	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
Motives: aggression avoidance	Relevance	3.80 (0.45)	3	4
	Clarity	3.80 (0.45)	3	4
Motives: other motives	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4
Suicide ideation and behavior	Relevance	4 (0)	4	4
	Clarity	4 (0)	4	4

Note. *M* = Mean; *SD* = Standard-deviation

Qualitative Evaluation and Revision of Items with Low Scores

Some general issues pointed by the experts included having more space to write the answers (particularly the initial optional questions), to make clear the distinction between separation anxiety and abandonment, when assessing depression, to keep in mind that depression is distinct from sadness, and some adolescents can have difficulties in understanding and identifying their emotions and other internal phenomena (e.g., dissociation). Another suggestion was to include online impulsive risky behaviors and always consider the difference between what could be normative adolescent behavior versus disordered behavior.

The suggestion for the item “intimacy/relational instability” was to further develop the item to better distinguish between what could be part of the "normal" developmental process related to adolescence versus disordered behavior. For example, the influence of changing friend groups and romantic interests and see how this could impact in intimacy and relational instability. In the beginning of the

interview, we point out some aspects that clinicians should consider when using the interview and the difference between typical adolescent behavior and disorder behavior is already mentioned. We included in the “risky behaviors” section a question about the internet overuse and related problematic behaviors (e.g., loss of control over the use of the internet, meeting strangers online).

In the appendix, the suggestion was to combine the motives “communication” and “aggression avoidance”. We did not combine both items because we consider that both capture different aspects of NSSI motives, the first one more related to asking for help or showing what they feel and the second one more related to reducing others’ hostility and violence, which is common in the familial context of people with BPD.

Discussion

Clinicians and researchers in the mental health field are still debating and looking for consensus about the best approach to assess and understand personality disorders. Currently, both categorical and dimensional approaches presented in the DSM-5 (APA, 2013) are valid and used worldwide, and the advantages and disadvantages of each other have been acknowledged and discussed thoroughly. Accordingly, a hybrid interview that includes both approaches to assess in detail the borderline functioning in adolescents could be particularly useful in the field.

The CI-BOR-A had already been submitted to a panel of Portuguese experts in mental health with important feedback and improving suggestions. However, translating and adapting this instrument to English could increase its use and access. In this line, we performed a rigorous process of translation and backtranslation (Sousa & Rojjanasrirat, 2011), and submitted the final version to a panel of English experts in child and adolescent mental health. As this manuscript is in preparation, the data collection in still ongoing and the results here presented only used the data collected so far. The interview was generally well evaluated with 75% of all items rated by all the five experts with the highest possible score. Slight changes were considered, including giving more blank space to transcribe the adolescents’ answers and considering problematic internet use in the section about risky behaviors.

Although the results are preliminary and the data collection is ongoing, we can generally conclude that English experts considered the interview well written, relevant, clear, and understandable. Additionally, considering the general evaluation, the interview seems to be a useful hybrid instrument to assess BPD in youth considering both categorical and dimensional approaches of DSM-5 (APA, 2013).

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Chapter 4

Characterization of borderline features in Portuguese adolescents, potential risk and protective factors and relationship between them

Chapter overview:

Study V: Uncovering borderline features in a community sample of Portuguese adolescents

Study VI: O efeito da impulsividade, autoaversão e autocompaixão nos traços *borderline* na adolescência: Estudo das diferenças entre sexos

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

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

Study V

Uncovering borderline features in a community sample of Portuguese adolescents

Carreiras, D., Castilho, P., & Cunha, M. (2022). Uncovering borderline features in a community sample of Portuguese adolescents. *Revista de Psicopatología y Psicología Clínica*

Uncovering borderline features in a community sample of Portuguese adolescents

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Abstract

Borderline features can be identified in adolescence and in some cases, these symptoms might have a psychopathological expression. Early detection is the first step to preventing the escalation of these features. This study aimed to characterize borderline features in Portuguese adolescents from the general population. The sample included 1,005 adolescents (n = 586 females), with a mean age of 15.35 years. Girls presented higher borderline features than boys, and no differences were found between age groups. The more prevalent features were feelings of abandonment and emotional intensity. Borderline features presented a negative correlation with school performance and positive correlations with depression, suicide ideation, anxiety symptoms, stress, self-harm, risk behaviours, and impulse. A regression model indicated that impulse, suicide ideation, stress, and depression were the significant predictors of borderline features. These results show the importance of assessing borderline features at early ages and identifying psychoemotional variables that might work as risk factors.

Keywords: borderline features, psychopathology, adolescence

Introduction

Borderline personality disorder (BPD) is an impairing disorder with marked symptoms such as emotional instability, impulsivity, fear of abandonment, feelings of emptiness, and self-harm (American Psychiatric Association [APA], 2013; World Health Organization [WHO], 2019). The prevalence of BPD is between 1.6% and 5.9% in the general population (APA, 2013) and studies indicated a prevalence between 1.3% and 1.6% in adolescents (Johnson et al., 2008; Lewinsohn et al., 1997). BPD has a developmental path as a personality disorder, which means that borderline symptoms tend to develop over time, with onset at early ages (Bozzatello et al., 2019). Accordingly, it seems crucial to identify and intervene earlier as possible when borderline features start to manifest, not only in adulthood when these symptoms are usually more rigid and severe (Bozzatello et al., 2019). In fact, adolescence is identified as a vulnerable stage for the development of BPD (Sharp & Fonagy, 2015), and some adolescents might present borderline features without meeting the full criteria to be diagnosed. Adolescents' subclinical borderline symptoms are likely to culminate in the development of BPD years later (Carlson et al., 2009).

In the last decades, research on borderline features in adolescents has grown. Diagnosing BPD in youth faced some reluctance from psychologists and psychiatrists. Some reasons of this reluctance is the fact that some borderline features might be "normal" features of adolescents, and they will remit when they get older, and the negative labeling might be stigmatizing for children (Sharp & Tackett, 2014). Additionally, adolescence is a transition period marked by turmoil, which might better explain some feelings and behaviors than a personality disorder (Larrivée, 2013). Nevertheless, the importance of early detection of borderline features has progressively gained strength as the first step to prevent the development of these maladaptive and impairing symptoms, with marked consequences and societal costs (Bozzatello et al., 2019; Hastrup et al., 2019; Sharp & Tackett, 2014; Swartz et al., 1990). In this line, it is necessary to correctly identify the most prevalent borderline features among adolescents and examine the association between borderline features, demographic variables, and psychopathological symptoms. The use of community adolescent samples is relevant because in theses ages some people might present subclinical symptoms

that have not been yet diagnosed, thus being unnoticed and/or unvalued until early adulthood.

Some sociodemographic variables have been discussed to be related to borderline symptoms. Several studies indicate higher borderline features in females than males (Bradley et al., 2005; Carreiras, Loureiro, et al., 2020; Sharp et al., 2015; Silberschmidt et al., 2015) and the DSM-5 (APA, 2013) suggests that BPD presents a female to male ratio of 3:1. The over-representation of women with BPD in mental health services may explain part of the gender prevalence differences (Sansone & Sansone, 2011). In adolescents, studies are scarcer, but some recent research has also demonstrated that girls present higher borderline features in comparison to boys (Carreiras, Castilho, et al., 2020). Moreover, a study by Swirsky-Sacchetti et al. (1993) suggested that BPD individuals seem to present lower verbal, performance and full-scale IQ scores. Bagge et al. (2004) showed that BPD itself predicted poor academic performance two years later.

Considering that BPD is a disorder with marked emotional instability and that it often co-occurs with mood disorders, anxiety disorders, substance use disorders and other personality disorders (Tomko et al., 2014), it is often reported a strong association between borderline features and negative affect (Rogers et al., 1995; Zanarini et al., 2019). Non-suicidal self-injury (NSSI) is also a common feature of BPD. It is the self-directed and intentional behavior to harm or destroy body tissue without the intention to die (Klonsky & Moyer, 2008). Studies showed that approximately 78% of adolescents who met the criteria for BPD regularly engage in NSSI (Glenn & Klonsky, 2013). Around 30% of adults with BPD report onset of NSSI in childhood, and another 30% report onset of NSSI in adolescence (Zanarini et al., 2006). Impulsive behaviors are a criterion for BPD, including NSSI, substance abuse, spending, promiscuous sex, reckless driving, or binge eating (APA, 2013). Fossati et al. (2014) showed that impulsivity (positive and negative urgency) and emotion dysregulation were unique predictors of adolescents' borderline features.

The present study aimed to map and characterize borderline features in Portuguese adolescents using a large youth sample, given that there is no Portuguese study that presented such results. Specifically, we intended to identify the most prevalent borderline features and explore differences across gender, age, socioeconomic status, grade, and school performance. We also intended to

analyze the association between borderline features and risk factors such as impulse, self-harm, depression, anxiety, suicide ideation and their predictive effect.

Method

Participants

The sample of the present study was composed of 1,005 Portuguese adolescents, 419 (42%) males and 586 (58%) females, with age between 12 and 19 years old (M = 15.35, SD = 1.38) and a mean of 9.65 years of education (SD = 1.08). Non-significant differences between boys and girls were found for age ($t_{(1005)}$ = 1.95, p = .05) and years of schooling ($t_{(1005)}$ = 0.02, p = .98). Further details are presented in Table 1.

Procedures

The current study is part of a broader PhD project of the first author. All procedures take into account 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. The sample was collected in eight schools in the north and center of Portugal after permission was granted by the school's headteachers, and parents and adolescents gave written consent. Participants and parents were informed about the aims of the study, confidentiality, and voluntary participation. The self-report questionnaires were completed in the classroom with researchers and teachers to provide any clarification and guarantee an independent response.

Measures

Participants completed a sociodemographic questionnaire with questions about age, gender, socioeconomic status, grade, and school performance. Rating scale for socioeconomic status was 1 = *very low*, 2 = *low*, 3 = *medium*, 4 = *high* and 5 = *very high* and for school performance was 1 = *insufficient*, 2 = *sufficient*, 3 = *good* and 4 = *very good*. Adolescents responded according to their perception of socioeconomic statues and school performance.

Table 1. Sample characteristics (*N* = 1,005).

Characteristics	*n* (%)	Mean (Standard-deviation)
Gender		
Female	586 (58.3%)	
Male	419 (41.7%)	
Age (years)		15.4 (1.4)
12	30 (3.0%)	
13	53 (5.3%)	
14	167 (16.6%)	
15	307 (30.5%)	
16	254 (25.3%)	
17	130 (12.9%)	
18	58 (5.8%)	
19	6 (0.6%)	
Years of education		9.7 (1.1)
7	41 (4.1%)	
8	99 (9.9%)	
9	271 (27.0%)	
10	362 (36.0%)	
11	223 (22.2%)	
12	9 (0.9%)	
Socioeconomic status		3.2 (0.5)
Very low (1)	3 (0.3%)	
Low (2)	37 (3.7%)	
Medium (3)	561 (55.8%)	
High (4)	140 (13.9%)	
Very high (5)	6 (0.6%)	
missings	258 (25.7%)	
School performance		2.7 (0.7)
Insuficient (1)	21 (2.1%)	
Suficient (2)	260 (25.9%)	
Good (3)	388 (38.6%)	
Very good (4)	84 (8.4%)	
missings	252 (25.1%)	

Note. Missing values are reported for socioeconomic status and school performance.

The Borderline Personality Features Scale for Children (BPFS-C; Sharp et al., 2014; Portuguese version by Carreiras et al., 2020) is a unidimensional self-report questionnaire comprising 11 items to assess borderline features in adolescents. Items are rated on a 5-point Likert scale (1 = *never true*; 5 = *always true* and the final score is a sum of all items, with higher sums reflecting a higher level of borderline features. The 11-item version presented good internal consistency (α = .85; Sharp et al., 2014) as well as the 10-item Portuguese version (α = .77; Carreiras, Loureiro, et al., 2020). In the current study, Cronbach's alpha was .84.

The Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995; Portuguese version by Pais-Ribeiro et al., 2004) is a self-report questionnaire with 21 items to assess depression, anxiety and stress. Items are rated on a 4-point Likert scale (0 = *did not apply to me at all*; 3 = *applied to me very much, or most of the time*) and higher scores mean higher negative affect. The original version showed good internal consistency (α = .91 for Depression, α = .84 for Anxiety, α = .90 for Stress). The Portuguese version also showed good internal consistency (α = .85 for Depression, α = .74 for Anxiety and α = .81 for Stress). In this study, the Cronbach's alpha was .88 for Depression, .82 for Anxiety, and .86 for Stress.

The Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents (ISSIQ-A; Carvalho et al., 2015) is a self-report questionnaire with 56 items to assess impulse (e.g. “I do things without thinking the consequences”), self-harm (e.g. “I cut some parts of my body on purpose”), risk behaviors (e.g., “I drink too much alcohol”), function of self-harm (e.g. “I hurt myself to feel less inferior”) and suicide ideation (e.g., “Sometimes I would like to disappear”) in adolescents. Items of impulse, self-harm and suicide ideation are rated on a 4-point Likert scale (0 = *never*; 3 = *always*). The original version showed good internal consistency for impulse (α = .77), self-harm (α = .90), risk behavior (α = .81) and suicide ideation (α = .89). In the current study the internal consistency was acceptable for impulse (α = .78), self-harm (α = .81), risk behavior (α = .68) and suicide ideation (α = .83).

Data Analyses

Data were analyzed with IBM SPSS Statistics version 23. Normality assumption was tested though Kolmogorov-Smirnov test and skewness (*sk*) and

kurtosis (*ku*) values (normality assumption assumed with *sk* < 3 and *ku* < 8; Kline, 2011). Outliers were explored with the boxplot diagram.

Descriptive statistics were conducted to characterize the sample according to gender, age, socioeconomic status, and other demographic variables. To test differences between groups, Student's t-tests for independent samples and One-way ANOVA were conducted. Post hoc comparisons were explored using the Tukey's HSD post hoc procedure. 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 correlation coefficients were used to explore the relationship between variables. The following references by Dancey and Reidy (2017) were used to interpret the correlation coefficients: values between .10 and .39 were considered weak; between .40 and .69 moderate; and above .70 strong. Correlation coefficients of two independent groups were compared using Fisher's z-test (Field, 2018).

The predictive model of borderline features was tested through regression analysis. The independence of errors was analyzed and validated through the Durbin–Watson statistic, considering values < 2.5 acceptable. Multicollinearity or singularity amongst variables was tested according to the Variance Inflation Factors (VIF) indicating an absence of *β* estimation problems when < 5 (Kline, 2005).

Statistical significance was considered when *p* values were under .05.

Results

Preliminary Analyses

Preliminary data analyses were completed to assure the assumptions of normality, linearity, homoscedasticity, and independence of residuals. No severe violations of normality were found (|Sk| < 3 and |Ku| < 8-10; Kline, 2005). Outliers were kept in order to maintain the natural variance and representation in the population and considering that there was no change in the main results. In the regression analysis, Durbin-Watson value of 1.27 and VIF < 5 assured independence of residuals and absence of multicollinearity problems.

Descriptives of Borderline Features

The Portuguese version of the BPFS-C assesses 10 borderline features in adolescents. In Table 2 are presented the descriptive statistics of the borderline

features in the present sample. It seems that the most prevalent traits were feelings of abandonment (item 9), emotional intensity (item 3) and an unstable self-image (item 10). The less reported trait was impulsivity (item 8). Differences between boys and girls were found for all items. Girls reported higher loneliness, wanting people to know they hurt them, intense feelings, emptiness, being let down, emotional instability and abandonment. Boys reported higher carelessness and getting into troubles for being impulsive.

Table 2. Descriptives of borderline features, student's t-test for independent samples (*t*) and effect sizes (Cohen's *d*) for gender differences (*N* = 1,005).

Borderline features	Total sample	Girls (*n* = 586)	Boys (*n* = 419)	*t* (df)	*p*	*d*
	M (SD)	*M (SD)*	*M (SD)*			
1. Feeling lonely.	2.29 (1.02)	2.45 (1.02)	2.06 (0.99)	-6.07 (1003)	< .001	0.39
2. Wanting to tell people how much they've hurt them.	2.68 (1.24)	2.83 (1.22)	2.47 (1.25)	-4.45 (1003)	< .001	0.29
3. Very strong and intense feelings.	3.04 (1.23)	3.15 (1.20)	2.87 (1.25)	-3.57 (1003)	< .001	0.23
4. Something important about the self is missing.	2.59 (1.25)	2.71 (1.17)	2.43 (1.22)	-3.48 (1003)	< .001	0.23
5. Being careless with things that are important.	2.12 (1.10)	2.05 (1.13)	2.22 (1.06)	2.35 (1003)	.019	0.16
6. Being let down by close people.	2.49 (1.15)	2.71 (1.17)	2.18 (1.06)	-7.53 (1003)	< .001	0.47
7. Emotional instability.	2.47 (1.16)	2.63 (1.15)	2.24 (1.13)	-5.44 (1003)	< .001	0.34
8. Getting into trouble for doing things impulsively.	1.92 (1.03)	1.82 (1.04)	2.05 (1.01)	3.53 (1003)	< .001	0.22
9. Feelings of abandonment.	3.59 (1.32)	3.82 (1.22)	3.27 (1.39)	-6.56 (1003)	< .001	0.42
10. Unstable self-image.	2.72 (1.22)	2.92 (1.20)	2.45 (1.19)	-6.14 (1003)	< .001	0.39

Note. Borderline features were assessed by the Borderline Personality Features Scale for Children (BPFS-C).

Borderline Features and Sociodemographic Variables

We tested differences in borderline features across gender and age, as well as associations between borderline features and socioeconomic status, grade, and school performance. In Table 3 are presented the means and standard deviations of borderline features by gender and age. Girls presented higher borderline features in comparison to boys ($t_{(1003)}$ = -5.99, p < .001), with a small effect size (d = .38). Nonsignificant differences were found between age groups for borderline features, $F_{(3, 1001)}$ = 1.76, p = .15.

Table 3. Means (M) and standard deviations (SD) of borderline features by gender and age. Student's t-test (*t*) and One-way ANOVA (*F*) for differences between groups (*N* = 1,005).

Gender differences	Boys (*n* = 419)	Girls (*n* = 586)	*t(df)*	*p*	*d*
	M (SD)	*M (SD)*			
Borderline features (BPFS-C)	24.25 (7.60)	27.09 (7.28)	- 5.99 (1003)	< .001	0.38

Age differences	12-13 (*n* = 83)	14-15 (*n* = 474)	16-17 (*n* = 384)	18-19 (*n* = 64)	*F(df)*	*p*
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*		
Borderline features (BPFS-C)	24.21 (9.24)	25.91 (7.42)	26.13 (7.33)	26.73 (7.13)	1.76 (3,1001)	.153

Note. BPFS-C = Borderline Personality Features Scale for Children.

The correlation results between borderline features and some sociodemographic variables showed that there was no association with age, socioeconomic status and grade. Borderline features only presented a significant and weak negative correlation with school performance (r = -.14, p < .001), which means that higher levels of borderline features are associated with lower school performance.

Borderline Features and Psychopathology

Pearson correlations were conducted to explore the association between borderline features and psychopathology constructs, such as depression, suicide ideation, anxiety symptoms, stress, self-harm, risk behaviors, and impulse. Considering gender differences, correlations were conducted separately for boys

and girls. Regardless of gender, all correlations were moderate or strong and significant ($p < .001$). Only risk behaviors presented weak correlations with boys' and girls' borderline features. Moreover, the magnitude of correlations did not differ between gender groups (Table 4).

Table 4. Comparisons of Pearson correlations (Fisher's z-test) between boys and girls' borderline features and other study variables (N = 1,005).

	Boys' borderline features (BPFS-C) (n = 419)	Girls' borderline features (BPFS-C) (n = 586)	z
Depression (DASS-21)	.58***	.59***	-0.24
Anxiety (DASS-21)	.46***	.52***	-1.23
Stress (DASS-21)	.56***	.58***	-0.46
Impulse (ISSIQ-A)	.58***	.59***	-0.24
Self-harm (ISSIQ-A)	.36***	.42***	-1.10
Risk behaviors (ISSIQ-A)	.24***	.23***	0.17
Suicide ideation (ISSIQ-A)	.59***	.61***	-0.49

Note. *$p < .05$, **$p < .01$, ***$p < .001$. DASS-21 = Depression Anxiety Stress Scale; BPFS-C = Borderline Personality Features Scale for Children; ISSIQ-A = Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents.

Regression Model to Predict Borderline Features in Adolescents

Considering the results above, a hierarchical regression model with all significant variables associated with borderline features was conducted (Table 5). The sample for this analysis was composed of 753 adolescents because 252 participants did not provide information about their school performance. In the first step, gender and school performance were inserted and a significant model was achieved, $F_{(2, 723)} = 27.67$, $p < .001$, with both variables being significant predictors. In the second step, depression, anxiety and stress were also included, $F_{(5, 720)} = 118.58$, $p < .001$. In this model, school performance, depression and stress showed a significant predictive effect. In the last step, impulse, self-harm, risk behaviors and suicide ideation were also added as predictors and the regression model was significant, $F_{(9, 715)} = 101.88$, $p < .001$, explaining 56% of borderline features.

Impulse (β = .32, p < .001), suicide ideation (β = .24, p < .001) stress (β = .23, p < .001) and depression (β = .15, p = .001) were the only significant predictors in this model.

Table 5. Hierarchical regression model to predict borderline features (BPFS-C) in adolescents (N = 753).

	R^2	R^2 adjusted	B	β	t	VIF
Model 1	.07	.07				
Gender			3.57	.23***	6.22	1.02
School performance			-1.95	-.17***	-4.82	1.02
Model 2	.45	.45				
Gender			0.73	.05	1.58	1.12
School performance			-0.82	-.07*	-2.54	1.08
Depression (DASS-21)			0.58	.32***	7.22	2.51
Anxiety (DASS-21)			0.05	.03	0.57	2.80
Stress (DASS-21)			0.59	-.36***	7.45	3.04
Model 3	.56	.56				
Gender			0.81	.05	1.86	1.21
School performance			-0.18	-.02	-0.62	1.11
Depression (DASS-21)			0.27	.15**	3.20	3.35
Anxiety (DASS-21)			-0.04	-.02	-0.50	2.90
Stress (DASS-21)			0.37	.23***	5.09	3.24
Impulse (ISSQ-A)			0.59	.32***	10.34	1.59
Self-harm (ISSIQ-A)			0.01	.00	0.10	1.68
Risk behaviors (ISSIQ-A)			-0.33	-.05	-1.85	1.27
Suicide ideation (ISSIQ-A)			0.80	.24***	5.53	2.96

Note. *p < .05, **p < .01, ***p < .001; Gender was coded as 0 = boy, 1 = girl. DASS-21 = Depression Anxiety Stress Scale; BPFS-C = Borderline Personality Features Scale for Children; ISSIQ-A = Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents; BPFS-C = Borderline Personality Features Scale for Children.

Discussion

In the last decades, research on borderline features in adolescents has grown. Prospective studies for the development of BPD are beneficial to understand important variables to prevent the evolution of these maladaptive features. Based on our bibliographic review, there are very few Portuguese studies on borderline features in adolescents. In this line, the current study aimed to characterize borderline features in a large community sample of Portuguese adolescents.

Firstly, we examined which borderline features were most prevalent amongst the Portuguese adolescent population. Results revealed that feelings of abandonment, emotional intensity and an unstable self-image were the most reported symptoms, which align with the intra and interpersonal criteria suggested by Sharp et al. (2019) as the homotopic features of BPD. Fear of abandonment, unstable social relationships, identity disturbance, and feelings of emptiness are suggested as core borderline features across ages (Sharp et al., 2019). Moreover, our results indicated that girls and boys differed in all the ten borderline features covered. While girls showed increased internal symptoms (e.g., abandonment, emptiness, loneliness, unstable self-image), boys showed increased behavioral symptoms such as impulsivity and carelessness. This is consistent with previous studies reporting that girls tend to exhibit higher internalizing problems, whereas boys tend to exhibit higher externalizing problems (Alarcón & Bárrig, 2015; Leadbeater et al., 1999). These finding made us reflect about gender differences in the phenotype of BPD that might be observed in adolescence. Girls seem to present more internalized difficulties such as feeling alone, abandoned and empty. Boys might externalize more their difficulties showing impulsive and reckless behaviors.

In general, adolescent girls presented higher borderline features than adolescent boys, corroborating previous studies (Carreiras et al., 2021; Carreiras, Castilho, et al., 2020). It has been reported that females tend to have more borderline features and that more women are diagnosed with BPD than men (APA, 2013; Swartz et al., 1990; Trull et al., 2010). Some reasons are pointed to these differences. For example, women are more likely to seek help, and men's behavior patterns might be culturally seen as less pathological (Skodol & Bender, 2003).

Considering age, a nonsignificant correlation with borderline features and no differences between age groups indicated that these variables seem unrelated. This finding suggests that in adolescence borderline features levels tend to be identical across ages. School performance was negatively associated with borderline features, indicating that having more developed academic skills and competencies is associated with lower levels of borderline traits. This finding supports previously identified protective variables such as superior school performance and above average intellectual skills (Helgeland & Torgersen, 2004). On the one hand, having intellectual skills might allow adolescents to develop a broader range of mechanisms and strategies to cope with borderline features; on the other, borderline features are disturbing and impairing, which might affect attention and performance to study, do homework or participate in class.

Borderline features were positively associated with depression, anxiety, and stress, which aligns with previous studies that identified neuroticism and emotional negativity as risk factors for borderline features (Zanarini et al., 2019). Indeed, BPD patients often experience feelings of emptiness, abandonment, self-criticism, self-condemnation, self-destructiveness and hopelessness, which are also symptoms of depression (Rogers et al., 1995). Self-harm, impulse, and suicide ideation were positively associated with borderline features, as well. NSSI is strongly associated with BPD, with studies showing that around 80% of adolescents with BPD regularly engage in NSSI (Glenn & Klonsky, 2013). The association between impulsivity and borderline features in adolescents has already been identified and discussed (Carreiras, Castilho, et al., 2020; Fossati et al., 2014). These emotional and behavioral difficulties are congruent with the lower life satisfaction and quality of life reported by people with BPD in comparison to healthy controls (Thadani et al., 2018).

The predictive model of borderline features in a community sample explained a high percentage of the variance of the referred symptoms (56%), thus contributing to increase knowledge about the possible risk factors to the development of these features in adolescence. The regression model showed that impulse, suicide ideation, stress and depression had a unique effect on borderline features. Gender did not present a significant role in the final model, which might indicate that psychological variables, and internal mechanisms better explain these dysfunctional traits. Having difficulties in controlling behaviors and experiencing

stress and depressive symptoms seem to affect borderline features, as well as thinking about ending life.

This study has some strengths, for example, using a representative sample of Portuguese adolescents and conducting robust statistical analyses. Nevertheless, some limitations are also essential to acknowledge. Some sociodemographic variables were not explored, for example, family variables (parenting styles, family history of mental health disorders, communication), sexual orientation, and living area (rural or urban). Additionally, the cross-sectional data limit establishing causality between variables under study, and we did not use instruments to assess personality traits. Future studies are encouraged to explore specific differences between girls and boys, and longitudinal studies are required and essential to understand specific mechanisms in the development of borderline features.

Conflicts of Interests

The authors have no conflicts of interest to disclose.

Authors' Contributions

DC: collected data, collaborated with the design, conducted the data analyses, and wrote the paper. PC: collaborated with the design and reviewed the final manuscript; MC: collaborated with the design and reviewed the final manuscript.

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.14036249.v1

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Study VI

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

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 diferences]. *Portuguese Journal of Behavioral and Social Research*, *6*(1), 50–63. https://doi.org/10.31211/rpics.2020.6.1.170

O efeito da impulsividade, autoaversão e autocompaixão nos traços *borderline* na adolescência: Estudo das diferenças entre sexos

Diogo Carreiras, Paula Castilho, & Marina Cunha

Resumo

A adolescência é uma etapa desenvolvimental com mudanças biológicas, psicológicas e sociais que irão influenciar o funcionamento na idade adulta. A investigação em torno das Perturbações da Personalidade, e em particular da Perturbação *Borderline* da Personalidade (PBP), tem cada vez mais investido no estudo de traços disfuncionais e inflexíveis em idades precoces, uma vez que é claro que uma Perturbação da Personalidade não se manifesta apenas subitamente na idade adulta. Existe uma trajetória desenvolvimental que deve ser melhor compreendida e explorada. Neste sentido, o presente trabalho teve como objetivo analisar o contributo de processos e mecanismos psicológicos, como a impulsividade, autoaversão e autocompaixão, para a compreensão dos traços *borderline* na adolescência. Este estudo tem um desenho transversal e uma amostra constituída por 440 adolescentes da população geral (278 raparigas e 162 rapazes), com idades compreendidas entre os 14 e os 17 anos. Com recurso ao SPSS, realizaram-se Testes T para Amostras Independentes, correlações de Pearson e regressões lineares. As raparigas, quando comparadas com os rapazes, apresentam níveis mais elevados de autoaversão, depressão e traços *borderline* e níveis mais baixos de autocompaixão. Os modelos de regressão hierárquica para testar o poder preditivo da impulsividade, autoaversão e autocompaixão nos traços *borderline* foram significativos, explicando 46% da variância dos traços *borderline* em rapazes e 58% nas raparigas, controlando o efeito da depressão. Enquanto que nas raparigas, todas as variáveis apresentaram um contributo significativo (depressão, impulsividade, autocompaixão e autoaversão), nos rapazes apenas a depressão, impulsividade e autocompaixão revelaram poder preditivo. Os dados desta investigação salientam variáveis essenciais para compreender os traços *borderline* em

adolescentes, bem como as diferenças nesses mecanismos psicológicos entre raparigas e rapazes, tendo significativas implicações para a investigação e, sobretudo, para a prática clínica e prevenção.

Palavras-chave: adolescência, autoaversão, autocompaixão, impulsividade, traços *borderline* da personalidade

The effect of impulsivity, self-disgust and self-compassion in borderline features in adolescence: Study of sex differences

Diogo Carreiras, Paula Castilho, & Marina Cunha

Abstract

Adolescence is a developmental stage with biological, psychological and social changes that will influence the individual functioning in adulthood. Recently, research on borderline personality disorder (BPD) has been focusing on dysfunctional and inflexible features in early ages, since a Personality Disorder does not appear suddenly in adulthood. The developmental path should be better understood and explored. Accordingly, the current study aimed at analyzing the contribution of psychological processes, specifically impulsivity, self-disgust and self-compassion, for understanding borderline features in adolescence. This study had a cross-sectional design and a sample of 440 adolescents from the general population (278 girls and 162 boys), with ages ranging between 14 and 17 years. In SPSS we conducted student's t-tests, Pearson correlations and linear regressions. Girls presented higher levels of self-disgust and borderline features in comparison with boys and lower levels of self-compassion. Regression models to test the predictive value of impulsivity, self-disgust and self-compassion on borderline features were significant. The model explained 43% of borderline features for boys, and 57% for girls. For girls all variables (impulsivity, self-compassion, and self-disgust) presented a significant contribution, and for boys only impulsivity and self-compassion were significant predictors. These results added evidence of important variables to understand better borderline features in adolescents and identified sex differences in these psychological mechanisms. This study has important implications for research, clinical practice and prevention.

Keywords: adolescence, borderline features, impulsivity, self-compassion, self-disgust

Introdução

Descrita como incapacitante e interferente, a Perturbação *Borderline* da Personalidade (PBP) é caracterizada por um padrão persistente de impulsividade, instabilidade na autoimagem, no afeto e nas relações interpessoais e no comportamento, bem como por marcadas dificuldades de regulação emocional (American Psychiatric Association [APA], 2013; Leichsenring, et al., 2011). A prevalência da PBP na população geral situa-se entre 1.6% e 5.9% (APA, 2013).

Embora habitualmente a incidência seja estudada na população adulta, a PBP pode ser diagnosticada na adolescência, quando tal for justificado (APA, 2013). A investigação em torno dos traços *borderline* na adolescência tem crescido nos últimos anos, partindo da premissa de que, sendo a PBP uma patologia da personalidade, existe uma trajetória desenvolvimental disfuncional que pode ser detetada em faixas etárias mais jovens (Paris, 2008). Vários autores salientam que padrões comportamentais, cognitivos e afetivos disfuncionais manifestam-se antes dos 18 anos de idade e, portanto, traços ou características *borderline* podem ser identificadas na adolescência (Bradley et al., 2005; Crick et al., 2005; Sharp & Bleiberg, 2007). De facto, Zanarini et al. (2006) referem que pessoas com traços *borderline* reconhecem o início dos seus sintomas por volta dos 11 anos (*DP* = 5 anos) e que receberam tratamento para essas dificuldades, pela primeira vez, em média aos 17 anos (*DP* = 6 anos). A prevalência de PBP na população adolescente é semelhante à prevalência na população adulta, entre 1.3% e 1.6% (Johnson et al., 2008; Lewinsohn et al., 1997), no entanto, em contexto hospitalar, esta prevalência aumenta para os 22% (Chanen et al., 2008). Quanto a diferenças entre sexos, os resultados não são consensuais pois alguns estudos apontam para a existência de traços *borderline* mais elevados nas mulheres (Swartz et al., 1990; Trull et al., 2010), ao passo que outros estudos não reportam diferenças significativas entre sexos (Aragonès et al., 2013; Morey et al., 2002).

Como referido anteriormente, a impulsividade é uma característica central na PBP. Chapman et al. (2008) demonstraram que as pessoas com mais características *borderline* apresentam níveis de impulsividade significativamente superiores a outras com menos características *borderline*. Com frequência, a impulsividade nas pessoas com traços *borderline* mais elevados está associada a consequências negativas, como comportamentos autolesivos (Brown et al., 2002;

Plener et al., 2015), abuso de substâncias ou comportamento sexual de risco (Sebastian et al., 2013). Fossati et al. (2014) estudaram a impulsividade, regulação emocional e traços *borderline* em 1157 adolescentes, comparando três grupos distintos em função do nível de traços *borderline* (alto, médio e baixo). Concluíram que o grupo com um nível elevado de traços *borderline* se diferenciava dos outros grupos, revelando uma tendência significativamente maior para ser impulsivo.

Adicionalmente, alguns estudos encontraram uma relação significativa e positiva entre a PBP e a autoaversão (Guiomar, 2015; Ille et al., 2014; Schienle et al., 2013). A autoaversão tem sido descrita como a experiência autoconsciente da emoção básica de nojo orientada para o "eu" (Overton et al., 2008; Power & Dalgleish, 2008). É uma abstração generalizada e disfuncional da aversão a aspetos pessoais, internos e externos, relativamente estáveis e duradouros (Powell et al., 2015; Olatunji et al., 2012). Sendo o nojo/aversão uma emoção básica, a autoaversão apresenta diferentes componentes: uma cognitiva/emocional, outra fisiológica e uma componente comportamental, que inclui afastamento e fuga (Carreiras et al., 2022; Ekman, 1992; Overton et al., 2008; Powell et al., 2015). Estudos têm mostrado uma associação positiva entre a autoaversão e sintomas de depressão, ansiedade e ideação suicida (Carreiras, 2014; Overton et al., 2008), bem como Perturbações do Comportamento Alimentares (Ille et al., 2014). Em adolescentes da comunidade geral, a investigação de Guilherme (2019) apresentou correlações positivas entre a autoaversão e sintomas psicopatológicos, impulso, autodano e ideação suicida e uma associação negativa entre a autoaversão e autocompaixão.

Uma alternativa à autoaversão é a capacidade de nos autotranquilizarmos e de sermos gentis e bondosos connosco próprios, nomeadamente quando estamos em sofrimento físico e psicológico. A autocompaixão revela-se um processo psicológico protetor cada vez mais estudado e que pressupõe ser sensível ao sofrimento do próprio/a, com uma motivação genuína para o aliviar esse sofrimento em situações difíceis. Incluindo um conjunto de atitudes essenciais, a autocompaixão consiste em não ajuizar e rotular, compreender o sofrimento como parte de uma experiência humana comum, partilhada com todos os seres humanos, e ter a capacidade de estar com esse sofrimento sem o tentar suprimir ou evitar (Neff, 2003, 2016). Portanto, as estratégias de autocompaixão

relacionam-se com o sistema de vinculação e segurança e traduzem-se num estado interno de calma, comportamentos ativos de exploração, criatividade, afiliação e cuidado pelo eu. Diversos estudos têm mostrado associações negativas entre a autocompaixão e a psicopatologia (Krieger et al., 2013; Marsh et al., 2018) e correlações positivas entre a autocompaixão e o bem-estar e funcionamento psicológico adaptativo (Bluth et al., 2016; Neff et al., 2007). Em adultos, existem alguns estudos que mostraram o papel protetor da autocompaixão relativamente à PBP (Keng & Wong, 2017; Loess, 2015; Warren, 2015; Scheibner et al., 2017), no entanto, no que toca à população adolescente, estudos sobre os traços *borderline* e a sua relação com a autocompaixão são escassos. Não obstante, estudos com adolescentes já apresentaram evidência de que ser autocompassivo está associado a *outcomes* psicológicos positivos (Bluth & Balton, 2015; Cunha et al., 2013, 2016;). Adicionalmente, diferenças na autocompaixão entre rapazes e raparigas foram previamente reportadas, com as raparigas a apresentarem níveis mais baixos, especialmente as mais velhas (Bluth et al., 2016). Numa meta-análise, Yarnell e colaboradores (2015) reportam a evidência de que pessoas do sexo masculino apresentarem níveis de autocompaixão ligeiramente superiores às do sexo feminino.

Considerando as evidências dos estudos previamente descritos, e dada a falta de investigação em Portugal na área dos traços *borderline* na adolescência e de fatores que contribuem para a sua manutenção, o principal objetivo deste trabalho foi estudar o contributo de variáveis relacionadas com a experiência do *self* para a compreensão dos traços *borderline* na adolescência. Com base na revisão da literatura, este será o primeiro estudo português a explorar estas variáveis e a sua relação com os traços *borderline*, testando diferenças entre os sexos. Assim, pretendemos analisar o contributo da impulsividade, da autoaversão e da autocompaixão nos traços *borderline* em adolescentes e explorar a possível existência de diferenças nestas variáveis entre rapazes e raparigas. Esperamos que a autoaversão, a impulsividade e a autocompaixão tenham um contributo individual único na explicação dos traços *borderline* nos adolescentes, controlado o efeito dos sintomas depressivos. Esperamos também encontrar diferenças entre os sexos, nomeadamente níveis mais elevados de sintomas depressivos, traços *borderline* e autoaversão nas raparigas, e níveis mais elevados de autocompaixão nos rapazes.

Método

Participantes

A amostra do presente estudo foi composta por 440 adolescentes portugueses da população geral, dos quais 278 (63%) são do sexo feminino e 162 (37%) do sexo masculino, com idades compreendidas entre os 14 e os 17 anos, *M* = 15.47; *DP* = .83. Os adolescentes eram estudantes do ensino básico e secundário dos quais setenta e cinto (17%) estavam no 9º ano, duzentos e seis (47%) no 10º ano e cento e cinquenta e nove (36%) no 11º ano de escolaridade. Não foram encontradas diferenças significativas entre rapazes e raparigas relativamente à idade, $t_{(210)}$ = .14, *p* = .89, e anos de escolaridade, $t_{(210)}$ = .83, *p* = .41.

Procedimentos

O presente estudo faz parte de uma investigação mais alargada, cujos procedimentos foram aprovados pela Direção Geral de Educação (DGE) do Ministério da Educação, pela Comissão Nacional de Proteção de Dados (CNPD; autorização n.º 6713/ 2018) e pelos Órgãos Diretivos dos Estabelecimentos de Ensino. Posteriormente, foram agendadas com o Investigador responsável as datas para a recolha de dados, que se realizou nos Estabelecimentos de Ensino em horário escolar. Os consentimentos informados, com informação sobre o estudo, objetivos, proteção de dados, confidencialidade e anonimato foram enviados para os encarregados de educação. Os instrumentos de autorrelato foram administrados aos adolescentes, cujos encarregados de educação concederam permissão. Os jovens frequentavam Estabelecimentos de Ensino Básico e Secundário, e os dados foram recolhidos entre outubro de 2018 e março de 2019, no centro e norte de Portugal Continental. Durante o preenchimento dos questionários, o Investigador e o Professor responsável pela Unidade Curricular estiveram presentes para esclarecer dúvidas e garantir a independência das respostas.

Medidas

Escala de Traços de Personalidade *Borderline* para Adolescentes: ETPB-A (*Borderline Personality Features Scale for Children* - BPFS-C; Sharp et al., 2014; versão portuguesa: Carreiras et al., 2020). Este instrumento de autorrelato é unidimensional e constituído por 10 itens, que avaliam os traços *borderline* de adolescentes, com questões sobre a forma como o sujeito se sente em relação a

si próprio e aos outros (e.g. “A maneira como me sinto muda muito.”, “Sinto que há algo importante que falta em mim, mas não sei o que é.”). Os itens são cotados numa escala de *Likert* de 5 pontos (1 = “Nunca verdadeiro”; 5 = “Sempre verdadeiro”). Quanto maior o somatório das pontuações de todos os itens, maiores os níveis de traços *borderline*. No estudo da versão original, a BPFS-C apresentou boa consistência interna (α = .85, Sharp et al., 2014), bem como no estudo da versão portuguesa (α = .77, Carreiras et al., 2020). No presente estudo, o alfa de Cronbach foi de .84.

Escala de Autocompaixão para Adolescentes: EAC-A (*Self-Compassion Scale* - SCS; Neff, 2003; versão portuguesa para adolescentes: Cunha et al., 2016). Esta escala destina-se a avaliar a autocompaixão em adolescentes, ou seja, a capacidade de serem calorosos, aceitantes e compreensivos consigo próprios em momentos difíceis e de sofrimento (e.g. “Quando as coisas me correm mal, vejo as dificuldades como fazendo parte da vida, e pelas quais toda a gente passa.”, “Quando passo por tempos difíceis tenho tendência a ser muito exigente e duro/a comigo mesmo/a.”). É composta por 26 itens que compõem seis subescalas (Calor/Compreensão, Isolamento, Humanidade comum, Autojulgamento, Mindfulness e Sobreidentificação), cotados numa escala de *Likert* de 5 pontos (1 = “Quase nunca”; 5 = “Quase sempre”). O total da escala é uma média das pontuações das subscalas, após inverter as pontuações dos itens das subscalas “Isolamento”, “Autojulgamento” e “Sobreidentificação”. Resultados mais elevados representam níveis mais elevados de autocompaixão. A EAC-A revelou boa consistência interna no estudo original (α = .92, Neff, 2003) e na versão portuguesa para adolescentes (α = .85, Cunha et al., 2016). No presente estudo, o alfa de Cronbach da escala total foi de .84.

Escala Multidimensional da Autoaversão para adolescentes: EMA-A (Escala Multidimensional da Autoaversão - EMA; Carreiras, 2014; versão para adolescentes: Guilherme et al., 2020). Esta escala portuguesa avalia a autoaversão, ou seja, a emoção de aversão/nojo direcionada para aspetos internos e externos do “eu”. É constituída por 30 itens que compõem 4 subescalas: Ativação Defensiva (componente fisiológica da emoção; e.g. “Quando sinto aversão em relação a mim, a minha respiração fica acelerada.”), Cognitivo-emocional (pensamentos e sentimentos que refletem a relação de hostilidade e aversão para com o “eu”; e.g. “Quando sinto aversão em relação a mim, sinto-me

diminuído/a, inferior e pequeno/a."), Evitamento (comportamentos destinados a esconder ou evitar esses aspetos considerados aversivos"; e.g. "Quando sinto aversão em relação a mim, desvio o olhar do meu corpo.") e Exclusão (comportamentos para excluir ou eliminar os aspetos do "eu" considerados tóxicos"; e.g. "Quando sinto aversão em relação a mim, sinto vontade de cortar, queimar, eliminar essa parte de mim mesmo/a."). Os itens são cotados numa escala de *Likert* de 5 pontos (1 = "Nunca"; 5 = "Sempre") e depois feito o somatório das pontuações dos itens. Maiores pontuações representam maiores níveis de autoaversão. A consistência interna da versão original para adolescentes é muito boa (α = .97, Guilherme et al., 2020), tal como no presente estudo (α = .96).

Questionário de Impulso, Autodano e Ideação Suicida para Adolescentes: QIAIS-A (Carvalho et al., 2019). O referido instrumento de autorrelato é composto por 56 itens que avaliam o impulso/impulsividade, comportamentos autolesivos, comportamentos de risco, motivos e funções desses comportamentos, e ideação suicida. Os itens agrupam-se em 4 subescalas: Impulso (8 itens), Autodano (8 itens), Comportamentos de risco (6 itens), Funções do autodano (31 itens) e Ideação suicida (3 itens) e são cotados numa escala de *Likert* de 4 pontos (0 = "Nunca acontece comigo"; 3 = "Acontece-me sempre"). Para este estudo, apenas recorremos à subescala "Impulso" (e.g. "Faço coisas sem pensar nas consequências.") através do somatório das pontuações dos 8 itens, em que valores mais elevados significam maior impulsividade. Esta subescala apresentou uma consistência interna adequada neste estudo (α = .78), semelhante à encontrada no estudo da versão original (α = .76, Carvalho et al., 2019).

Escala de Ansiedade Depressão e Stress: DASS-21 (Lovibond & Lovibond, 1995; versão portuguesa: Pais-Ribeiro et al., 2004). Este instrumento de autorrelato é composto por 21 itens que avaliam sintomas de depressão, ansiedade e stress. Os itens agrupam-se em 3 subescalas: Depressão (7 itens), Ansiedade (7 itens) e Stress (7 itens) e são cotados numa escala de *Likert* de 4 pontos (0 = "Não se aplicou nada a mim"; 3 = "Aplicou-se a mim a maior parte das vezes"). Para este estudo, apenas recorremos à subescala "Depressão" (e.g. "Não consegui sentir nenhum sentimento positivo.") através do somatório das pontuações dos 7 itens, em que valores mais elevados significam maior sintomatologia depressiva. Neste estudo, esta subescala apresentou uma

consistência interna bastante adequada (α = .88), semelhante à encontrada no estudo da versão original (α = .91, Lovibond & Lovibond, 1995) e versão portuguesa (α = .91, Pais-Ribeiro et al., 2004).

Análise estatística

Para a análise dos dados, utilizámos o *software* IBM SPSS versão 23. Estatísticas descritivas e Testes T para Amostras Independentes foram realizados para examinar as variáveis sociodemográficas e explorar diferenças entre sexos, respetivamente. As associações entre as variáveis foram analisadas através do cálculo do coeficiente de correlação de Pearson. De acordo com Dancey e Reidy (2017), valores entre .10 e .39 são considerados fracos, entre .40 e .69, moderados e acima de .70, fortes. O tamanho do efeito foi calculado de acordo com Cohen (1988) considerando pequenos valores de *d* entre .20 e .49, médios entre .50 e .79 e elevados acima de .80. Regressões múltiplas foram realizadas para explorar o poder preditivo das variáveis independentes (Impulsividade, Autoaversão, Autocompaixão e Depressão) sobre a variável dependente (Traços *borderline*). A independência dos erros foi analisada com recurso aos valores de Durbin-Watson, considerando valores abaixo de 2.5 aceitáveis. A multicolinearidade e singularidade das variáveis foi examinada através dos *Variance Inflation Fator* (VIF), sendo aceitáveis valores inferiores a 5 (Kline, 2005).

Resultados

Análise Preliminar dos Dados

Não foram encontradas violações severas à normalidade dos dados após analisar os valores de assimetria (*Sk*) e curtose (*Ku*) (|Sk| < 3 e |Ku| < 8). Os valores de Durbin-Watson foram aceitáveis (entre 1.65 e 1.82). Os VIF foram abaixo do valor recomendado de 5. No geral, as análises preliminares evidenciaram um ajustamento adequado dos dados para prosseguir com as análises estatísticas.

Análise Descritiva e Diferenças entre Sexos

Na tabela 1 são apresentadas as estatísticas descritivas das variáveis em estudo para a amostra total e por sexo. Comparativamente aos rapazes, as raparigas apresentaram níveis mais elevados de traços *borderline,* $t_{(438)}$ = 2.25, p = .03, e depressão, $t_{(438)}$ = 2.25, p = .02, com um tamanho de efeito pequeno, bem

como níveis mais elevados de autoaversão, $t_{(438)} = 5.42$, $p < .001$, com tamanho de efeito médio. Quanto à autocompaixão, os rapazes apresentam níveis mais elevados, $t_{(438)} = 3.50$, $p < .001$, com um tamanho de efeito pequeno. Não foram encontradas diferenças estatisticamente significativas entre os sexos relativamente à impulsividade.

Tabela 1. Médias (*M*), Desvios-Padrão (*DP*), Testes T para Amostras Independentes (*t*) e Tamanho do Efeito (*d*) para as diferentes variáveis em estudo na amostra total e na amostra dividida por sexos.

Variáveis	**Total (*N* = 440)**	**Rapazes (*n* = 162)**	**Raparigas (*n* = 278)**	***t* (gl)**	***d* de Cohen**
	M (SD)	***M (SD)***	***M (SD)***		
Traços *borderline* (ETPB-A)	25.45 (7.35)	24.41 (7.44)	26.05 (7.25)	2.25* (438)	.22
Impulsividade (QIAIS-A)	7.16 (4.27)	7.30 (4.25)	7.08 (4.29)	0.51 (438)	.05
Autoaversão (EMA-A)	18.65 (21.19)	11.69 (16.78)	22.70 (22.43)	5.42** (438)	.56
Autocompaixão (SCS-A)	3.13 (.64)	3.27 (0.56)	3.05 (0.68)	3.50** (438)	.35
Depressão (EADS-21)	5.15 (4.75)	4.43 (4.42)	5.57 (4.89)	2.45* (438)	.24

Nota. ETPB-A = Escala de Traços de Personalidade *Borderline* para Adolescentes; EAC-A = Escala de Autocompaixão para Adolescentes; EMA-A = Escala de Autoaversão para Adolescentes; QIAIS-A: Questionário de Impulso, Autodano e Ideação Suicida para Adolescentes; EADS-21 = Escala de Ansiedade Depressão e Stress.

*$p < .05$; **$p < .001$

Correlações entre Traços *Borderline*, Impulsividade, Autoaversão, Autocompaixão e Depressão

Como apresentado na Tabela 2, encontramos correlações negativas e moderadas entre a autocompaixão e os traços *borderline*, sintomas depressivos e impulsividade, o que significa que elevada autocompaixão está associada a menores níveis de traços *borderline*, sintomas depressivos e impulsividade. Encontramos também correlações positivas moderadas e fortes entre a

impulsividade, a autoaversão, os sintomas depressivos e os traços *borderline*, ou seja, elevados traços *borderline* estão associados a maiores níveis de impulsividade, de sintomatologia depressiva e autoaversão. Todos os coeficientes de correlações foram significativos ao nível de $p < .001$.

Tabela 2. Correlações de Pearson entre as variáveis em estudo ($N = 440$).

	1	**2**	**3**	**4**	**5**
1. Traços *borderline* (ETPB-A)	1	-	-	-	-
2. Impulsividade (QIAIS-A)	.60**	1	-	-	-
3. Autoaversão (EMA-A)	.56**	.43**	1	-	-
4. Autocompaixão (EAC-A)	-.58**	-.39**	-.63**	1	-
5. Depressão (EADS-21)	.56**	.44**	.66**	-.67**	1

Nota. ETPB-A = Escala de Traços de Personalidade *Borderline* para Adolescentes; EAC-A = Escala de Autocompaixão para Adolescentes; EMA-A = Escala de Autoaversão para Adolescentes; QIAIS-A: Questionário de Impulso, Autodano e Ideação Suicida para Adolescentes; EADS-21 = Escala de Ansiedade Depressão e Stress.

*$p < .05$; **$p < .001$

Regressões Múltiplas na Explicação dos Traços *Borderline* para Ambos os Sexos

Dadas as diferenças encontradas entre rapazes e raparigas nas variáveis em estudo, foram realizadas duas regressões múltiplas, uma para cada grupo. Em ambas as regressões, a variável dependente foi os traços *borderline* e as variáveis independentes foram a depressão, impulsividade, autoaversão, autocompaixão. Nos rapazes, o modelo final (Tabela 3) foi significativo e explicou 46% da variância dos traços *borderline,* $F_{(4,\ 157)} = 34.92$, $p < .001$. Dos preditores testados, a impulsividade, $\beta = .35$, $p < .001$, e a autocompaixão, $\beta = -.25$, $p = .004$, revelaram significância estatística, bem como a depressão, $\beta = .27$, $p = .002$. A autoaversão não se revelou um preditor significativo, $\beta = .05$, $p = .58$. Para os rapazes, menor autocompaixão e maior impulsividade relacionam-se com níveis mais elevados de traços *borderline*.

Tabela 3. Regressão múltipla a explicar os traços *borderline* em adolescentes do sexo masculino (*N* = 162).

Variáveis	R^2	R^2 *ajustado*	***B***	***Erro***	**β**
	.47	.46			
Depressão (EADS-21)			0.46	0.15	.27*
Impulsividade (QIAIS-A)			0.62	0.12	.35**
Autoaversão (EMA-A)			0.02	0.04	.06
Autocompaixão (EAC-A)			-3.29	1.13	-.27*

Nota. ETPB-A = Escala de Traços de Personalidade *Borderline* para Adolescentes; EAC-A = Escala de Autocompaixão para Adolescentes; EMA-A = Escala de Autoaversão para Adolescentes; QIAIS-A = Questionário de Impulso, Autodano e Ideação Suicida para Adolescentes; EADS-21 = Escala de Ansiedade Depressão e Stress.

*p < .05; **p < .001

Relativamente ao grupo constituído apenas por sujeitos do sexo feminino, o mesmo modelo foi testado (Tabela 4). Neste caso, a variância dos traços *borderline* foi explicada em 58%, num modelo estatisticamente significativo, $F_{(4, 273)} = 96.24$, $p < .001$. Todos os preditores demonstraram significância estatística: impulsividade, $\beta = .38$, $p < .001$, autoaversão, $\beta = .26$, $p = .002$, autocompaixão, $\beta = -.23$, $p < .001$, e depressão, $\beta = .17$, $p = .003$. Para as raparigas, menor autocompaixão, maior impulsividade e maior autoaversão relacionaram-se com níveis mais elevados de traços *borderline*.

Discussão

O número de estudos sobre traços *borderline* na adolescência tem crescido nos últimos anos. Tal evidência está relacionada com alguns fatores, como o reconhecimento da trajetória desenvolvimental da PBP, e com o facto de o início dos sintomas *borderline* e da procura de tratamento serem reportados em idades precoces (Crick et al., 2005; Paris, 2009; Zanarini et al., 2006). Porém, em Portugal, verifica-se ainda uma lacuna na investigação deste tema, pelo que o presente estudo teve dois grandes objetivos: explorar o poder preditivo

Tabela 4. Regressão múltipla a explicar os traços *borderline* em adolescentes do sexo feminino (*N* = 278).

Variáveis	R^2	R^2 *ajustado*	***B***	***Erro***	**β**
	.59	.58			
Depressão (EADS-21)			0.25	0.08	.17*
Impulsividade (QIAIS-A)			0.64	0.08	.38**
Autoaversão (EMA-A)			0.06	0.02	.18*
Autocompaixão (EAC-A)			-2.44	0.56	-.23**

Nota. ETPB-A = Escala de Traços de Personalidade *Borderline* para Adolescentes; EAC-A = Escala de Autocompaixão para Adolescentes; EMA-A = Escala de Autoaversão para Adolescentes; QIAIS-A = Questionário de Impulso, Autodano e Ideação Suicida para Adolescentes; EADS-21 = Escala de Ansiedade Depressão e Stress.

*$p < .05$; **$p < .001$

da impulsividade, da autoaversão e da autocompaixão relativamente aos traços *borderline*, controlando a sintomatologia depressiva; e analisar possíveis diferenças entre adolescentes do sexo feminino e masculino nessas variáveis.

Foram encontradas diferenças entre rapazes e raparigas em algumas variáveis em estudo. Os dados mostraram que os traços *borderline* nas raparigas revelaram-se significativamente mais elevados, comparativamente aos rapazes, indo ao encontro de estudos anteriores (Swartz et al., 1990; Trull et al., 2010), o que é também consistente com o facto de a PBP ser predominantemente diagnosticada em mulheres (APA, 2013). Do ponto de vista da cultura ocidental, características *borderline* como emocionalidade intensa, sentimentos de dependência e abandono estão mais associadas ao sexo feminino, o que pode conduzir a uma cotação mais elevada destes sintomas pelas raparigas e explicar os resultados obtidos neste e noutros estudos. O mesmo padrão foi encontrado para a autoaversão, com as raparigas a revelarem níveis mais elevados, o que vai ao encontro de estudos anteriores (Guilherme et al., 2020). As jovens parecem ter uma relação mais negativa e crítica consigo próprias, caraterizada por

pensamentos e sentimentos de aversão e repulsa em relação a aspetos físicos e de personalidade. O que poderá relacionar-se com uma maior sensibilidade das adolescentes aos sinais de aprovação e desaprovação dos outros, um aspeto central nesta fase de desenvolvimento na formação da identidade.

Relativamente à autocompaixão, os resultados evidenciaram um padrão oposto, já que foram os adolescentes do sexo masculino que se mostraram mais compassivos consigo próprios, reportando, em momentos de sofrimento, uma maior capacidade de autotranquilização, menos enredamento na experiência interna e uma vivência de conectividade e de humanidade comum. Outros estudos, portugueses e internacionais, tinham previamente comprovado que os rapazes tendem a apresentar níveis mais elevados de autocompaixão em comparação com as raparigas (Bluth et al., 2016; Xavier et al., 2016; Cunha et al., 2016; Yarnell et al., 2015). Uma das possíveis explicações para os níveis mais elevados de autocompaixão no sexo masculino será o facto de os homens não se enredarem e sobreidentificarem de forma excessiva com pensamentos e experiência interna negativa, em comparação com as mulheres. Ademais, as raparigas tendem a ser mais autocríticas e mais predispostas a terem um discurso interno negativo (Yarnell et al., 2015).

Quanto à impulsividade, não encontrámos diferenças significativas entre os sexos embora a literatura aponte para níveis mais elevados em pessoas do sexo masculino (Cross et al., 2011). Consideramos que a ausência de diferenças se relaciona com a utilização de uma medida que é uma subescala unidimensional com apenas oito itens e não um instrumento destinado a avaliar a impulsividade. Como tal, possivelmente esta subescala não capta nuances particulares e mais específicas da impulsividade que permitem diferenciar a sua expressão em função do sexo. No futuro, é recomendável que outros estudos utilizem medidas mais completas de avaliação da impulsividade.

Todas as variáveis em estudo revelaram-se significativamente associadas entre si. Especificamente, foi encontrada uma correlação positiva e forte entre a impulsividade e os traços *borderline*, como já confirmado em estudos prévios (Chapman et al., 2008; Fossati et al., 2014). A autoaversão também estava positivamente correlacionada com os traços *borderline*, depressão e com a impulsividade, reforçando estudos anteriores que evidenciaram a relação entre a aversão direcionada para aspetos do *eu* e sintomas psicológicos negativos

(Carreiras, 2014; Overton et al., 2008), inclusivamente da PBP (Ille et al., 2014). Os valores da autocompaixão nos adolescentes mostraram-se negativamente correlacionados com a impulsividade, a autoaversão, os traços *borderline* e sintomatologia depressiva, indicando o potencial efeito protetor da capacidade genuína de ser sensível ao próprio sofrimento, reconhecendo-o, e de agir no sentido de o aliviar, no desenvolvimento de *outcomes* psicológicos negativos, como ansiedade, depressão e stress (Krieger et al., 2013; Marsh et al., 2018).

Quanto ao conjunto de variáveis que melhor explica os traços *borderline*, os modelos de regressão múltipla, conduzidos para rapazes e raparigas, dadas as diferenças entre os sexos reportadas anteriormente, revelaram resultados importantes para a compreensão da forma como essas variáveis se comportam, em função do sexo. Em primeiro lugar, ambos os modelos foram significativos, explicando percentagens consideráveis dos traços *borderline:* 46% para os rapazes e 58% para as raparigas. Em segundo lugar, podemos concluir que, independentemente do sexo e dos níveis de sintomatologia depressiva, a impulsividade e a autocompaixão são variáveis importantes a considerar na compreensão dos traços *borderline* nestas faixas etárias. Contudo, em terceiro lugar, os resultados mostraram que a autoaversão apenas foi um preditor significativo para os traços *borderline* nas raparigas, o que aponta para uma maior sensibilidade das pessoas do sexo feminino à relação negativa e de aversão por aspetos do eu, internos e/ou externos, com elevado autocriticismo, na explicação dos traços *borderline*. No grupo composto por sujeitos do sexo masculino, a autoaversão não teve um contributo único e independente.

Os resultados obtidos permitem refletir sobre importantes implicações clínicas. Os traços *borderline* estão presentes nesta faixa etária, em rapazes e raparigas, e estão associados a variáveis psicológicas negativas, como a impulsividade, a autoaversão e a depressão. Para os rapazes, a autoaversão não parece ser um aspeto relevante na explicação da variância dos traços *borderline*, enquanto para as raparigas desempenha um papel significativo. Como tal, intervenções individuais ou grupais com as raparigas com traços *borderline* marcados deverão trabalhar o desenvolvimento de uma relação mais calorosa e aceitante do eu como forma de atenuar esses traços. Krawitz (2012) defendeu que a abordar e desenvolver autocompaixão seria uma intervenção promissora no tratamento crónico de autoaversão em pessoas com PBP. Assim, autocompaixão

pode funcionar como um fator protetor, estando negativamente associada com os traços *borderline*, com potencial terapêutico para ambos os sexos. Posto isto, e salientando a importância de agir numa ótica preventiva, o desenvolvimento de uma relação positiva com o eu em idade precoce, por exemplo no início da adolescência, poderá prevenir ou amortecer o desenvolvimento de traços *borderline*. Face às características da PBP (instabilidade, oscilações entre sentimentos positivos e negativos relativamente ao próprio, elevada impulsividade), a implementação de uma intervenção baseada no desenvolvimento de competências compassivas onde sejam focados aspetos como a autoaversão e a impulsividade, pode ser de grande relevância, quer na população comunitária, quer em amostras de risco (e.g., adolescentes com elevados traços *borderline*). A autocompaixão tem sido indicada como um processo cognitivo-emocional alternativo que envolve outros mecanismos neuro-corticais revelando-se eficaz na regulação emocional e no aumento de comportamentos afiliativos (Gilbert, 2009). Neste sentido, programas de intervenção em grupo para adolescentes focados na autocompaixão, como o *Making Friends with Yourself* (Bluth et al., 2016), adaptado do *Mindful Self-Compassion* (Neff & Germer, 2013), mostraram resultados positivos no desenvolvimento de competências de autocompaixão e de *mindfulness* e na diminuição dos sintomas ansiosos, depressivos, *stress* e afeto negativo. De notar ainda que dificuldades relacionadas com a sintomatologia da PBP podem ser reportadas a partir dos 11 anos (Zanarini et al., 2006), reforçando a importância de uma abordagem clínica e psicoterapêutica.

Consideramos que o presente estudo apresenta pontos fortes, como o facto de abordar variáveis ainda pouco estudadas na população adolescente portuguesa, recorrendo a uma amostra robusta, permitindo assim identificar importantes pistas para atuar de forma preventiva no desenvolvimento de PBP. Não obstante, reconhecemos também algumas limitações. O facto de ter um desenho transversal não permite determinar relações de causalidade entre as variáveis. Estudos longitudinais são essenciais, no sentido de compreender melhor a trajetória desenvolvimental da PBP, explorando os efeitos a longo prazo. A diferença no tamanho da amostra de rapazes e raparigas para conduzir a análise de regressão deve ser considerada e os resultados interpretados com cautela. Em estudos futuros as diferenças entre rapazes e raparigas relativamente

aos traços *borderline* devem ser profundamente exploradas, com amostras proporcionais, procurando compreender especificidades próprias de ambos os sexos. Também nos parece essencial testar em Portugal a eficácia de programas de intervenção para adolescentes, focados na autocompaixão, como antídoto do autocriticismo e vivência negativa e aversiva com o próprio, promovendo maior autotranquilização (Gilbert, 2009), no sentido de prevenir o agravamento e desenvolvimento de traços *borderline*.

Conflitos de Interesse e Fontes de Financiamento

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Study VI

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

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

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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-judgement, 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-judgement, 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.

Keywords: borderline features, self-compassion, experiences of threat and subordination in childhood, adolescence, mediation

Introduction

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). Non-suicidal self-injury (NSSI) is also associated with BPD (Brown et al., 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 behavioral 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 behavior (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 and colleagues (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-judgmental and understanding and seeing suffering as part of the human experience (Neff, 2003a, 2003b).

Neff (2003a, 2018) conceptualized self-compassion as entailing three main interacting components: self-kindness versus self-judgement, 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-judgement 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, 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., 2013; Cunha et al., 2016; Bluth & Balton, 2015) and negatively related with maladaptive functioning (e.g., aggression, narcissism, negative affect; Barry et al., 2015; Bluth & Balton, 2015). Moreover, it counteracts criticism, hostility

and hate towards the self and promotes greater emotional awareness and adaptive behavioral 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; Warren, 2015; Scheibner et al., 2017). 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, 2003), and the individual contribution of the self-compassion subscales has not been explored yet. We believe that developing self-kindness (in contrast with self-judgment), 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 this relationship. Considering the lack of studies using specifically the self-compassion components in this relationship, we intended to explore which will work as a mediator. Identifying

which of the self-compassion components play a role in this relationship will help tailor intervention programs for adolescents at risk, especially those with marked borderline features and childhood experiences of feeling threatened and subordinated.

Methods

Participants

The sample was composed of 422 adolescents, of which 173 were males (41%) and 249 were females (59%) from 9th, 10th and 11th grade, with a mean age of 15.40 years (*SD* = 0.79) and a mean of 10.17 years of schooling (*SD* = 0.69). The majority of 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 high schools in the center 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., 2014; Sharp et al., 2015). The higher the sum of the items, the higher the levels of borderline features. The original study found a good internal consistency

(*α* = .85) and the Portuguese version (*α* = .77), which have 10 items. In our study, the Cronbach's coefficient for the total scale was *α* = .84.

The Self-Compassion Scale (SCS; Neff, 2003b, 2018; Portuguese version for adolescents by 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-judgement (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-judgement 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 *α* = .90. Subscales presents the following Cronbach's alphas: self-kindness *α* = .82, common humanity *α* = .75, mindfulness *α* = .75, self-judgment *α* = .86, Isolation *α* = .81 and over-identification *α* = .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 (α = .92) and in the Portuguese version for adolescents (α = .86). In the current study, the Cronbach's coefficient for the total scale was α = .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 (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 analyzed 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 analyzed. 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 |Ku| < 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).

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 (*N* = 422)	Males (*n* = 173)	Females (*n* = 249)	t (*df*)	Cohen's *d*
	M (SD)	*M (SD)*	*M (SD)*		
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-judgement (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.

Concerning the self-compassion components, results obtained showed nonsignificant sex differences for self-kindness and 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-judgement, 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).

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-judgement (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.

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-judgement, 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-judgement ($\beta = .26$, $p = .001$) and mindfulness ($\beta = -.16$, *p*

= .01). Self-kindness, common humanity and over-identification were not significant predictors in the regression model.

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	.10	.01	.01	4.30*			
Sex					1.50	.10*	1.00
Model 2	.66	.44	.43	52.36**			
Sex					-1.29	-.09*	1.14
Self-kindness (SCS-A)					0.18	.11	2.37
Common Humanity (SCS-A)					-0.03	-.02	1.78
Mindfulness (SCS-A)					-0.34	-.16*	2.52
Self-judgement (SCS-A)					0.38	26*	4.03
Isolation (SCS-A)					0.68	.36**	2.73
Overidentification (SCS-A)					0.22	.12	4.49

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

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-judgement 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 (a2b2 = .15, 95% CI [.10, .20]) and self-judgement (a3b3 = .11, 95% CI [.06, .17]) were significant and a marginal significance was attained for mindfulness (a1b1 = .02, 95% CI [.00, .04]), which confirmed the mediation hypothesis. Sex presented a nonsignificant effect on borderline features and mindfulness.

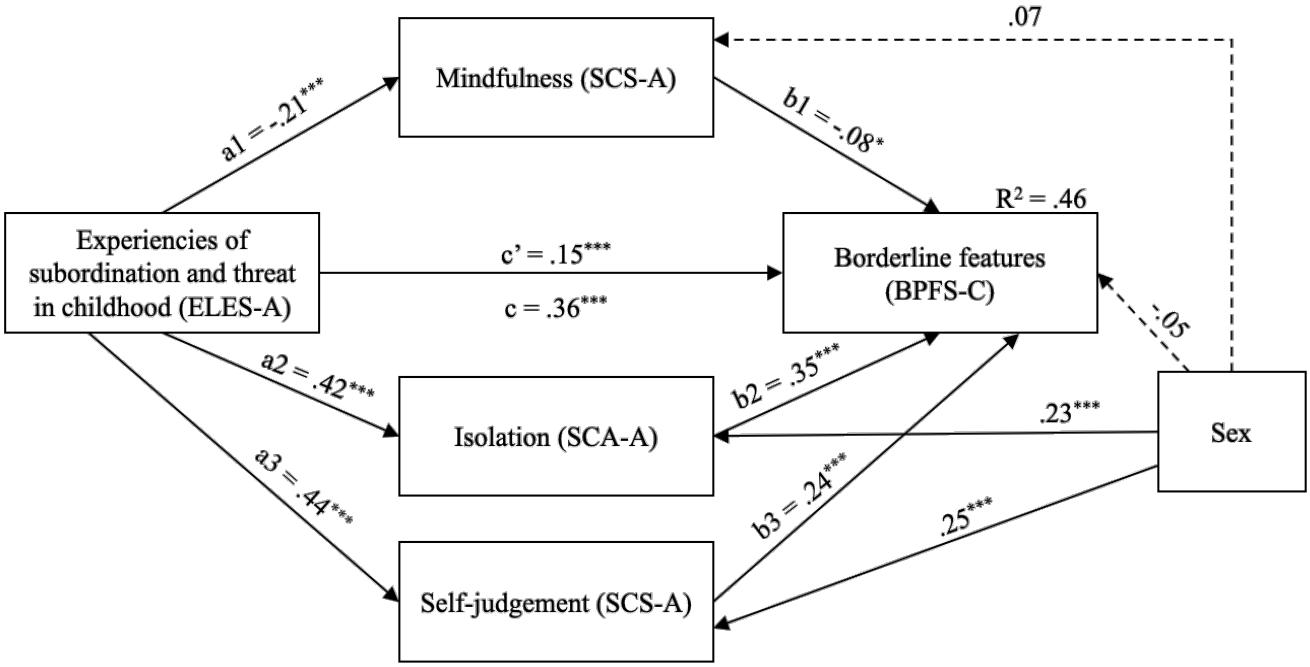

Figure 1. The mediation effect of three self-compassion components (Mindfulness, Isolation and Self-judgement) in the relationship between Experiences of subordination and threat in childhood and Borderline features.

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 borderline personality disorder (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 & Blazer, 1990; Trull et al., 2010). Indeed, according to the DSM-5, 75% of people diagnosed with BPD are women (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 underrepresentation 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 behavior in childhood have been associated with an increased liability to develop depression and other psychological symptoms (Gilbert et al., 2003). Xavier and colleagues (2015) reported that adolescents from fearful and threatened environments, with submissive behaviors and who fear being self-compassionate are at greater risk to engage in self-harm behaviors. 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 behaviors, 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 & Balton, 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-judgement, 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-judgement, isolation and over-identification, the three negative subscales of self-compassion. Girls only 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 and colleagues (2019) have already reported that girls seem to exhibit increased scores of the uncompassionate factors (self-judgement, 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 (Yarnel 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-judgement 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-judgement 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-judgment 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 judgmental and more self-compassionate might improve self-acceptance and reduce the engagement in self-harm behaviors (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-judgement, 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 & Balton,

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 behaviors) are encouraged to use an approach focused on developing self-compassion to counteract these maladaptive features. Compassion Focused Therapy (CFT; Gilbert, 2010), Dialectical Behavioral 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-judgement 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 (Richer 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.

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Study VII

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

Carreiras, D., Castilho, P., & Cunha, M. (2022). What stands between self-disgust and borderline features? The need to cultivate self-compassion in adolescents from Portugal. *Psychologica*, *7*(1), 50–63. https://doi.org/10.31211/rpics.2020.6.1.170

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. 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

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 et al., 2022). 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 1-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, a 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.

Methods

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 were 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 (α = .85; Sharp et al., 2014) as well as the 10-item Portuguese version (α = .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 (α = .92) and in the Portuguese version (α = .85). In our data, Cronbach's coefficient for the total scale was α = .87.

The Multidimensional Self-Disgust Scale (MSDS; Carreiras, Pinto, et al., 2022; Version for adolescents by Carreiras, Guilherme, 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; Guilherme et al., 2020). 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 boxplot 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 correlation 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 5,000 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 (*N* = 655)	**Males (*n* = 274)**	**Females (*n* = 381)**	***t(df)***	***p***	***d***
	M (SD)	***M (SD)***	***M (SD)***			
Borderline features (BPFS-C)	24.43 (8.23)	21.77 (8.05)	26.34 (7.84)	-7.27 (653)	<.001	0.56
Self-disgust (MSDS-A)	19.08 (21.05)	12.87 (16.83)	23.55 (22.62)	-6.93 (653)	<.001	0.54
Self-compassion (SCS-A)	3.10 (0.63)	3.24 (0.54)	3.01 (0.66)	4.92 (653)	<.001	0.38

Note. BPFS-C = Borderline Personality Features Scale for Children; MDSD-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; MDSD-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, $p < .001$).

Discussion

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.

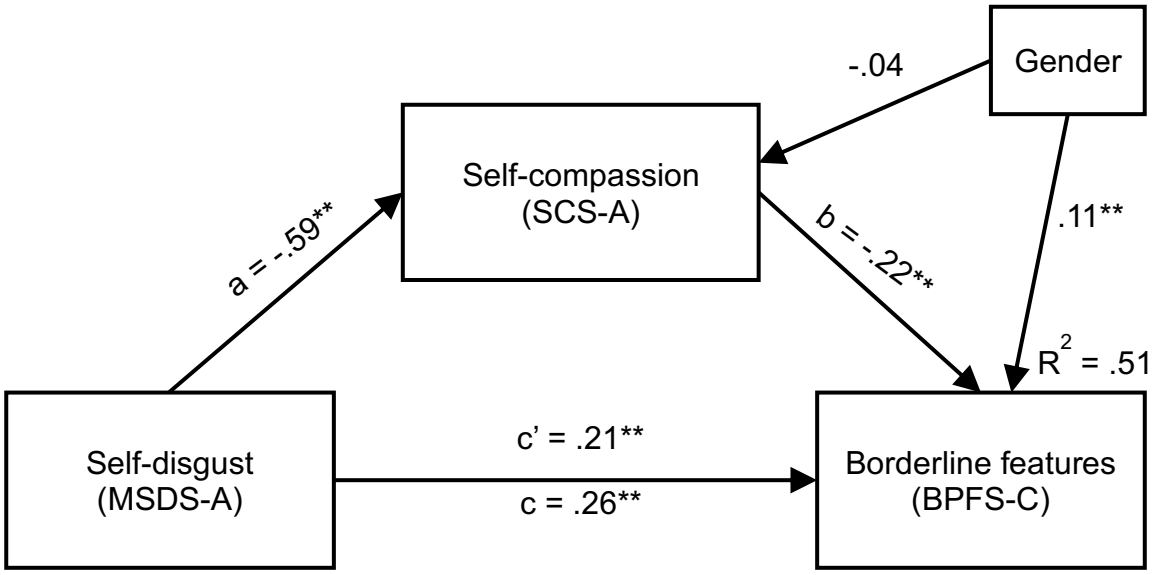

Figure 1. The mediation effect of self-compassion in the relationship between self-disgust and borderline features.

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.

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 exibit higher internalized difficulties (e.g., depression, axiety) (Hayward & Sanborn, 2002; Mendle, 2014), a more self-criticial 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 have 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

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Chapter 5

Longitudinal effect of psychoemotional variables on the developmental trajectory of borderline features in adolescents

Chapter overview:

Study IX: Does self-compassion protect adolescents with NSSI from developing borderline features? A two-wave longitudinal study

Study X: Trajectories of borderline features in adolescents: A three-wave study testing the effect of gender and self-disgust over 12 months

Study IX

Does self-compassion protect adolescents with NSSI from developing borderline features? A two-wave longitudinal study

Carreiras, D., Castilho, P., & Cunha, M. (2022). *Does self-compassion protect adolescents with NSSI from developing borderline features? A two-wave longitudinal study*. Under review

Does self-compassion protect adolescents with NSSI from developing borderline features? A two-wave longitudinal study

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Abstract

Adolescence is a vulnerable developmental stage for the onset of non-suicidal self-injury (NSSI). Youth who engage in these self-harming behaviors are at increased risk to develop borderline features. Self-compassion is a prosocial emotion particularly useful for emotional regulation and stress deactivation. The aim of the present study was to test the protective effect of self-compassion in the evolution of borderline features in six months with a group of adolescents with a history of NSSI. Sample was composed of 119 Portuguese adolescents (n = 86 girls), with an average age of 15.51 years (SD = 0.87), who reported having at least one episode of NSSI in their lifetime. The moderation model explained 57% of borderline features six months later, and the interaction between initial borderline features and the different levels of self-compassion (low, medium and high levels) was significant. Youth with higher borderline features presented lower levels of borderline features six months later if they had higher levels of self-compassion. These findings suggest the importance of cultivating self-compassion to potentially buffer the growth of borderline features in adolescents with history of NSSI.

Keywords: borderline features, NSSI, self-compassion, adolescence, longitudinal analysis

Introduction

Non-suicidal self-injury (NSSI) has been defined as the intentional and direct destruction of body tissue without suicide intention (Brown & Plener, 2017; Klonsky & Moyer, 2008). These self-harming behaviors encompass cutting, burning and craving skin, punching, biting, among others (Greydanus & Shek, 2009). The developmental stage of adolescence is a vulnerable period for the onset of NSSI (Klonsky et al., 2011). The prevalence of these behaviors in adolescents from community samples (a metanalysis with a total of 280 408 participants) is about 16.9%, with an average age of onset of 13 years (Gillies et al., 2018). Indeed, NSSI has a close relationship with some psychopathological outcomes and symptoms, including personality disorders (Ayodeji et al., 2015), eating disorders (Ayodeji et al., 2015), and it is associated with a higher risk of suicide attempts and suicide (Hargus et al., 2009; Nock et al., 2006). Several functions for self-harming have been discussed in different studies, being emotional regulation, self-punishment, halting dissociation and influencing others some of the main functions (Briere & Gil, 1998; Klonsky, 2007, 2009).

The relationship between NSSI and borderline personality disorder (BPD) has been discussed in the last decades, with evidence supporting a reciprocal influence (Bracken-Minor & McDevitt-Murphy, 2014; Vega et al., 2017). BPD is a severe personality disorder with impairing features such as emotional instability, interpersonal difficulties, chronic feelings of emptiness, impulsivity, self-harm behaviors and suicide attempts (American Psychiatric Association [APA], 2013). Although BPD is usually diagnosed in adulthood, borderline features might be previously identified in adolescence and early ages (Crick et al., 2005; Paris, 2014). Adolescents with a previous history of borderline features have higher risk for the onset of NSSI (Gratz et al., 2014). Goodman et al. (2017) showed that 95% of adolescents with BPD, who have been hospitalized in the past, have had self-injury behaviors, with more than half of them reporting at least 50 episodes. This may indicate that borderline features are a risk factor to the development of self-harm, although some literature has suggested that self-harm, itself, is a risk factor for the development of borderline features (Crowell et al., 2009; Crowell & Beauchaine, 2008; Paris, 2005). Often, NSSI is manifested prior to the diagnosis of BPD, which might indicate that adolescents with NSSI are a risk group to develop BPD, but only a proportion of those adolescents will, indeed, develop BPD (Hessels et al.,

2018). Differences between boys and girls on borderline features and NSSI have also been explored, with evidence supporting that females usually present higher levels of both (Bresin & Schoenleber, 2015; Carreiras, Castilho, et al., 2020; Carreiras, Loureiro, et al., 2020; Xavier et al., 2019).

Research on underlying mechanisms and psychological processes has been growing, and Sharp et al. (2015), already added evidence that experiential avoidance is a significant predictor of borderline features a year later. Self-compassion can also be considered an underlying process or a way to deal with difficult situations. It is described as being 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-judgmental and understanding and seeing the suffering as part of the human experience (Neff, 2003). More and more studies have found that self-compassion is negatively correlated with psychopathology (Krieger et al., 2013; MacBeth & Gumley, 2012; Marsh et al., 2018) and positively correlated with well-being and adaptive psychological functioning (Kelly et al., 2014; Neff et al., 2007; Neff & Germer, 2013; Yarnell et al., 2015). Moreover, it has been reported that adolescents with lower levels of self-compassion tend to exhibit higher psychological distress, alcohol use and suicidal behavior (Tanaka et al., 2011).

Although evidence that self-compassion plays a role as a protective factor on BPD in adults has been discussed (Keng & Wong, 2017; Loess, 2015; Scheibner et al., 2017; Warren, 2015), studies with adolescent samples exploring the relationship between these constructs are scarce. Keng & Wong (2017) concluded that in college students, self-compassion was an independent predictor of BPD symptoms over and above the effects of an invalidating environment in childhood and Carreiras, Castilho, et al., (2020) showed the significant predictive effect of self-compassion, impulsivity and self-disgust on adolescents' borderline features. More recently, the self-compassion components of mindfulness, isolation and self-judgement were identified as significant mediators in the relationship between early life experiences of subordination and threat and borderline features in youth (Carreiras et al., 2021). Evidence has also supported that self-compassion plays a protective role for psychopathological factors related to NSSI (Xavier et al., 2016). People with NSSI, through compassionate mind training, may become more aware of their emotional experience and behave in a gentle way to deal with moments of

distress and emotional dysregulation. Self-compassion seems to counteract criticism, hostility and hate towards the self (Van Vliet & Kalnins, 2011; Xavier et al., 2016).

In this line, the aim of the current study was to test the protective effect of self-compassion in the evolution of borderline features over six months, controlling the effect of baseline levels of self-compassion and gender in adolescents with NSSI history.

Method

Procedures

This study is part of a wider PhD project of the first author. All procedures take into consideration the ethical standards of the Ethics and Deontology Commission of the Faculty of Psychology and Educational Sciences of the University of Coimbra, the Ministry of Education, the National Commission for Data Protection of Portugal (number: 6713/ 2018) and the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Participants were students from four schools in the north and center regions of Portugal. School's headteachers agreed to collaborate with this research. Participants and parents were informed about the study aims, confidentiality and voluntary participation and gave their written informed consent. Adolescents responded to the self-report questionnaires in the classroom, with the presence of researchers and teachers to guarantee confidentiality and independent responding. Data was collected in two moments with a 6-month interval in 2019. A code was generated for all participants to identify cases in the two waves.

Measures

The sociodemographic questionnaire used included a random and unique code for each participant to match responses in the two waves, questions about age, gender and years of education.

The Borderline Personality Features Scale for Children (BPFS-C; Sharp et al., 2014; Portuguese version by Carreiras et al., 2020) is a one-dimension self-report questionnaire composed of 11 items to assess borderline features in youth. Items are rated on a 5-point Likert scale (1 = *never true*; 5 = *always true*) and the final score is a sum of all items, with higher scores representing higher level of borderline features. The 11-item version presented good internal consistency (α =

.85; Sharp et al., 2014) as well as the 10-item Portuguese version (α = .77; Carreiras, Loureiro, et al., 2020). In the current study, Cronbach's alpha was .74 in the first wave and .84 in the second.

The Self-Compassion Scale (SCS; Neff, 2003; Portuguese version for adolescents by Cunha et al., 2015) is a self-report questionnaire used to assess self-compassion. The 26 items represent 6 subscales (Self-kindness, Self-judgement, Common Humanity, Isolation, 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 items, considering the reversed subscales. Higher scores reflect higher level of self-compassion. SCS revealed good internal consistency in the original version (α = .92) and in the Portuguese version (α = .85). Cronbach's alpha of the total SCS in our sample was .92 in both waves.

The Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents (ISSIQ-A; Carvalho et al., 2015) is a self-report measure composed by 56 items to assess impulse, self-harm, risk behaviors, functions of self-harm and suicide ideation in youth. The subscales impulse, self-harm, risk behaviors and suicide ideation are rated on a 4-point Likert scale (0 = *never*; 3 = *always*). Cronbach's Alphas of the original version were good, ranging between .77 and .90. This measure was used in our study to identify adolescents who reported having engaged at least once in NSSI.

Data Analyses

Data were analyzed using IBM SPSS Statistics version 23 and PROCESS Macro (Hayes, 2013). Normality of data was tested through Kolmogorov-Smirnov test (with Lilliefors Significance Correction) and skewness (*sk*) and kurtosis (*ku*) values. Normality was assumed for $sk < 3$ and $ku < 8$ (Kline, 2011). Descriptive statistics and frequencies were used to explore demographic variables. Student's t-tests for independent and paired samples were conducted to explore differences between groups and assessment moments. Correlations between variables were examined with Pearson's correlation coefficients. Following the reference values of Dancey and Reidy (2017), correlations between .10 and .39 were considered weak; between .40 and .69 moderate; and above .70 strong. Effect sizes were calculated and interpreted according to Cohen (1988): *d* values between .20 and .49 were considered small, between .50 and .79 medium, and above .80 large.

A moderation model (model 1) was computed on PROCESS Macro, including two covariates (gender and self-compassion at baseline) to control its potential confounding effect. A 5,000 bootstrap procedure was used. To interpret the significant interaction, a graphic was plotted, and simple slope analysis was performed to examine the significance of these slopes. Multicollinearity was ensured by examining the tolerance and variance inflation factor (VIF < 5; Kline, 2011).

Results

Participants

Sample was composed of 119 Portuguese adolescents, 86 (72%) girls and 33 (28%) boys, who reported having at least one episode of NSSI in their lifetime. The age-range was 14 and 17 years old (M = 15.51, SD = 0.87) and the mean of years of education was 10.29 (SD = 0.69). Non-significant gender differences were found for age ($t_{(117)}$ = 0.25, p = .80) and years of education ($t_{(117)}$ = 0.76, p = .45).

About the NSSI at wave one, the most frequent behavior was biting parts of the body or objects, reported by 58% of participants, followed by scratching or pinching the body (report by 44% of participants). The less common NSSI behaviors were burning the body (1%), followed by swallowing sharp objects or dangerous substances (2.5%) and pricking nails in the body (2.5%).

Preliminary Analyses

The Kolmogorov-Smirnov test was non-significant for borderline features and self-compassion (p > .06). Skewness and kurtosis values were within the acceptable range (Sk < 3 and Ku < 8; Kline, 2011) and normality of data was assumed. Outliers were not eliminated to keep the natural distribution and variance and because they did not change the results. No multicollinearity among variables was found (VIF < 5; Kline, 2011).

Descriptive Statistics and Differences in the Two Waves

Means and standard deviations for borderline features and self-compassion in the two waves are presented on Table 1. Non-significant differences were found from wave one to wave two for borderline features, $t_{(118)}$ = 0.73, p = .47, and self-compassion, $t_{(118)}$ = 0.01, p = .92.

Differences Between Girls and Boys

Gender differences were analyzed (Table 1), and girls presented higher levels of borderline features in comparison to boys in wave one ($t_{(117)}$ = 2.51, p = .014) and wave two ($t_{(117)}$ = 3.06, p = .003). The effect size of these differences was medium. In self-compassion, boys showed higher levels than girls in wave one ($t_{(117)}$ = 3.51, p = .001) and wave teo ($t_{(117)}$ = 4.27, p < .001), with a medium and large effect sizes.

Table 1. Means (*M*) and standard deviations (*SD*) of total sample and both genders in the two waves on borderline features, self-harm and self-compassion. Student's t-test (*t*) for differences between groups and Cohen's *d* for effect sizes (*N* = 119).

	Total (*n* = 119)	**Boys (*n* = 33)**	**Girls (*n* = 86)**	***t* (df)**	***d***
	M (SD)	***M (SD)***	***M (SD)***		
Borderline features W1	28.49 (6.21)	26.24 (6.49)	29.36 (5.91)	2.51* (117)	.50
Borderline features W2	28.92 (7.30)	25.73 (5.86)	30.15 (7.46)	3.06* (117)	.66
Self-compassion W1	1.99 (0.55)	2.27 (0.52)	1.89 (0.53)	3.51* (117)	.72
Self-compassion W2	1.99 (0.57)	2.33 (0.50)	1.86 (0.55)	4.27** (117)	.89

Note. *p < .05, **p < .001. W1 = Wave one; W2 = Wave two. Borderline features measured by the Borderline Personality Features Scale for Children; Self-compassion measured by the Self-Compassion Scale.

Correlations

The associations between variables in the two waves are presented in Table 2. As expected, the association between the same variables in different moments are moderate or high, ranging between .56 and .75 (p < .001). The correlations between borderline features and self-compassion were negative and significant.

Table 2. Pearson correlations between the study variables in the two waves (*N* = 119).

	1.	2.	3.	4.
1. Borderline features W1	1			
2. Borderline features W2	.56**	1		
3. Self-compassion W1	-.50**	-.48**	1	
4. Self-compassion W2	-.44**	-.66**	.75**	1

Note. **p < .001. W1 = Wave one; W2 = Wave two. Borderline features measured by the Borderline Personality Features Scale for Children; Self-harm measured by the Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents; Self-compassion measured by the Self-Compassion Scale

The Moderator Effect of Self-compassion on the Evolution of Borderline Features in Six Months

A moderator model was computed on PROCESS macro with self-compassion at wave two as a moderator variable between borderline features at wave one and borderline features at wave two. Gender and self-compassion at wave one were entered as covariates, to control the potential confounding effect of differences between boys and girls, as well as previous levels of self-compassion. The attained model was statistically significant, $F_{(5, 113)} = 29.66$, $p < .001$, and explained 57% of borderline features at wave 2. The effect of borderline features at wave 1 on borderline features at wave two was significant ($B = 1.22$, 95% CI [0.59, 1.65], $t = 4.21$, $p < .001$), as well as the interaction with self-compassion ($B = -0.34$, 95% CI [-0.59, -0.10], $t = -2.74$, $p = .01$). Gender ($B = 0.43$, 95% CI [-1.73, 2.58], $t = 0.39$, $p = .69$) and self-compassion at wave one ($B = 2.05$, 95% CI [-0.52, 4.61], $t = 1.58$, $p = .12$) did not present a significant effect on borderline features at wave 2.

Using the results of the moderation analysis, a graph was plotted (Figure 1) to analyze the relationship between borderline features at wave one and wave two as a function of the different levels of self-compassion (low, medium and high). We can observe that for the same levels of initial borderline features, adolescents with higher levels of self-compassion presented lower borderline features six months later. These results show the buffer effect of self-compassion in the evolution of

borderline features in adolescents with NSSI. The simple slope analysis indicated that for all levels of self-compassion, the effect of borderline features at wave one on borderline features at wave two was significant: $t_{(\text{low self-compassion})\ (113)} = 5.48$, $p < .001$; $t_{(\text{medium self-compassion})\ (113)} = 5.13$, $p < .001$; $t_{(\text{high self-compassion})\ (113)} = 2.01$, $p = .047$.

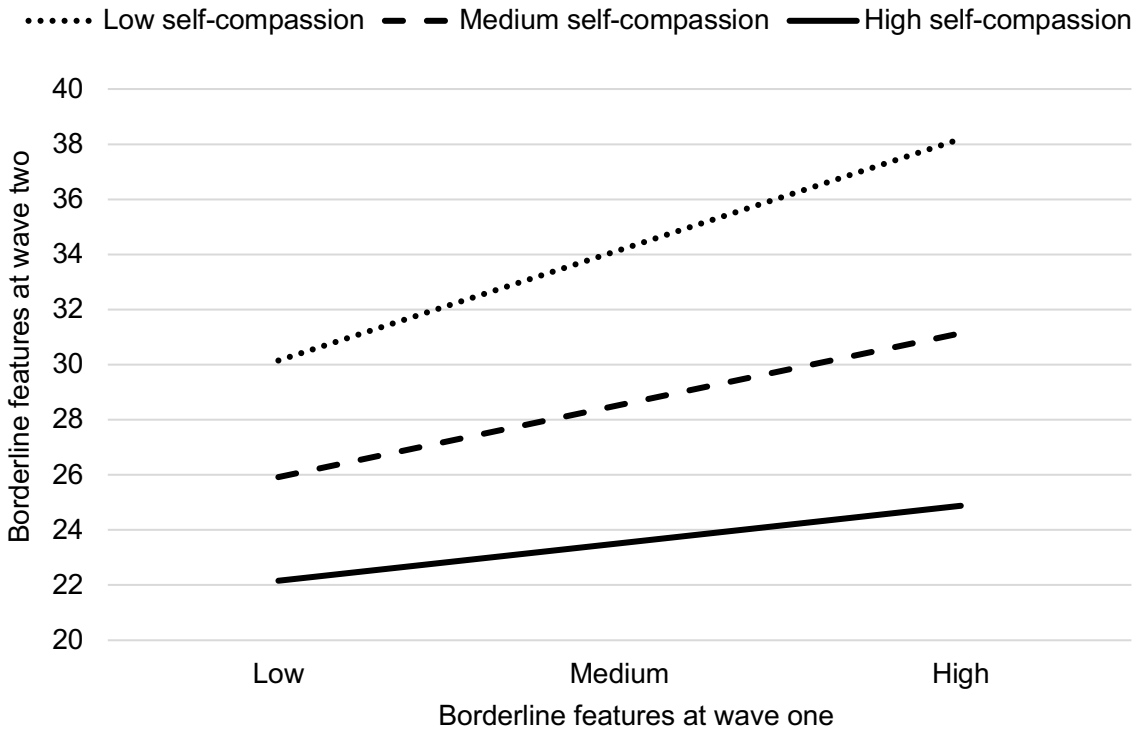

Figure 1. Graphic representation of the moderation effect of self-compassion between borderline features at wave one and wave two. Borderline features were measured with the Borderline Personality Features Scale for Children and self-compassion was measured with the Self-Compassion Scale.

Discussion

Considering that adolescents with history or current NSSI are at increased risk to develop BPD in comparisons to adolescents without these behaviors (Crowell et al., 2009; Crowell & Beauchaine, 2008; Hessels et al., 2018), the present study aimed to examine whether self-compassion had a buffer effect in the evolution of borderline features in six months, in adolescents with at least one episode of NSSI in their lifetime.

Results showed that borderline features and self-compassion were relatively stable from baseline to six months later, which is not surprising considering the

short timeframe. Gender differences in both assessment points were also expected, considering previous studies reporting higher borderline features in females (Carreiras, Castilho, et al., 2020; Trull et al., 2010) and higher self-compassion in males (Bluth et al., 2016; Cunha et al., 2015; Yarnell et al., 2015).

The association between borderline features and self-compassion was negative and moderate, suggesting that being less kind and understanding towards the self in difficult situations is related to higher borderline features in youth. Similar results have been presented in cross-sectional studies (Carreiras et al., 2021; Carreiras, Castilho, et al., 2020; Keng & Wong, 2017), suggesting that self-compassion might work as a potentially positive regulation strategy to deal with borderline features. Nevertheless, longitudinal data are needed. Borderline symptoms are usually marked by a devaluation of the self, self-loathing, self-criticism and low self-esteem (Donald et al., 2019; Krawitz, 2012). Given the supporting evidence of the positive effect of self-compassion on psychopathology, shame and self-criticism (Gilbert & Procter, 2006; Krieger et al., 2013; MacBeth & Gumley, 2012; Marsh et al., 2018), we hypothesized its protective effect on the evolution of borderline features in adolescents with NSSI.

Accordingly, a moderation model was tested with self-compassion as a moderator between borderline features at baseline and six months later. Differences between boys and girls in these variables reported in previous studies and supported in our data led us to control gender, considering its potential confounding effect. Additionally, self-compassion at baseline was also controlled in our model to consider the effect of previous levels of self-compassion. The moderation model accounted for 57% of borderline features 6 months later, and borderline features at baseline as well as the interaction with self-compassion were significant predictors. The potentially confounding variables showed a non-significant effect on borderline features. These results suggest that adolescents with lower self-compassion present an increase in borderline features over six months. The influence of self-compassion in the evolution of these features seems to work in low, medium and high levels. Self-compassion entails being kind and understanding with oneself, not trying to avoid or suppress the internal experience and perceiving the own suffering as part of common humanity (Neff, 2003). This self-regulation process might attenuate the growth of borderline features in

adolescents, working at decreasing criticism, hate and disgust towards the self (Carreiras, Castilho, et al., 2020; Van Vliet & Kalnins, 2011; Xavier et al., 2016).

The current study presents some limitations. Firstly, the adolescent sample with NSSI is overrepresented by girls. Secondly, the use of self-report questionnaires encompasses some bias, for example, social desirability. Nonetheless, this work was conducted on a sample of adolescents at increased risk to develop borderline features, and the longitudinal data allow drawing more robust conclusions because the temporal relationships between variables were considered even though the time length was short. Our results have important clinical implications, shedding light on the protective effect of self-compassion to attenuate the risk of intensifying borderline features in adolescents with NSSI. Compassion-focused therapies and intervention programs designed to cultivate and increase self-compassion might be important to implement in groups of adolescents with NSSI to attenuate the development of borderline symptoms. Future studies are encouraged to replicate these finding in more representative adolescent samples or separately for boys and girls. Additionally, it would be relevant to examine the protective role of self-compassion in the evolution of borderline features using wider time intervals (e.g., two years follow-up).

Compliance with Ethical Standards

This study was supported by the PhD Grant (grant number: SFRH/BD/129985/2017) 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.

Authors' Contributions

DC: collected data, designed the study, conducted the data analyses, and wrote the paper. MC: reviewed the final manuscript. PC: reviewed the final manuscript.

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Study X

Trajectories of borderline features in adolescents: A three-wave longitudinal study testing the effect of gender and self-disgust over 12 months

Carreiras, D., M., Cunha, M., & Castilho, P. (2022). Trajectories of borderline features in adolescents: A three-wave longitudinal study testing the effect of gender and self-disgust over 12 months. *Personality and Individual Differences*, *191*. https://doi.org/10.1016/j.paid.2022.111577

Trajectories of borderline features in adolescents: A three-wave longitudinal study testing the effect of gender and self-disgust over 12 months

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Abstract

Recent research has emphasised the need to study the development of borderline features in adolescents prospectively. Self-disgust is feeling repugnance for aspects of the self and studies have supported its association with borderline features. This study aimed to identify different trajectories of the development of borderline features in adolescents over 12 months and test the longitudinal impact of self-disgust and gender. Participants were 158 adolescents (*n* = 110 girls) with a mean of 15.44 years (*SD* = 0.79), assessed in three moments with a six-month interval. Gender differences were found on borderline features and similar stable trajectories were exhibited for the total sample, boys and girls. Adolescents with higher and lower borderline features presented opposite trajectories: while the lower group decreased borderline features over time, the higher group increased. A latent growth model with the total sample revealed heterogeneity in basal levels and a relative homogeneity on growth rates of borderline features. Self-disgust feelings presented a significant effect on basal levels and growth rates indicating that it might influence the developmental trajectory of borderline features. These findings highlight the importance to address self-disgust when dealing with borderline features in youth since it seems to be a risk factor.

Keywords: borderline features, adolescence, self-disgust, latent growth model, longitudinal design

Introduction

In the last decades, research on borderline features in adolescents has increased, and critical studies have been conducted identifying risk factors, relevant psychological mechanisms and precursors of borderline personality disorder (BPD; Paris, 2014). BPD is a personality disorder characterised by a pervasive pattern of instability in self-image, emotions and social relationships, feelings of emptiness and abandonment, self-destructive behaviors and impulsivity (American Psychiatric Association [APA], 2013). Several authors have defended that borderline features can be identified in adolescence and that BPD symptoms usually first appear in youth (Chanen & Kaess, 2012; Paris, 2014).

Retrospective data or correlations of proximal variables of adults with BPD are insufficient and present some limitations (e.g. reports might reflect the current symptoms instead of its cause, the borderline features themselves might predispose adverse reports; Carlson et al., 2009). Accordingly, longitudinal studies are essential to understand the development of borderline features and identify causal relationships between variables. Indeed, prospective data are crucial to shed light on developmental paths of dysfunctional personality traits (Burke & Stepp, 2012; Paris, 2005). Some authors have conducted important analyses about trajectories and antecedents of borderline features in adolescents, exploring different predictors (Chanen et al., 2004; Greenfield et al., 2014; Haltigan & Vaillancourt, 2016; Winograd et al., 2008; Wright et al., 2016).

Evidence shows that only around 40% of adolescents with BPD maintained the diagnosis two years later (Chanen et al., 2004), possibly indicating a not so stable BPD course. Adding to this evidence, Bornovalova et al. (2013) showed a small but significant decline in BPD traits from age 14 to 18. Moreover, Haltigan & Vaillancourt (2016) analyzed intra-individuals and interpersonal risk factors in children and adolescents and the association with trajectories of borderline features. The authors identified three distinct trajectories: elevated/rising, intermediate/stable and low/stable, demonstrating the heterogeneous course of borderline features in early adolescence. On the other hand, Greenfield et al. (2014) found a high percentage of BPD continuity in suicidal youth. In this population, BPD diagnosis was consistent from baseline to 4 years later in 76% of participants. Besides trajectories, in general, prospective studies indicated that BPD symptoms are related to future poor psychosocial functioning, increased

sexual risk behaviors, lower adult role functioning, social functioning, life satisfaction, educational and occupational attainment and less partner involvement (Choukas-Bradley et al., 2020; Winograd et al., 2008; Wright et al., 2016).

Nevertheless, not so many longitudinal studies have explored the effect of psychological mechanisms (e.g., self-digust, self-compassion, acceptance, rumination) on the evolution of adolescents' borderline features. Sharp et al. (2015) presented the first evidence of the longitudinal effect of experiential avoidance on borderline features one year later when controlled baseline levels of borderline features, anxiety, and depressive symptoms. This study emphasised the relevance of exploring the effect of underlying psychological mechanisms besides sociodemographic and family variables. Some years before, a prospective study with a risk sample of 162 participants, who were assessed from childhood to adulthood, had already highlighted the significant effect of disturbances in self-functioning on later borderline features. Particularly, self-representation at age 12 mediated the relationship between early attachment disorganisation (12-18 months) and BPD symptoms at age 28 (Carlson et al., 2009). Some results in this line were also reported by Wright et al. (2016). They found a unique association over time between BPD and self-perception (social self-worth, self-competence, and peer-victimisation) in adolescent girls when controlled depressive symptoms and conduct disorder features.

The way one sees and relates with him/herself seems to be central to self-identity development, and psychological processes might have a unique contribution to the development of personality traits. Focusing on exploring regulation mechanisms and internal processes with the potential to help to decrease borderline features in adolescents have been defended and encouraged (Carlson et al., 2009). Considering that humans can think about themselves and create a self-image, they are able to feel disgust towards aspects of the self (personality, behaviors, body; Carreiras, Pinto et al., 2014; Ille et al., 2014; Overton et al., 2008). Self-disgust has distinct components: cognitive, emotional, physiological, and behavioral. Cognitions and feelings of self-disgust include profound grief for the self, a desire to escape from internal aspects, negative self-critical thoughts, feeling inferior and diminished when compared to others and feeling hate or repugnance for oneself. Studies with adults diagnosed with BPD have argued that self-disgust might be central to this disorder. These patients tend

to exhibit a negative self-to-self relationship, with marked self-criticism and increased feelings of self-disgust and self-loathing (Guiomar, 2015; Ille et al., 2014; Rüsch et al., 2011). Studies on borderline features and self-disgust are scarce in the adolescent population, and in the last year, Carreiras, Castilho, et al. (2020) showed that self-disgust had a predictive effect on borderline features in adolescence, particularly for girls.

This study aimed to identify and analyse different trajectories of the development of borderline features in adolescents over 12 months. The second aim was to test the longitudinal impact of gender and cognitions and feelings of self-disgust on borderline features in adolescence, considering the need to explore further the effect of psychological mechanisms on developing dysfunctional personality traits in early ages.

Methods

Participants

At wave 1, participants were 491 adolescents, 311 (63.3%) females and 180 (36.7%) males. Their ages ranged between 14 and 18, with a mean of 15.49 years (SD=0.89). At wave 2 there was a dropout rate of 31%, and at wave 3 only 158 participants completed the questionnaires, 110 (69.6%) females and 48 (30.4%) males. Their ages were between 14 and 17 years old (M = 15.44, SD = 0.79) and the mean of years of education was 10.23 (SD = 0.54). Non-significant gender differences were found for age ($t_{(156)}$ = 0.06, p = .95) and years of education ($t_{(156)}$ = 0.08, p = .94).

Comparisons between completers (n = 158) and dropouts (n = 333) showed non-significant differences for gender (X^2 (1, N = 490) = 2.10, p = .15), age ($t_{(489)}$ = 0.79, p = .43), years of education ($t_{(489)}$ = -1.00, p = .32) and self-disgust cognitions and feelings ($t_{(489)}$ = -1.03, p = .30). However, borderline features were higher for dropouts ($t_{(489)}$ = -2.41, p = .02) than for completers.

Procedures

The participants of this study were recruited in public schools from the centre and north regions of Portugal. We contacted the school's head teachers via e-mail to present the study. Then, we went to schools that agreed to collaborate. Parents and adolescents provided their written informed consent after being informed about the study aims, confidentiality and voluntary participantion. The main inclusion

criterion was age between 14 and 18. The exclusion criteria were: being in the 12th grade (so we could easily follow-up in the next year), and having cognitive impairment. Adolescents completed the quesionnaires in the classroom, in the presence of a researcher to provide any clarification and guarantee independent responses. Data were collected in three waves in one year (2019-2020), with a 6-month interval between them. Participants were 491 in Wave 1, 339 (69%) in Wave 2 and 191 (39%) in Wave 3. We only considered for this study the 158 participants who completed all self-report questionnaires in the three waves. One of the reasons for this high dropout rate was the lockdown after the COVID-19 pandemic outbreak, which made us collect the last wave through online questionnaires (LimeSurvey platform). The online data collection reflected less adherence and a decrease of response rates.

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 to assess borderline features in adolescents. In the current study, Cronbach's alpha of total scale was .80 in the first wave, .87 in the second and .86 in the third.

The Multidimensional Self-Disgust Scale for Adolescents (MSDS-A; Carreiras et al., 2022) is a self-report questionnaire designed to assess self-disgust, including four subscales: Defensive activation, Cognitive-emotional subscale, Avoidance, and Exclusion. We only used cognitive-emotional subscale because we were interested in the internal psychological mechanisms of self-disgust more than on the physiological activation of such emotion or related behaviors. In the present data, the Cronbach's alpha was .94 for the Cognitive-emotional subscale.

Data Analyses

Data were analysed using IBM SPSS Statistics version 23 and AMOS version 22. Kolmogorov-Smirnov test and skewness (*Sk*) and kurtosis (*Ku*) values were analysed to test normality assumption. Descriptive statistics and frequencies were performed to explore demographic variables. Student's *t*-tests and repeated measures ANOVA were conducted to test differences between groups and waves. Sphericity assumption was analysed through Mauchly's test of sphericity. Pearson's correlation coefficients were used to examine correlations between

variables. According to Dancey and Reidy (2017), correlations between .10 and .39 were considered weak; between .40 and .69 moderate; and above .70 strong. Effect sizes were calculated and interpreted according to Cohen (1988): *d* values between .20 and .49 were considered small, between .50 and .79 medium, and above .80 large.

Structural equation modelling (SEM) was performed to test a latent growth curve model (LGM). This longitudinal analysis estimates the growth of borderline features over 12 months, using repeated measures from the perspective of an individual growth curve for each participant. The intercept factor represents the mean starting point of the outcome across the three time periods and thus describes the baseline level of the variable in the study (intercept mean) and its individual differences (intercept variance). The slope factor represents the average rate over time (slope mean) and individual differences in growth patterns (slope variance). A positive correlation between the intercept and slope factors means that individuals with greater initial values tended to have a higher growth. Conversely, a negative correlation reflects that individuals with greater initial levels present a lower growth. The following goodness of fit indices were used to examine the adequacy of the model: Comparative Fit Index (CFI), Tucker and Lewis Index (TLI), the Incremental Fit Index (IFI), and the Standardised Root Mean Squared Residual (SRMR). Good adjustment was considered using the following cut-off points: CFI > .90; TLI > .90; IFI > .90; SRMR < .08 (Hair et al., 2006; Hu & Bentler, 1999). The sample size for LGM should have at least 100 cases (Hamilton et al., 2003).

Results

Preliminary Analyses

Kolmogorov-Smirnov test was non-significant for all variables. Additionally, considering the reference values for skewness and kurtosis (*Sk* < 3 and *Ku* < 8; Kline, 2011), the normality of data was assumed. Outliers were not eliminated to keep the natural distribution and variance and because they did not change the results.

Evolution of Borderline Features for Total Sample and by Gender

Means and standard deviations of borderline features in the three waves are presented in Table 1. Adolescent girls exhibited higher borderline features than boys in all waves, with effect sizes ranging from .34 to .36.

Table 1. Means (*M*) and standard deviations (*SD*) of borderline features in the three waves for the total sample, males and females. Student's t-test (*t*) for differences between groups and Cohen's *d* for effect sizes (*N*=158).

	Total (*n* = 158)	**Males (*n* = 48)**	**Females (*n* = 110)**	***t* (df)**	***d***
	M (SD)	***M (SD)***	***M (SD)***		
Borderline features W1	24.36 (6.57)	22.81 (6.40)	25.04 (6.56)	2.00* (156)	.34
Borderline features W2	25.35 (7.46)	23.56 (6.81)	26.14 (7.62)	2.11* (156)	.36
Borderline features W3	24.35 (7.20)	22.58 (7.03)	25.13 (7.09)	2.08* (156)	.36

Note. *p < .05. W1 = Wave 1; W2 = Wave 2; W3 = Wave 3. Borderline features measured by the Borderline Personality Features Scale for Children.

For the total sample, significant differences in borderline features were found between waves, $F_{(2,\ 157)}$ = 3.61, p = .03. Thus, Bonferroni *post hoc* test was conducted, but no differences were found between wave 1 and 2 (p = .09), wave 2 and 3 (p = .06) and wave 1 and 3 (p = 1.00). The same procedure was performed for boys and girls separately. In the group of boys, borderline features did not change across time, with non-significant differences between waves, $F_{(2,\ 47)}$ = 0.70, p = .50. Girls showed different levels of borderline features in the three waves, $F_{(2,\ 47)}$ = 3.14, p = .05. Again, Bonferroni *post hoc* test showed non-significant differences between wave 1 and 2 (p = .09), wave 2 and 3 (p = .16) and wave 1 and 3 (p = 1.00). The assumption of sphericity was not violated in our data in all ANOVA with repeated measures tests. These three trajectories are graphically represented in Figure 1.

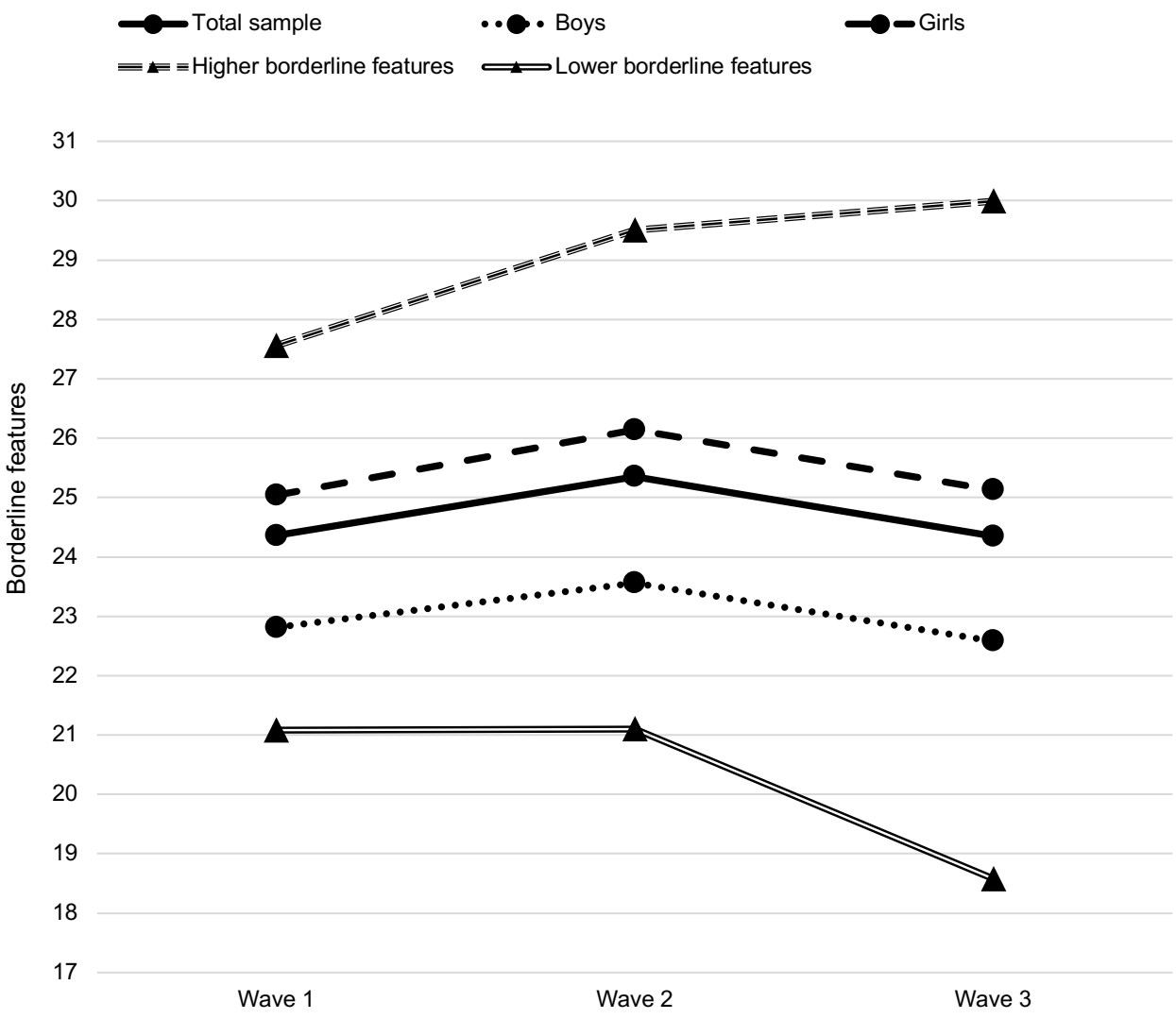

Figure 1. Trajectories of the development of borderline features over 12 months in different groups of adolescents.

The associations between borderline features in the different time points were explored. The correlation between wave 1 and 2 was strong (r = .68, p < .001), as well as between wave 2 and 3 (r = .73, p < .001) and 1 and 3 (r = .74, p < .001).

Trajectories of Adolescents with Higher and Lower Borderline Features

The sample was divided into two groups using the percentile 50 of the BPFS-C as a cut-off point. The group of lower borderline features was composed of 78 adolescents, whereas the group of higher borderline features was composed of 80 adolescents. The percentage of boys was higher in the first group (34.6%) than in the second (26.3%). Non-significant differences were found for age, $t_{(156)}$ = 0.51, p = .61, and years of education, $t_{(156)}$ = 0.08, p = .94, between groups.

Means, standard deviations and differences between adolescents with lower and higher borderline features are presented in Table 2. As expected, the two groups differed in borderline features in the three waves with large effect sizes. Considering the assessment points, the group with lower borderline features presented significant differences between waves, $F_{(2,\ 77)} = 14.65$, $p < .001$, specifically between wave 1 and 3 ($p < .001$) and wave 2 and 3 ($p < .001$). In its turn, the group with higher borderline features also presented significant differences between waves, $F_{(2,\ 79)} = 8.87$, $p < .001$. These differences were between wave 1 and 2 ($p = .02$) and wave 1 and 3 ($p < .001$). It is important to notice that the trajectory of each group is opposite. In the lower group, borderline features' levels decrease over time, whereas borderline features' levels seem to increase in the higher group. Both trajectories are presented in Figure 1.

Table 2. Means (*M*) and standard deviations (*SD*) of borderline features in the three waves for adolescents with higher and lower borderline features. Student's t-test (*t*) for differences between groups and Cohen's *d* for effect sizes (*N*=158).

	Higher borderline features (*n* = 80)	**Lower borderline features (*n* = 78)**	***t* (df)**	***p***	***d***
	M (SD)	***M (SD)***			
Borderline features W1	27.56 (6.18)	21.08 (5.22)	7.12 (156)	<.001	1.13
Borderline features W2	29.50 (6.47)	21.10 (5.84)	8.55 (156)	<.001	1.36
Borderline features W3	29.99 (4.39)	18.58 (4.20)	16.68 (156)	<.001	2.66

Note. *$p < .05$. W1 = Wave 1; W2 = Wave 2; W3 = Wave 3. Borderline features measured by the Borderline Personality Features Scale for Children.

Predicting Changes in Borderline Features and Testing the Impact of Self-disgust and Gender Over 12 Months

A LGM was performed for total sample. The non-conditioned LGM successfully fitted to the three measurement time points of borderline features: CFI = .99; TLI = .99; IFI = .99; SRMR = .01. Results showed that borderline features were heterogeneous between participants at baseline (b = 33.45; SE = 4.78; Z = 6.99; p < .001), around a mean level of 24.24 (SE = 0.52; Z = 46.34; p < .001). A significant change over time was found given the significant estimate of slope's mean (b = 1.07; SE = 0.45; Z = 2.41; p = .02). Additionally, the growth rate was homogeneous amongst adolescents considering the non-significant slope variance (b = 7.77; SE = 4.40; Z = 1.77; p = .08). A positive correlation between intercept and slope of .08 was found (Z = 3.17; p = .68), indicating that adolescents with higher initial borderline features tend to display higher growth rates.

Gender and self-disgust (cognitions and feelings) were included as predictors of the intercept and the slope factors. The goodness-of-fit indices of this conditioned LGM (Figure 2) were adequate: CFI = .98; TLI = .95; IFI = .98; SRMR = .02. Results showed that gender had no effect on basal levels of borderline features (b = .09; p = .20), nor on the growth rates (b = -.02; p = .92). On the other hand, self-disgust presented a significant impact on initial borderline features (b = .61; p < .001), which means adolescents with higher self-disgust presented higher borderline features at the baseline. Moreover, self-disgust had a significant effect on slope (b = .36; p = .03), indicating its impact on the evolution of borderline features.

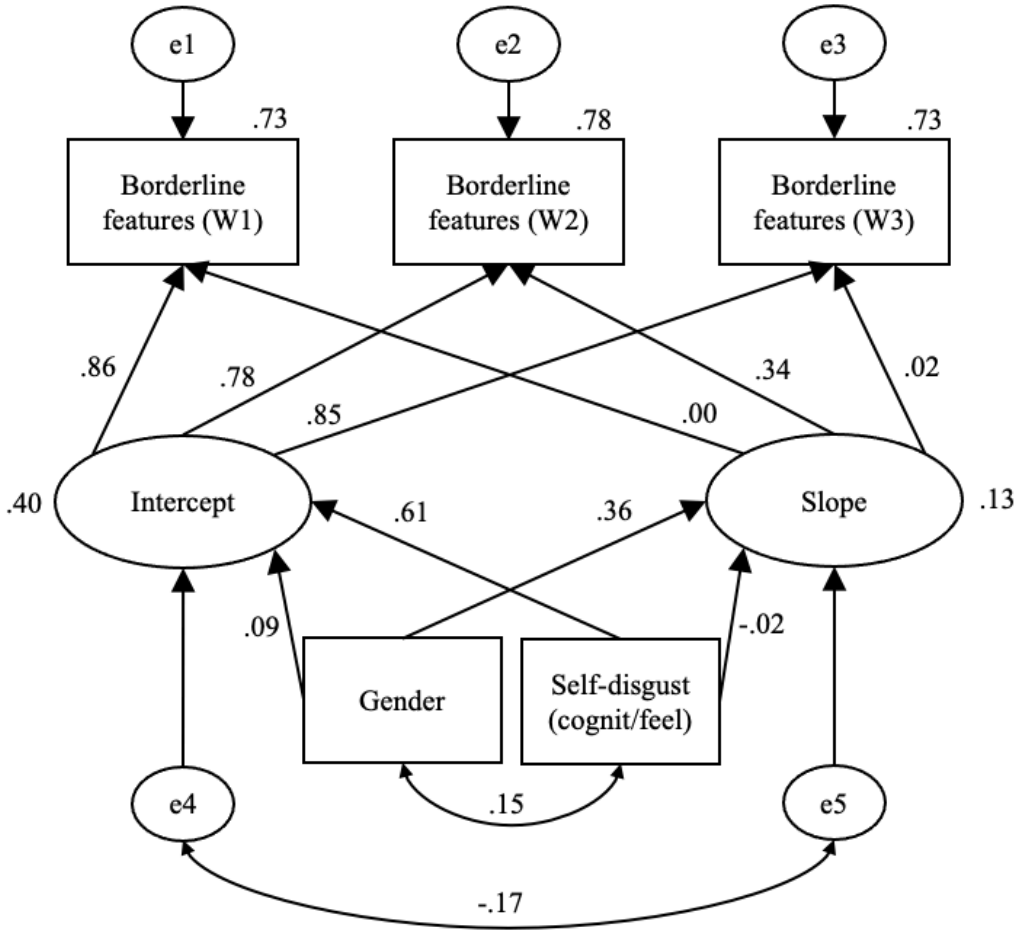

Figure 2. The influence of cognitions/feelings of self-disgust and gender in borderline features' change.

Discussion

Longitudinal studies have a great potential to identify trajectories, causal relationships, and predictors' influence over time. These research designs add an inestimable contribution to guide interventions for dysfunctional developmental symptoms, such as borderline features (Burke & Stepp, 2012; Paris, 2005). Thus, the first aim of the current study was to identify trajectories of borderline features as a function of different groups. Specifically, we examined the trajectory of girls and boys separately, considering the amount of research indicating gender differences on borderline symptoms (Bradley et al., 2005; Carreiras, Castilho, et al., 2020; Trull et al., 2010), as well as the trajectory of two groups, one with lower and other with higher borderline features. The second aim was to test the effect of gender and self-disgust on the evolution of borderline symptoms, considering the

need to explore further the role of internal psychological mechanisms that might have a beneficial impact on developing these dysfunctional personality traits.

Our results seem to show that general borderline features tend to evolve in a relatively stable way in adolescence, considering the marginal non-significant differences between waves for the total sample. These findings align with previous works reporting slight changes and heterogenious trajectories for adolescent BPD (Bornovalova et al., 2013; Haltigan & Vaillancourt, 2016), however we need to keep in mind that we used a community sample. Future studies on this matter using community samples sould collect more representative and larger samples to attain more robust conclusions. Borderline features' stability appeared to be more evident for boys, who clearly showed non-significant differences across time. Haltigan & Vaillancourt (2016) also showed than the low/stable trajectory of BPD was mainly composed of adolescent males. Girls exhibited a slight stability of borderline features due to some marginal non-significant differences between waves.

Two distinct trajectories were found when the sample was divided into two groups as a function of borderline features' levels. Adolescents with lower borderline features presented a slightly decreasing trajectory, suggesting mitigation of the intensity and frequency of borderline symptoms when they are already low. The opposite tendency was found in adolescents with higher borderline features, who presented a gradual increase over time. In addition, we could see a slight difference in the proportion of boys in these two groups. The group with lower borderline features had fewer boys than the group with higher borderline features, which aligned with previous longitudinal studies (Haltigan & Vaillancourt, 2016). These results are also congruent with gender differences found between borderline features' levels in the different time points, with boys consistently exhibiting lower scores. Such findings were expected considering previous research works (Bradley et al., 2005; Carreiras, Castilho, et al., 2020; Trull et al., 2010). Indeed, BPD is more prevalent in women, with a 3:1 female to male gender ratio, as described in the DSM-5 (APA, 2013).

A LGM for the total sample showed that adolescents presented significant differences at initial borderline features, reflecting substantial variation among individuals at the baseline. That is, compared with each other adolescents might present considerably different levels of borderline features at a certain moment. However, such differences were not found in the growth rates, indicating that

adolescents exhibited similar trajectories and paths in our sample. Stability over time in BPD has already been claimed in clinical samples (Greenfield et al., 2014) and in female adolescents (Bornovalova et al., 2013), and our results align with these reports. Furthermore, it is important to notice that our time frame was short (a year), so this stability must be carefully interpreted, and future studies are encouraged to replicate these analyses. Additionally, it seemed that adolescents with higher borderline symptoms at baseline showed a more noteworthy evolution of these traits. These data indicate that adolescents who already exhibit higher borderline features tend to present a greater development of those traits, supporting the imperative need for early detection and preventive measure for BPD.

Considering gender differences consistently reported by studies about borderline features and our interest in testing the role of cognitions and feelings of self-disgust, the LGM was conditioned by both variables. Results demonstrated that gender did not influence basal levels nor growth rates. Although this result was not expected, it might imply a similar pattern of borderline features between boys and girls.

By its turn, cognitions and feelings of self-disgust presented a significant effect of initial borderline features and in the growth rates, suggesting that this mechanism might work as a key factor to increase borderline features in youth. On the one hand, feeling repugnance and hate towards aspects of the self seems to influence borderline features, which is consistent with previous studies supporting the negative self-to-self relationship, often marked with self-hate, loathing and disgust. On the other hand, the same self-disgust feelings and thoughts appear to impact on borderline symptoms' evolution. Self-related feelings of disgust involve systematically looking down upon oneself and judging what one is, thinks, feels and does. This might increase self-harm behaviors, self-punishment, anger or depressive symptoms typical of BPD (Krawitz, 2012a). These findings have major clinical implications once they stress the need for clinicians to address the aversive self-to-self relationship when dealing with adolescents with persistent and pervasive borderline features. Whether individually or in groups, interventions based on developing feelings of self-reassurance, self-compassion, and self-soothing (e.g., Mindful Self-Compassion, Neff & Germer, 2013; Compassion-

Focused Therapy, Gilbert, 2010) might be essential to prevent the development of these dysfunctional features (Krawitz, 2012b).

Some limitations are now acknowledged. The sample size and the considerable number of dropouts impose some attention when drawing conclusions. Even though our sample was above the recommended sample size of 50 (minimum of cases to obtain model convergence; Hamilton et al., 2003), future studies should further explore these findings in larger and more representative samples. Also due to the small sample size, we could not examine the development of borderline features considering the age diversity of our sample nor the parallel development of self-disgust with borderline features. In the future, studies should examine and control participants' age in longitudinal designs and with cross-lagged panel models test the effect of self-disgust on the escalation of borderline symptoms. Additionally, the one-year follow-up only allow us to look at the borderline features' development in a short period of time, precluding sound conclusions on the broad evolution of these traits. Finally, only self-report measures were used, which usually entails some bias, for example, social desirability. Future studies could include more objective measures (e.g., clinical interviews) and other informant sources, such as parents or teachers.

Nonetheless, the current study has strengths and significant clinical implications. It was the first evidence of the negative effect of self-disgust on borderline features in adolescents, using longitudinal data. Our results emphasised the need to implement interventions capable of addressing the negative self-to-self relationship, and counteracting self-disgust. For example, compassion-based interventions for adolescents with higher borderline features might decrease the feelings of repugnance, hate and contempt about the self, through cultivating a compassionate and kind attitude in times of failure and suffering.

Compliance with Ethical Standards

This study was supported by the first author's PhD Grant (grant number: SFRH/BD/129985/2017), financed by the Portuguese Foundation for Science and Technology (FCT). All procedures considered the ethical standards of the Ethics and Deontology Commission of the Faculty of Psychology and Educational Sciences of the University of Coimbra, the Ministry of Education, the National Commission for Data Protection of Portugal (number: 6713/ 2018) and the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Participants were recruited in 4 schools in Portugal's north and centre regions. School's headteachers agreed to collaborate with researchers. Participants and parents were informed about the study aims, confidentiality, voluntary participation, and written informed consent. In the classroom, adolescents completed the self-report questionnaires in the presence of researchers and teachers to ensure confidential and independent responses.

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Part III

Synthesis and conclusions

Chapter 6

General discussion and conclusions

Chapter 6

General discussion and conclusions

Explaining this research in a few words, it was a committed attempt to provide valid instruments to early assess borderline symptoms and better understand the potential influence of new essential internal psychological mechanisms on the evolution of borderline features in adolescents. Optimistically, more and more researchers have established comprehensive and integrative models towards BPD functioning, however, there is still much to know regarding prospective results and preventive measures, as well as the role of certain internal psychological variables (Keng & Wong, 2017; Sharp et al., 2015; Sharp & Fonagy, 2015; Zanarini et al., 2019).

This section provides a synthesis of the findings achieved in the ten studies and integrates and discusses them in the light of the main aims of the current research project. A more detailed discussion of each study can be found in Chapters 3, 4 and 5. Additionally, this section includes a reflection on the strengths and limitation of this research, as well as recommendations for future studies.

6.1. Synthesis, discussion, and clinical implications of the main findings

Considering the three general aims of this research, the synthesis, discussion, and clinical implications of the main findings will be divided into three sections. The first section includes studies I, II and III and discusses the valuable contribution of four new assessment tools for the Portuguese population to the early assessment of borderline features in adolescents. It also includes study IV about the English version of the clinical interview designed by our research team. The second section encompasses studies V, VI, VII and VIII and sheds light on internal psychological mechanisms understudied in the evolution of BPD at early ages. Finally, the third section contains the main findings of the longitudinal studies IX and X and reflects on how self-disgust and self-compassion can be addressed to prevent the evolution of borderline features.

6.1.1. Contributions to early assessment

Before this research, there was an acknowledged lack of assessment instruments for borderline symptoms in youth in Portugal. Studies I, II and III present four new instruments now available for the Portuguese population.

In **study I**, we translated and validated the Borderline Personality Features Scale for Children (BPFS-C; Crick et al., 2005; Sharp et al., 2014) and for Parents (BPFS-P; Sharp et al., 2010). The factorial structure of both measures was validated through CFA. The final solution of the BPFS-C resulted in a 10-item scale with adequate construct and convergent validity, satisfactory internal consistency (α = .77) and general measurement invariance across gender. Although there were differences in the total scores between girls and boys, with girls exhibiting higher borderline features, the BPFS-C seems to measure the construct similarly across gender. As expected and theoretically sustained, borderline features were associated with depression, anxiety, stress (Hepp et al., 2018; Sharp et al., 2014). These results are consistent with the negative affect often experienced by people with BPD (APA, 2013). Inversely, borderline symptoms were associated with self-compassion and social safeness evidencing the possible benefits of being kind and accepting with the self in BPD (Feliu-Soler et al., 2017; Keng & Wong, 2017; Scheibner et al., 2017), as well as feeling safe with the people around and having

positive relationships (Beeney et al., 2018). In turn, the BPFS-P also showed good fit, adequate construct and convergent validity and good internal consistency (α = .88). The borderline-related problems assessed by parents were positively associated with general difficulties, including emotional symptoms, conduct problems, hyperactivity-inattention and peer problems, which is congruent with the wider impairment of BPD (APA, 2013; Tomko et al., 2014). Moreover, the co-occurrence of BPD and ADHD symptoms has already been identified in youth (Haltigan & Vaillancourt, 2016; Sebastian et al., 2013).

The BPFS-C and BPFS-P are easy and quick to complete, and they complement each other by providing different types of information from two different sources (adolescents and parents). Interestingly, the adolescent version provides information about feelings and thoughts while the parent version provides information about behaviors and emotional expression. The differences of content in both versions were possible due to an initial pool of 24 initial items. Considering they are short-form versions, they are particularly useful for an early screening of borderline difficulties rather than for an in-depth examination of BPD. In case adolescents score high in the BPFS-C and the BPFS-P, a detailed assessment is encouraged to explore borderline symptoms further. Besides providing new possibilities in clinical assessment in community and school settings, these instruments open new opportunities in terms of research by allowing the operationalization of borderline features in youth to conduct descriptive and empirical studies with related variables. Moreover, the Portuguese population can now integrate international transcultural studies that use the same instruments across countries.

In **study II** we intended to adapt a self-report questionnaire to assess self-disgust for the adolescent population, the Multidimensional Self-Disgust Scale (MDSD; Carreiras et al., 2022). We were interested in studying this self-directed emotion in adolescents, and thus it was indispensable to validate this measure that was only available for adults. Firstly, the questionnaire was adapted to the adolescent population considering their developmental stage and regular linguistics. Then, a 4-factor model like the original version was confirmed through a CFA with the same subscales: Defensive Activation, Cognitive-Emotional Subscale, Avoidance and Exclusion. Two items were eliminated due to unsatisfactory psychometric quality. The final version had less two items than the

original and a second-order factor (total self-disgust). Good fit indices and construct and convergent validity were attained. It also showed incremental validity by having a significant predictive effect on depression and anxiety. Self-disgust in adolescents was positively correlated with negative affect (depressive, anxiety and stress symptoms), impulsivity, self-harm and suicide ideation showing the harmful effect that self-disgust might have on mental health (Carreiras, 2014; Carreiras, Pinto et al., 2022; Guiomar, 2015; Ille et al., 2014; Marques et al., 2021; Overton et al., 2008). On the other side, self-disgust revealed a negative relation with self-compassion as the latter is indicated as a positive mechanism to cultivate an healthy and positive self-to-self relationship (Gilbert, 2009; Muris et al., 2019; Neff, 2009). Additionally, the MSDS-A presented a satisfactory internal consistency for total score and subscales, as well as temporal stability at four weeks. Females presented higher levels of self-disgust than males as previously reported in other studies (Ille et al., 2014; Palmeira et al., 2017). Overall, the MSDS-A is a valid and valuable instrument to assess self-disgust in adolescents and we consider this self-directed emotion essential to understand the borderline functioning since it has a close relation with harmful, negative and damaging psychological outcomes, typical of BPD (Guiomar, 2015; Ille et al., 2014).

Study III consisted of developing the CI-BOR-A, examining acceptability by adolescents, and submitting the interview to be quantitative and qualitatively evaluated by an expert panel of clinical psychologists and psychiatrists. The CI-BOR-A was based on the CI-BPD (Sharp et al., 2012; Zanarini, 2003), a sound clinical interview to assess BPD in youth according to the DSM-5 categorial approach (APA, 2013). Considering the recent dimensional approach to personality disorders (APA, 2013), we decided to include items to also assess BPD through this perspective, making it a hybrid assessment tool. Moreover, we divided the items into four sections (affect, self, relationships, and impulsivity), included decision-tables at the end of the interview and built an appendix to assess self-harm further. Adolescents appeared to accept the interview well, considering that none of them refused to complete the interview and did not report negative feedback. Experts rated all sections above 75% of the highest score possible and provided several suggestions to improve the interview's quality. A final version of the CI-BOR-A was achieved after taking into consideration all suggestions of adolescents and experts. This new instrument adds an important contribution to

assessing BPD in youth, resulting in early detection to prevent further evolution by referring adolescents for appropriate treatment (Bozzatello et al., 2019; Crick et al., 2005; Paris, 2014; Sharp & Fonagy, 2015). The CI-BOR-A would be essential to facilitate clinicians (e.g., psychologists, child and adolescent psychiatrists) assessing adolescents not only in terms of BPD symptoms but also self-harm behaviors and suicide ideation. NSSI and suicide ideation are common phenomena amongst people with BPD (Brickman et al., 2014; Groschwitz et al., 2015; Stead et al., 2019), and adolescents with marked borderline features have higher impulsivity and NSSI than adults (Sharp et al., 2019).

As an attempt to increase access and use of the CI-BOR-A, **study IV** consisted in translating and adapting the interview to English. The translation and backtranslation were done by independent people and the final version was agreed by the research team. Then, the interview was sent to English-speaker experts with experience in adolescents' borderline features who examined the instrument and evaluated it in terms of relevance and clarity. All these procedures were taken considering the recommendations by Sousa and Rojjanasrirat (2011). Although many clinicians use the categorical approach, it has been discussed that in some years there will be a shift from the categorical to the dimensional approach (Lee, 2007). Thus, a hybrid assessment tool that brings the possibility of assessing BPD in youth according to the perspective that most resonated with the clinicians proves value. At this moment, the CI-BOR-A is available in Portuguese and English, being an interview that can be used in several countries to support the assessment of BPD. However, it is important to acknowledge that people might need some training to use it in a right way, especially clinicians with less experience. They must know the disorder and the criteria in depth in order to do a proper assessment.

In summary, the borderline questionnaires (BPFS-C and BPFS-P) would be particularly valuable in schools and community settings for adolescent BPD screening. While the BPFS-C could be useful to assess the adolescent BPD internal functioning, the BPFS-P could complement the assessment with observable, behavioral and other-informant data. Additionally, the BPFS-C, the BPFS-P and the MSDS-A would be helpful measures for research, allowing the assessment of such constructs and inclusion in research designs. On the other hand, the CI-BOR-A would be mainly beneficial in a clinical context (e.g., health centers, mental health facilities, adolescent residential care), allowing a more in-

depth assessment of all clinical criteria by a mental health professional, for example, for adolescents who scored high on BPFS-C and BPFS-P. In the research context, the clinical interview would be worthy whether for epidemiological and broader studies, whether for selecting clinical samples of adolescents with BPD.

6.1.2. Internal psychoemotional mechanisms related to borderline features

A consistent body of evidence has shed light on risk and protective factors for BPD (Burke & Stepp, 2012; Chapman et al., 2011; Helgeland & Torgersen, 2004; Knafo et al., 2015; Stepp et al., 2016). However, research on internal psychoemotional mechanisms is not so extensively explored. The following studies were an attempt to enlarge what is known on this matter.

Firstly, after developing and validating the previous measures, a clinical characterization of borderline features in the Portuguese population was needed, considering a lack of Portuguese literature on youth borderline features. In **study V** we used a large sample of over 1,000 adolescents to describe how borderline symptoms manifest at early ages. Feelings of abandonment, emotional intensity and an unstable self-image were the most prevalent borderline symptoms amongst youth, which is congruent with the homotopic features of BPD reported by Sharp et al. (2019) and with the core BPD symptoms reported by Meares et al. (2011). Although behavioral BPD symptoms (e.g., impulsivity, NSSI) are more prevalent in adolescence than in adulthood (Sharp et al., 2019), it seems that the self-related and interpersonal borderline symptoms are still evident at these ages. Moreover, differences between boys and girls were found in all borderline features. While girls showed higher internal symptoms (e.g., abandonment, emptiness, loneliness, unstable self-image), boys showed higher behavioral symptoms (e.g., impulsivity, carelessness). These results align with previous research reporting that girls tend to exhibit greater internalizing problems, and boys greater externalizing problems (Alarcón & Bárrig, 2015; Leadbeater et al., 1999). This might indicate gender differences in the phenotype of BPD. When considering borderline symptoms in youth, girls might present more internalized difficulties, for example feelings of loneliness, abandonment, and emptiness; and boys have more difficulties in

controlling impulsive and reckless behaviors. Results also indicated that age and borderline features seems to be unrelated. That is, borderline features tend to present similar levels between 12 and 19 years old. Although the developmental pathways of BPD are characterized by heterotypic and homotypic continuity, general levels of borderline features in youth seem to be stable. School performance was negatively associated with borderline features, corroborating previous studies that identified superior school performance and above average intellectual skills as a protective factor for BPD (Helgeland & Torgersen, 2004). Borderline features were associated with a large range of negative affect and emotional difficulties (e.g., depression, anxiety, stress, impulsivity, NSSI), which was expected considering the BPD criteria and previous studies (APA, 2013; Glenn & Klonsky, 2013; Rogers et al., 1995; Zanarini et al., 2004, 2019). This study also provided significant insights into the predictive effect of negative factors for borderline features in youth, informing that impulse, suicide ideation, stress and depression were the main predictors. Depressive symptoms and suicide ideation are related variables, and there is a high comorbidity between BPD and major depression disorder (around 87%) (Zanarini et al., 2004). The same applies to BPD and impulsive problems (Fossati et al., 2014; Paris, 2005; Sebastian et al., 2013). These variables seem to be the effective predictors above demographic characteristics (gender, age, school performance).

Then, in **study VI** we decided to examine the effect of impulsivity, self-compassion and self-disgust in adolescents' borderline features, controlling for the effect of depressive symptoms, and exploring gender differences. Self-compassion and self-disgust are two internal mechanisms about the self that have been poorly studied in BPD research. We also did a more detailed exploration of gender differences in this study. Firstly, girls exhibited higher borderline features and higher self-disgust, while boys presented higher self-compassion. In fact, females present higher rates of BPD diagnosis than males (APA, 2013) and girls usually have greater internalizing problems (Hayward & Sanborn, 2002; Mendle, 2014), a more critical and negative self-talk (Yarnell et al., 2015), and poorer self-esteem (Gentile et al., 2009). On the other hand, boys tend to be less self-critical and do not overidentify greatly with their thoughts and emotions compared to girls (Yarnell et al., 2015). Notwithstanding theses differences, general levels of self-compassion were negatively associated with borderline features and levels of self-disgust were

positively associated, with moderate correlation coefficients of -.58 and .56, respectively. Possibly more interesting were the results of the hierarchical regressions for boys' and girls' borderline features. Regardless of gender and depressive symptoms, impulsivity and self-compassion were significant predictors. Impulsivity is one of the BPD criteria (APA, 2013), and it may be behind risky behaviors, anger conducts, NSSI and suicide attempts (Brown et al., 2002; Fossati et al., 2014; Sebastian et al., 2013), predisposing people to act on a whim, without forethought. Moreover, our finding added an important contribution to the effect of self-compassion for borderline symptoms in adolescents considering that previous studies with these variables were only performed in young adult and adult samples (Feliu-Soler et al., 2017; Keng & Wong, 2017; Loess, 2015). Self-disgust seemed to present a significant effect on borderline features only for girls, which might be related to the negative self-to-self relationship and self-criticism more prevalent amongst girls than boys (Yarnell et al., 2015). Possibly, these gender differences explain why self-disgust appear to have a more preponderant effect on girls' borderline features.

Considering the previous study establishing the influence of self-compassion in early borderline features, **study VII** was performed to examine it in depth. Thus, we tested the mediator effect of self-compassion components (self-kindness, self-judgement, mindfulness, overidentification, common humanity and isolation) between childhood memories of subordination and threat and borderline features, controlling the effect of gender. Adverse family contexts (e.g., neglect, family conflict, abuse, invalidation, criticism) are precursors of BPD (Fruzzetti et al., 2005; Winsper et al., 2012; Zanarini et al., 2006), and we intended to examine which self-compassion components would influence its effect of adolescents' borderline features. As expected, total self-compassion and positive/compassionate subscales (self-kindness, mindfulness and common humanity) were negatively correlated with borderline features. In contrast, the negative/uncompassionate subscales (self-judgement, overidentification and isolation) were positively correlated. Looking closer, the uncompassionate subscales presented higher correlation magnitudes with borderline symptoms than the compassionate subscales. This might indicate that borderline functioning is more related to the presence of uncompassionate aspects than to the absence of compassionate ones. That is, more associated with borderline features in youth than not being self-

compassionate is being unkind and harshly critical with the self, and overidentified and isolated in the own internal experience. This study also provided an interesting insight into gender differences in self-compassion. Girls presented higher scores than boys in all uncompassionate subscales. Even with higher scores in the common humanity subscale, girls exhibited lower total self-compassion scores than boys, aligning with previous studies (Muris et al., 2019; Xavier, Pinto-Gouveia, & Cunha, 2016).

The mediation model showed that mindfulness, isolation, and self-judgement were the only mediators between memories of subordination and threat and borderline features. Adolescents with childhood experiences of threat and subordination with their parents tend to present higher borderline features and that relationship is partially explained by feelings of isolation, self-judgment, and lower mindfulness. Lower self-criticism and self-judgment would decrease the frequency of self-harm behaviors (Xavier, Pinto-Gouveia, & Cunha, 2016); and feeling less isolated in suffering could reduce feelings of loneliness (Nenov-Matt et al., 2020). Additionally, being more mindful of the internal experience might decrease negative affectivity, impulsivity and interpersonal dysfunction, considering the higher awareness of own impulses, thoughts and emotions (Wupperman et al., 2009). Self-compassion is an overarching psychological mechanism resulting from three distinct processes. In this study, we were able to understand their distinct contribution to borderline features in youth, which might be an essential asset to designing compassion-based interventions.

In **study VIII** we provided the first evidence that self-compassion possibly stands between self-disgust and borderline features in adolescents. Self-compassion has been proposed as an antidote to the threat system (activated by disgust, amongst other emotions) (Gilbert, 2009), and our results reinforced this idea by showing that self-compassion mediated the effect of self-disgust on adolescents' borderline features. Self-disgust activates outputs of avoidance and rejection of what is perceived as toxic, repulsive, and flawed (in this case, aspects of the self) (Krawitz, 2012a). For example, difficult thoughts, anger or sadness, feelings of abandonment or emptiness. Or the whole personality functioning (Krawitz, 2012a, 2012b). Though self-disgust might function to decrease external punishment (e.g., insults, devaluation) or avoid other emotions (e.g., sadness, helplessness), it is self-sustained because these functions emotionally regulate in the short-term but

reinforce self-loathing in the long-term. Self-compassion encourages people to embrace their flaws, failures and mistakes, with a compassionate and wise inner voice, accepting who they are (Neff, 2011). This attitude would potentially decrease the threat system activation by activating the soothing system, as people feel safe within the self (Gilbert, 2010). Krawitz (2012b) has already suggested that self-compassion interventions are promising in the behavioral treatment of BPD severe chronic self-loathing.

In summary, studies V, VI, VII and VIII examined the clinical manifestation of borderline features in Portuguese adolescents and highlighted the innovative influencing role of self-disgust and self-compassion, opening new avenues for research and intervention. These two internal processes have been underexplored in adolescents' borderline features from a preventive approach. Although these studies added an important contribution to this matter, their cross-sectional designs stress the need to be cautious about the causal impact of self-compassion and self-disgust in the pathway of borderline features. To overcome this issue, studies IX and X were designed to use longitudinal data and separately test the effect of self-compassion and self-disgust, providing important implications for BPD prevention.

6.1.3. Towards prevention of BPD

Longitudinal data on borderline features throughout adolescence are probably the richer data to understand the BPD development and which mechanisms can influence its initial course. Taking into consideration the established relationship between borderline features and NSSI (Bracken-Minor & McDevitt-Murphy, 2014; Crowell & Beauchaine, 2008; Gratz et al., 2014; Vega et al., 2017), in **study IX** we used a risk sample of adolescents who reported previous engagement in self-harm behaviors, at least once. Around 90% of adolescents with BPD and hospitalization engaged in NSSI in the past (Goodman et al., 2017). Adolescents were assessed in two moments with a 6-month interval. Results showed that borderline features and self-compassion did not differ from the baseline levels to six months later, which was expected given the short period of time. Borderline symptoms are usually marked by a devaluation of the self, self-loathing, self-criticism, and low self-esteem (Donald et al., 2019; Krawitz, 2012b), which made us hypothesize that

being self-compassionate instead of self-critical could decrease the likelihood that adolescents with NSSI had to increase borderline symptoms. The results of the moderation model in which self-compassion was the moderator between borderline features at baseline and six months later showed that adolescents with NSSI and lower self-compassion present a higher increase in borderline features over six months compared to those with higher self-compassion. As mentioned previously, dealing with the self with kindness in difficult situations, being aware of the internal and external experience, and without feeling isolated seems to attenuate the growth of borderline features in adolescents with NSSI, possibly decreasing criticism, hate and disgust towards the self (Van Vliet & Kalnins, 2011; Xavier, Pinto-Gouveia, & Cunha, 2016). These results with longitudinal data reinforce the need to cultivate self-compassion, for example, implementing group intervention for risk populations (e.g., adolescents with NSSI, adverse childhood experiences, family history of BPD). It seems that this self-regulation process can mitigate the evolution and maintenance of borderline symptoms at early age.

It was also important to test the effect of self-disgust throughout the development of borderline features in adolescence, to provide more solid evidence of its harmful effect. Accordingly, in **study X** we used a sample of adolescents from the community who were assessed at three-time points with a 6-month interval and conducted an LGM. This type of research design firstly allowed to observe borderline features' trajectories as a function of different groups. The general tendency was a stable trajectory for the total sample, with the same occurring for boys and girls. Gender differences occurred in the levels of borderline features but not in the course. Boys reported consistently lower levels than girls, as observed in all studies of this thesis. Considering the short period of longitudinal assessment and the community sample it was expected to have a relatively stable trajectory as in previous studies (Bornovalova et al., 2013; Haltigan & Vaillancourt, 2016). Maybe more noteworthy were the trajectories of adolescents with higher and lower borderline symptoms. While adolescents with lower borderline features showed a slightly decreasing course, adolescents who already have higher borderline features seem to present a gradually rising trajectory. This finding shows the relevance of early intervention for BPD, considering the tendency to escalate to more severe symptoms at these ages. Regardless of the heterotopic (Beauchaine et al., 2009; Stepp et al., 2012) and homotopic continuity of BPD (Bornovalova et

al., 2013; Winograd et al., 2008) previously described, it seems that borderline features increase for adolescents who already exhibit such personality functioning. With a peak in early adulthood (Chanen & Kaess, 2012; Sharp & Fonagy, 2015), preventing the evolution of BPD in adolescence seems crucial to preclude maladaptive adult functioning. Results also showed significantly different levels of initial borderline features and relatively stable growth rates supporting stability evidence of borderline symptoms over time (Bornovalova et al., 2013; Winograd et al., 2008). An unexpected result was the non-significant effect of gender on both initial levels and growth rates, possibly indicating a similar pattern of borderline features for boys and girls.

Moreover, this last study reinforced the harmful effect of self-disgust on the evolution of youth borderline features. Although this is not a completely novel result, this study provided sound evidence that feeling repugnance and hate towards aspects of the self influence the evolution of borderline features. Cognitions, thoughts and feelings of contempt, disgust, and disdain for oneself may include a persistent feeling of being irrevocably bad, repulsive, or flawed (Krawitz, 2012a), considering previous experiences of invalidation, insecurity or abuse. Feeling that one is undesirable and repulsive for being emotionally unstable, exhibiting anger behaviors, NSSI or feelings of abandonment and emptiness might be a reality for people with BPD. Self-disgust and self-loathing self-sustain and self-power themselves by reducing external punishment, avoiding primary emotions and personal stagnation, and confirming the negative self-image (Krawitz, 2012a, 2012b).

These two longitudinal studies provided evidence of the protective effect of self-compassion and the risk effect of self-disgust on the evolution of borderline symptoms. Adolescence is a particularly vulnerable period for the BPD onset and preventive measures for its development are hereby warranted. A lot has been written about the imperative prevention of BPD, but it is also important to provide practical advice for application. Firstly, according to the indicated prevention approach, instruments to assess borderline features (e.g., BPFS-C, BPFS-P, CI-BOR-A) should be widely applied in schools, community settings and child and adolescent mental health services. The early assessment would facilitate and assist the identification of subthreshold BPD symptoms to refer adolescents for appropriate treatment. Secondly, based on the results of our research, self-disgust

should be addressed, and self-compassion cultivated in these adolescents. This strategy can be implemented through individual or group sessions. Considering the costs and resources required, group sessions could be employed for adolescents with initial borderline features (for example, at school) while individual therapy could be offered to adolescents with more severe BPD traits. Compassion Focused Therapy (CFT; Gilbert, 2010), Dialectical Behavioral 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 important aspects of self-compassion. Cultivating a kinder internal speech, more awareness of the current experiences and a feeling of being part of a shared human experience that includes difficulties and struggles is encouraged in these interventions. Radical acceptance, mindfulness and loving kindness meditation are practices that could help decrease a sense of being undesirable, accepting the emotional instability and negative affect and feel motivated to regulate and alleviate it. Although developing self-compassion could benefit boys and girls, it seems that undermining thoughts and feelings of disgust and repugnance towards the self could be particularly beneficial for girls. Adolescents who already present NSSI could learn to anticipate self-harm triggers and replace these risky emotional regulation behaviors with more functional mechanisms such as distress tolerance or mindfulness (Schaich et al., 2021; Wupperman et al., 2009) as a way of being self-compassionate. In general, self-compassion implies being kind and validate difficulties, adverse past experiences, suffering and even feeling of self-disgust and borderline features themselves. Getting perspective from their life course, struggles, traumas, and difficult experiences could help adolescents to understand where their current self-view comes from. Moreover, being understanding towards it, embracing their flaws, and acknowledging them, could reduce emotional outbursts, shame or guilt, having a significant impact on their lives. Adolescents with marked borderline symptoms would beneficiate from cultivating self-compassion by developing strength, wisdom and courage to accept what has already happened and, at the same time, endeavor and strive for change, pursuit life goals and find their meaning in life. Always while being warmth with others and themselves. It is our banner that being self-compassionate at early ages, instead of self-critical and self-depreciating,

could alter the course of borderline functioning, preventing the development of BPD.

A final but important note about cultivating self-compassion in adolescents with borderline symptoms should mention the fears, blocks and resistances to compassion. People who suffered trauma, aggression or invalidation from significant people can perceive compassion, kindness, or love as a weakness or something they are not deserving of (Gilbert et al., 2011; Gilbert et al., 2014). If people have not had contact with compassion on its genuine and pure form, they may associate it to something less important or even harmful, for example, they may see compassion as something that will make them weaker, oversensitive or dependent; or something irrelevant to spend time and effort with (Irons & Beaumont, 2017). These fears, blocks and resistances should be considered before engaging adolescents with borderline features in self-compassion. The therapeutic relationship can be a way of doing it, as the therapist can provide a safe and healthy relationship, with care and assertive boundaries. Also, psychoeducation to increase awareness of what is and is not compassion could be helpful. Only after deconstructing the misconceptions of self-compassion, people will be willing to try a new, healthier and positive self-to-self relationship.

Furthermore, and considering the crucial influence that parents/carers and the familial context have on people's development, parental interventions designed to promote positive parental competencies would be essential to decrease adverse familial contexts, encourage more healthy parental practices and stimulate support and understanding for children. Reducing childhood experiences of invalidation, criticism, threat, and subordination could be helpful to develop and cultivate a better self-to-self relationship throughout life (Richter et al., 2009).

6.3. Strengths, limitations and future directions

The current research provided four new assessment tools for the Portuguese adolescent population, developed the English version of a clinical interview initially designed in Portugal, and pioneeringly tested the role of understudied psychological mechanisms, such as self-compassion and self-disgust, to prevent the evolution of BPD at early ages. The studies in this thesis used different samples, had longitudinal designs and adequate sample sizes. The schools that

collaborated in the data collection were from the coast and interior and from different Portuguese regions to have more representative samples. Additionally, a wide variety of statistical analyses were performed (e.g., CFA, hierarchical regression analysis, mediation, moderation, LGM), aligning with our main aims.

Notwithstanding the strengths above, the studies that compose this thesis also have weaknesses and limitations important to consider. These limitations depend on data collection, assessment methods and statistical decisions. In Chapters 3, 4 and 5, each study presents its inherent limitations. Hence, we will now draw some considerations on the general limitations of our research.

Cross-sectional studies, particularly studies V, VI, VII and VIII, encompass some constrains regarding causal inference. Since data were examined at the same time, the temporal relationship between variables (particularly on the outcome) cannot be determined. The theoretical framework was exposed to defend the relationships established in the tested models. Longitudinal research designs can overcome the abovementioned limitation, although they are much more demanding in time and energy. Thus, studies IX and X present longitudinal data to corroborate some of the findings of the cross-sectional studies and analyze developmental trajectories. Nevertheless, considering the time frame for this research and the unexpected challenges related to the COVID-19 pandemic, the follow-ups of the longitudinal studies were far shorter than we planned. Therefore, future studies with longitudinal designs should include wider follow-ups to better capture the borderline features' evolution and trajectory. Moreover, age should be controlled in these studies, for example, following for the same amount of time adolescents that were born in the same year.

Although sample sizes were adequate for the analyses performed, larger samples would allow more sound conclusions and particularly a greater ecological validity of the results. Thus, future studies are encouraged to replicate some of these findings with larger samples, having the opportunity to include and test multiple variables in the same model (e.g., latent growth model, cross-lagged panel model).

Another limitation was the almost exclusive use of quantitative self-reported data in most studies. On the one hand, quantitative data misses assessing what is not contemplated by the items. On the other hand, self-report questionnaires entail bias related to the person's emotional state at the assessment time and social

desirability (e.g., over report of socially desirable characteristics). We developed a questionnaire for parents (Study I) and a clinical interview (Study III) to overcome some of these constraints. However, the COVID19-pandemic precluded further data collection. Data from other informants (e.g., parents, teachers) and clinical assessments could enrich our findings. Additionally, multimethod research is encouraged in the future. This type of research combines qualitative (e.g., interviews) and quantitative data (e.g., self-report questionnaires and experimental data) to have a deeper and wider understanding of human behavior. Nevertheless, self-reported data were essential to assess such inner processes which are self-related, internal, and personal.

Some data were also collected online. The initial plan was to collect all data from adolescents in person, but the COVID-19 pandemic forced us to collect some data online. It is known that online surveys present important advantages such as reaching more participants or specific populations, easier data input and less work and energy spent by the researchers. However, we should also consider the disadvantages of online surveys, for example excluding people who do not have internet access or do not own a computer or mobile phone, not guaranteeing that people provide reliable information (e.g., demographic characteristics) and the systematic bias of only having the responses of people who are more willing to respond to the questionnaires (Heiervang & Goodman, 2011; Wright, 2005). With regard once more to the COVID-19 pandemic, we did not control for its impact on the adolescent's mental health.

Although it was our intent to study borderline features from a dimensional perspective and then use a community sample, important studies are yet to be performed with adolescents with subthreshold symptoms. Study X pointed out that adolescents with higher borderline features tend to increase those symptoms. Thus, identifying adolescents with higher borderline features, even though they do not meet full criteria for BPD, and referring them for adequate treatment would prevent the previously mentioned tendency.

Implementing compassion-based interventions and targeting self-disgust in adolescents with BPD or subthreshold symptoms seems to be a plausible way to prevent BPD. Future studies could develop and implement such programs or interventions, whether in a group or individually, and test their efficacy to decrease borderline symptoms, NSSI, and suicide ideation, and increase life satisfaction.

6.4. Conclusions and highlights

BPD tend to start developing at early ages and adolescents with marked borderline features seem to present a rising trajectory towards a clinical diagnosis. Higher borderline features relate to a self-perception of being undesirable, unsafe, or repulsive. Often, BPD patients refer to themselves as bad, flawed and disgusting, exhibiting a disturbed sense of self, self-criticism, and self-punishment. This self-identity and internal relationship might be built upon adverse childhood experiences and deficits in learning self-compassion skills. Giving adolescents with subthreshold BPD symptoms the opportunity to develop and cultivate self-compassion, could counteract these feelings and thoughts of self-disgust helping them to find a safe internal environment, despite their previous backgrounds, learnings, and experiences. Self-disgust appears to contribute to borderline features' growth and maintenance, and it is related to an overactivation of the threat-protection system. Psychotherapeutic Interventions designed to counteract this negative self-identity, replacing it with self-kindness, understanding, awareness, and diminished feelings of isolation, could teach adolescents how to ease the threat-protection system. The soothing system could be stimulated by mindfulness practice, loving-kindness meditation, gratitude exercises, externalizing the inner critic, "a moment for me" informal practice, compassionate touch, developing a compassionate voice, among others (Bluth et al., 2016; Gilbert, 2010; Neff & Germer, 2018).

The following highlights summarize the main conclusions of this research. We hope these studies will enrich the knowledge on BPD evolution and prevention by drawing attention to internal psychological mechanisms related to the self-to-self relationship that have been underexplored so far. We believe that preventing the evolution of borderline features at early ages by cultivating self-kindness, being aware of the present moment and sharing common humanity would be valuable for people with emotional dysregulation, early invalidating experiences, and higher likelihood to develop BPD.

- The BPFS-C is a brief self-report questionnaire useful for early assessment and screening of borderline features in adolescents, particularly in community settings, with an important contribution to research and clinical prevention.

- The BPFS-P complement the assessment of borderline features in adolescents by providing other-informant data on youth behaviors.
- The MSDS-A is a valid and reliable self-report questionnaire for the multidimensional assessment of self-disgust in adolescents.
- The CI-BOR-A was accepted by adolescents, and experts provided important contributions to improve the interview quality. It is encouraged to be used in clinical settings for early BPD diagnosis.
- The English version of the CI-BOR-A gives clinicians the possibility of using this instrument to assess adolescents' BPD in other countries and facilitate the translation to other languages.
- The more prevalent borderline features in youth are feelings of abandonment, emotional intensity, and an unstable self-image.
- Girls exhibit higher general levels of borderline features than boys. However, boys present higher impulsivity and carelessness.
- Adolescents with higher borderline features tend to present a rising trajectory, while adolescents with lower borderline features tend to present a descending trajectory.
- Self-compassion seems to protect adolescents from developing borderline features, including adolescents with a previous history of NSSI.
- Adolescents with childhood experiences of threat and subordination tend to present higher borderline features, and that relationship is partially explained by isolation, self-judgment, and mindfulness (as self-compassion components).
- Thoughts and feelings of self-disgust increase the likelihood of developing BPD, especially for girls.
- Individual and group interventions designed to cultivate self-compassion in adolescents might be a robust mean to decrease feelings of self-disgust and, consequently, borderline features.
- Preventing and mitigating the evolution of borderline features at early ages could decrease the BPD prevalence in adulthood with significant implications for society.

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Appendices

Appendices

Appendix 1: Portuguese version of the Borderline Personality Features Scale for Children (BPFS-C)

Appendix 2: Multidimensional Self-Disgust Scale for Adolescents (MSDS-A)

Appendix 3: Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A)

Appendix 4: Clinical Interview for Borderline Personality Disorder for Adolescents (CI-BOR-A) – English version

Appendix 5: Portuguese version of the Borderline Personality Features Scale for Parents (BPFS-P)

Appendix 6: Carreiras, D., Castilho, P., & Cunha, M. (2022). Portuguese adolescents' perception of the COVID-19 pandemic: Gender differences and relation with psychopathological symptoms. *Psicologia: Teoria e Prática, 24*(1), 1-13. https://doi.org/10.5935/1980-6906/ePTPCP14125.en

Any of these instruments/materials can be reasonably requested by e-mail to Diogo Carreiras (diogocarreiras1@gmail.com).

Appendix 1

BPFS-C
Como me sinto acerca de mim e dos outros

(BPFSC-11: Sharp, C., Steinberg, L., Temple, L., & Newlin, E., 2014)
(Versão Portuguesa: Carreiras, D., Loureiro, A., Cunha, M., Sharp, C., & Castilho, P., 2020)

Instruções: Aqui estão algumas afirmações sobre a forma como te sentes em relação a ti e a outras pessoas. Coloca um X na opção que melhor se aplica a ti.

	Nunca verdadeiro	Quase nunca verdadeiro	Às vezes verdadeiro	Muitas vezes verdadeiro	Sempre verdadeiro
1. Sinto-me muito sozinho/a.					
2. Quero que algumas pessoas saibam o quanto elas me magoam/magoaram.					
3. Os meus sentimentos são muito intensos. Por exemplo, quando me zango, fico mesmo muito zangado/a. Quando fico feliz, fico mesmo muito feliz.					
4. Sinto que há algo importante que falta em mim, mas não sei o que é.					
5. Sou descuidado/a com as coisas que são importantes para mim.					
6. Sinto que as pessoas que me foram próximas desiludiram-me.					
7. Oscilo entre sentimentos diferentes, como estar zangado ou triste ou feliz.					
8. Meto-me em problemas porque faço coisas sem pensar.					
9. Preocupa-me que as pessoas que são importantes para mim se vão embora e não voltem.					
10. A maneira como me sinto muda muito.					

Appendix 2

Escala Multidimensional da Autoaversão

(Versão para adolescentes: Carreiras, Guilherme, Cunha, & Castilho, 2022)

O nojo é uma emoção básica, universal e fundamental cuja principal função é defender-nos. Por nojo queremos dizer um sentimento de aversão, profundo desgosto ou ainda repugnância quer por aspetos físicos (corpo), quer por aspetos da forma como nos sentimos, pensamos, somos e nos comportamos.

Esta escala pretende avaliar a autoaversão, ou seja, estamos interessados em saber a frequência com que tens este sentimento de aversão em relação a ti próprio/a. Para isso utiliza a seguinte escala de resposta:

|----------|----------|----------|----------|----------|
0 1 2 3 4
Nunca Raramente Algumas Vezes Frequentemente Sempre

	0	1	2	3	4
1. Quando sinto aversão em relação a mim, tenho arrepios em determinadas partes do corpo.					
2. Quando sinto aversão em relação a mim, sinto que gostaria de fugir de mim.					
3. Quando sinto aversão em relação a mim, a minha respiração fica acelerada.					
4. Quando sinto aversão em relação a mim, sinto-me profundamente desgostoso/a.					
5. Quando sinto aversão em relação a mim, disfarço esses aspetos que me metem nojo.					
6. Quando sinto aversão em relação a mim, o meu coração fica acelerado.					
7. Quando sinto aversão em relação a mim, sinto-me diminuído/a, inferior e pequeno/a.					
8. Quando sinto aversão em relação a mim, sinto tensão muscular na cara (enrugar a testa, semicerrar os olhos, contrair os lábios).					
9. Quando sinto aversão em relação a mim, sinto que há “algo de mau em mim”.					
10. Quando sinto aversão em relação a mim, sinto vontade de cortar, queimar, eliminar essa parte de mim mesmo/a.					
11. Quando sinto aversão em relação a mim, sinto-me a desfalecer ou a perder as forças no meu corpo.					
12. Quando sinto aversão em relação a mim, tenho a sensação de que o meu corpo se contrai.					
13. Quando sinto aversão em relação a mim, fico com tremor no corpo.					
14. Quando sinto aversão em relação a mim, sinto-me “sujo/a”.					

|----------|----------|----------|----------|
0 1 2 3 4
Nunca Raramente Algumas Vezes Frequentemente Sempre

	0	1	2	3	4
15. Quando sinto aversão em relação a mim, fico com uma sensação estranha no estômago.					
16. Quando sinto aversão em relação a mim, não consigo deixar de pensar nisso.					
17. Quando sinto aversão em relação a mim, tenho tonturas.					
18. Quando sinto aversão em relação a mim, tenho certos comportamentos para me magoar ou eliminar determinadas partes de mim (cortar, queimar, morder, arranhar, bater).					
19. Quando sinto aversão em relação a mim, sinto ódio.					
20. Quando sinto aversão em relação a mim, sofro alterações gastrointestinais (cólicas, dor de barriga).					
21. Quando sinto aversão em relação a mim, fico ativado/a (alerta).					

Appendix 3

Data: _____

ID do sujeito: _____

Entrevistador/a: _____

CI-BOR Adolescentes

ENTREVISTA CLÍNICA PARA A PERTURBAÇÃO BORDERLINE DA PERSONALIDADE SEGUNDO O DSM-5* PARA ADOLESCENTES

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2021

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UNIVERSIDADE D COIMBRA

FCT
Fundação para a Ciência e a Tecnologia

*inclui a abordagem categorial e dimensional.

INFORMAÇÕES PRÉVIAS PARA O/A ENTREVISTADOR/A

A CI-BOR é uma entrevista clínica desenhada para avaliar a Perturbação Borderline da Personalidade (PBP) em adolescentes, segundo a classificação do DSM-5 (APA, 2013). É importante salientar que **atribuir o diagnóstico de PBP (ou outra perturbação da personalidade) a adolescentes é controverso**. Tal prende-se com vários motivos como o estigma associado a esse rótulo, a instabilidade e turbulência típicas desta fase de desenvolvimento poderem estar na base de alguns comportamentos disfuncionais e com a possível remissão espontânea dessas dificuldades com o avançar da idade. No entanto, **é essencial ter em conta que o diagnóstico precoce de PBP quando devidamente justificado e aplicado** (existência de um padrão cognitivo, emocional e comportamental consistente no último ano) **pode ser muito útil para um encaminhamento e tratamento adequados, prevenindo assim o agravamento da sintomatologia**.

ABORDAGEM CATEGORIAL E DIMENSIONAL ÀS PERTURBAÇÕES DA PERSONALIDADE

No DSM-5 é feita referência à complexidade das Perturbações da Personalidade e assume-se que há ainda um longo caminho a percorrer relativamente ao conhecimento científico nesta matéria. Neste sentido, o DSM-5 apresenta duas abordagens para este tipo de diagnóstico: a **abordagem categorial**, onde é definido que cada Perturbação da Personalidade é uma entidade clínica ímpar e distinta, quer das restantes taxonomias de personalidade, quer da personalidade saudável; e a **abordagem dimensional** que defende que os sintomas variam num *continuum*, o que permite explicar a sua heterogeneidade e diferenças entre as categorias diagnósticas. Ambas as abordagens são válidas e clínicos/as e investigadores/as podem aplicar o modelo que mais sentido faz para si e/ou que melhor se aplica aos seus casos.

Por este motivo, esta entrevista permite fazer o diagnóstico clínico de PBP segundo as duas abordagens, tendo no final duas tabelas-chave respetivamente para cada (onde o clínico poderá colocar as pontuações atribuídas ao longo da entrevista e decidir em relação ao diagnóstico). Caso pretenda adotar a perspetiva categorial, apenas precisa utilizar os itens a sombreado ao longo da entrevista. Caso pretenda seguir a abordagem dimensional, recomenda-se que a entrevista seja administrada na íntegra.

ESTRUTURA DA CI-BOR E ESCALAS DE RESPOSTA

A CI-BOR é constituída por:

Questões iniciais: Sociodemográficas e algumas questões opcionais relativas ao sujeito.

Secção 1: **Afetividade**, que inclui itens para avaliar afeto negativo (raiva, ansiedade, ansiedade de separação), bem como instabilidade emocional/afetiva.

Secção 2: **Eu/*self***, que diz respeito a questões sobre a identidade, sentimentos de vazio, autocriticismo, dissociação e autodireção.

Secção 3: **Relação com os outros**, associada a questões de instabilidade relacional, relações íntimas, paranoia, empatia e abandono.

Secção 4: **Impulsividade**, onde estão incluídos itens de exposição a situações de risco, dificuldade em controlar impulsos e comportamento autolesivo não suicidário.

Tabelas-chave: Que facilita a tomada de decisão relativamente ao diagnóstico de PBP, onde estão contempladas a abordagem categorial e a dimensional (DSM-5).

Apêndice para explorar mais aprofundadamente comportamentos autolesivos: aplicável quando existe este tipo de comportamento, sendo a sua administração de caráter opcional.

Nesta entrevista, existem duas escalas de resposta: uma sobre a ausência/presença do critério de diagnóstico e outra sobre a interferência no funcionamento pessoal e interpessoal. Por debaixo de cada item existe um espaço onde o clínico/a deverá colocar a pontuação que faz mais sentido de acordo com as respostas do/a entrevistado/a. A escala sobre a ausência/presença do critério de diagnóstico varia entre 0 e 2:

0	1	2
Ausente	Provavelmente presente	Definitivamente presente

Os itens deverão ainda ser pontuados de acordo com a interferência no funcionamento pessoal e interpessoal. Para tal poderá utilizar a seguinte escala de resposta:

0	1	2	3	4
Nenhuma/ pouca	Alguma interferência	Interferência moderada	Interferência severa	Interferência extrema

TOMADA DE DECISÃO RELATIVAMENTE AO DIAGNÓSTICO DE PBP

Após administrar a entrevista, encontrará as tabelas-chave para a tomada de decisão relativamente ao diagnóstico de PBP.

Abordagem categorial: o/a adolescente deverá ter pelo menos 5 dos 9 critérios de diagnóstico definitivamente presentes (pontuação 2).

Abordagem dimensional: segundo esta abordagem, existem dois grupos de critérios a ter em conta para o diagnóstico.

- Grupo A é composto pelo funcionamento da personalidade representado por 2 critérios pessoais (identidade e autodireção) e 2 critérios interpessoais (empatia e intimidade). Estes itens deverão ser cotados de acordo com o nível de interferência na vida da pessoa (0 = *nenhuma/pouca*; 4 = *interferência extrema*).
- Grupo B é constituído por 7 traços patológicos da personalidade que são a labilidade emocional, ansiedade, ansiedade de separação, depressão (domínio da Afetividade negativa), impulsividade, comportamentos de risco (domínio da Desinibição) e a hostilidade (domínio do Antagonismo).

O/A adolescente deverá ter pelo menos 2 critérios do Grupo A com pelo menos interferência moderada (≥ 2) e definitivamente presentes no mínimo 4 traços patológicos da personalidade (Grupo 2) em que pelo menos um é a impulsividade, os comportamentos de risco ou a hostilidade.

Informação detalhada pode ser encontrada na Secção II (Perturbações da Personalidade) e III (Modelo Alternativo para Perturbações da Personalidade) do DSM-5 (APA, 2013).

Questões iniciais

1. Que idade tens? _____
2. Com que género te identificas? _____
3. Em que ano estás? _____
4. Como é o teu rendimento escolar? Já reprovaste? Faltas muito às aulas? _____
5. Os teus pais vivem juntos? _____
6. Tens irmãos ou irmãs? _____
7. *(SE SIM)* Quantos/as? _____
8. Atualmente estás numa relação amorosa? _____
9. Tens amigos/as próximos/as/ ou chegados/as? _____
10. *(SE SIM)* Quantos/as? Gostarias de ter mais? _____
11. Com que frequência falas com eles/as? _____

Questões opcionais	
Vou fazer-te algumas perguntas acerca da tua maneira de ser e sobre como te tens comportado ao longo da tua vida...	
19. Há alguma coisa na tua forma de ser que achas que te traz problemas ou te incomoda? (Em casa, na escola, com os teus amigos? De que forma?)	
20. Como te descreves como pessoa?	
21. Como achas que os outros te descrevem como pessoa?	
22. Como ocupas o teu tempo livre?	
23. Se pudesses mudar alguma coisa na tua personalidade, o que mudarias?	

Antes de começarmos, queria dizer que as questões desta entrevista são relativas ao último ano da tua vida ou ao período a partir dos teus *(IDADE APROPRIADA),* em que andavas no *(ANO ESCOLAR APROPRIADO)* ano. Queria também dizer que estou interessado/a em saber mais acerca dos sentimentos, pensamentos e comportamentos que tens tido durante este último ano. No entanto, há algumas perguntas que vou fazer sobre coisas específicas que talvez tenhas feito apenas quando estavas particularmente chateado/a ou perturbado/a.

Durante o último ano, tu…

SECÇÃO 1: AFETIVIDADE	
Item	Questões
1. Raiva/ hostilidade Ausente/Presente: _____ (0-2) Interferência: _____ (0-4)	Sentiste-te com raiva muitas vezes? Quantas vezes por semana?_____ Várias vezes sentiste raiva dentro de ti mas conseguiste geri-la de modo a que as outras pessoas não percebessem? Frequentemente comportaste-te de uma forma irritada/raivosa (e.g., várias vezes provocaste pessoas ou disseste coisas más (chamar nomes, insultar, dizer palavrões), frequentemente gritaste com pessoas, repetidamente partiste coisas? Por vezes por coisas pequenas? Acontecimentos insignificantes ou porque alguém te disse algo que não gostaste? E ficaste com tanta raiva que te envolveste em lutas físicas com alguém próximo de ti?
2. Ansiedade Ausente/Presente: _____ (0-2) Interferência: _____ (0-4)	Sentiste-te muito tenso/a, ansioso/a, nervoso/a, a entrar em pânico? (coração a bater muito depressa, suores, tremores?) Por exemplo, por teres conflitos com alguém ou “stresses” com os teus amigos? Ou por estares preocupado/a com algo que aconteceu no passado ou medo do que poderá acontecer no futuro? Incerteza? Ou muito medo de perderes o controlo? Ou de falhares?
3. Ansiedade de separação Ausente/Presente: _____ (0-2) Interferência: _____ (0-4)	Tiveste medo muito intenso que pessoas importantes para ti te rejeitassem ou fossem embora? Ou que lhes acontecesse algo de mal ou morressem? Tiveste muito medo de ficar sozinho/a quando alguém importante para ti não esteve presente fisicamente? Ou tiveste medo de ficar demasiado dependente das pessoas e perderes a tua autonomia, espaço ou liberdade?

Observações:_____

_____

SECÇÃO 2: EU/*SELF*	
Item	Questões
6. Identidade instável Ausente/Presente: _____ (0-2) Interferência: _____ (0-4)	Frequentemente não tiveste certeza em relação à pessoa que és? Frequentemente oscilaste entre sentires-te ok/bem em relação a ti e sentires que eras mau/má ou até diabólico/a? Muitas vezes sentiste que não tinhas uma identidade consistente ou constante? Como se não tivesses sentido de eu? Identidade própria? Não tiveste ideia de quem és ou no que acreditas? Que nem sequer existes? Que não és nada? E criticares-te? Chamares nomes a ti próprio/a? Desvalorizares-te?
7. Sentimentos de vazio Ausente/Presente: _____ (0-2) Interferência: _____ (0-4)	Tiveste sentimentos de vazio muitas vezes? Sentires-te inútil, só e aborrecido/a tudo junto? Pareceu que não tinhas sentimentos dentro de ti? Como se não tivesses nada por dentro?
8. Dissociação Ausente/Presente: _____ (0-2) Interferência: _____ (0-4)	Frequentemente sentiste que estavas fisicamente desconectado/a dos teus sentimentos ou que te estavas a ver à distância? Muitas vezes sentiste como se estivesses num sonho ou que algo como um vidro te separava do mundo? Dentro de uma bolha? Repetidamente tiveste momentos em que te sentiste desligado/a ou dormente? “Zombie”? Não te lembravas depois desses momentos? E sentires-te emocionalmente morto/a? *(SE SIM A ALGUMA DAS ANTERIORES)* Estes sentimentos iam e vinham ou parecia que estavam sempre lá? Eles ocorreram apenas quando estavas sob stress? Ficaram piores quando estavas sob muito stress? Quando estás tranquilo/a isto não acontece ou acontece menos?

Observações:_____

_____

_____

_____

SECÇÃO 3: RELAÇÃO COM OS OUTROS	
Item	**Questões**
10. Falta de empatia Ausente/Presente: _____ (0-2) Interferência: _____ (0-4)	Achas que foste capaz de compreender como os outros se estão a sentir? As suas necessidades? És capaz de te colocar no lugar do outro? Alguma vez te disseram o contrário? Não respondeste às necessidades dos outros porque não sabias lidar com isso? Porque era difícil de suportar? Porque não sabias o que ela/e precisava naquele momento? Vês habitualmente as outras pessoas como tendo sempre muitos defeitos ou características negativas? Achas que os outros se estão sempre a queixar desnecessariamente?
11. Paranoia Ausente/Presente: _____ (0-2) Interferência: _____ (0-4)	Várias vezes sentiste-te muito desconfiado/a ou com suspeitas em relação a outras pessoas? Que te iam fazer mal ou eram perigosas? Acreditaste que os outros estavam a tirar partido de ti ou culparam-te por coisas que não eram responsabilidade tua? Acreditaste que os outros estavam a olhar para ti, a falar de ti nas tuas costas ou a rir-se de ti?
12. Intimidade/ Instabilidade relacional Ausente/Presente: _____ (0-2) Interferência: _____ (0-4)	Frequentemente oscilaste entre adorar e admirar alguém e sentires que não suportavas/detestavas essa pessoa? Frequentemente oscilaste entre sentimentos de não poderes viver sem aquela pessoa e sentimentos de te afastar dele ou dela? Que depois se traduzia em aproximares-te exageradamente da pessoa ou quereres estar longe dela? Tiveste relações conflituosas ou relações com vários altos e baixos? Algumas relações com muitas discussões intensas? E vezes em que vocês deixaram de se falar ou ver? *(SE SIM)* E depois voltaram a ficar juntos/as?

[illegible]

Observações: _____

SECÇÃO 4: IMPULSIVIDADE	
Item	**Questões**
14. Impulso Ausente/Presente: _____ (0-2) Interferência: _____ (0-4)	Agiste muitas vezes por impulso (sem pensar)? Sem plano, envolveste-te em atividades perigosas de forma desnecessária e sem pensares nas consequências? Ou disseste algo que te arrependeste muito? Essas atividades, no final, foram negativas para ti? Puseram em risco o teu bem-estar ou a tua vida? Consegues dar-me exemplos? Sentiste-te muito frustrado/a/inquieto/a/agitado/a porque tiveste de esperar por algo que querias ou precisavas, mas não podias ter naquele momento? Como se quisesses tudo para ontem? Já te magoaste a ti próprio/a quando estavas em situações muito difíceis ou a sofrer muito? *(SE SIM, FAZER A PONTE COM O PRÓXIMO ITEM SEGUINTE)*

15. Comportamentos autolesivos não suicidários Ausente/Presente: _____ (0-2) 0 = nunca 1 = uma vez 2 = duas ou + vezes Interferência: _____ (0-4)	Magoaste-te de propósito sem teres intenção de te matares (e.g., cortares-te, queimares-te, esmurrares-te, partires vidros com as mãos, esmurrares paredes, bateres com a cabeça, morderes-te, beliscares-te, puxares os teus cabelos)? *(SE SIM)* Quantas vezes? _____ Ameaçaste matares-te? *(SE NÃO)* E dizeres a alguém que te ias matar para que soubessem que estavas a sofrer? Para veres se os outros se importavam? *(SE SIM A ALGUMA DAS ANTERIORES)* Quantas vezes? *(Caso o/a avaliado/a apresente comportamentos autolesivos não suicidários, o/a avaliador/a poderá passar para o apêndice no final da entrevista, retomando depois a entrevista a partir deste ponto)*

Observações:_____

Tabelas de decisão: Diagnóstico de PBP segundo o DSM-5

(mais informações podem ser encontradas no início da entrevista)

Abordagem categorial

ITEM	PONTUAÇÃO Ausente/presente (0-2)
1. Raiva/hostilidade	
5. Labilidade/ instabilidade emocional	
6. Identidade instável	
7. Sentimentos de vazio	
8. Paranoia ou 11. Dissociação *(pontuação do mais elevado)*	
12. Intimidade/ Instabilidade relacional	
13. Abandono	
15. Comportamentos de risco	
16. Comportamentos autolesivos não suicidários	

DIAGNÓSTICO DE PBP
reúne 5 ou mais critérios de nível 2

DIAGNÓSTICO SUBCLÍNICO DE PBP
reúne 4 critérios de nível 2

DIAGNÓSTICO AUSENTE
reúne 3 ou menos critérios de nível 2

Abordagem dimensional

	ITEM	PONTUAÇÃO Interferência (0-4)
A 2 critérios ou mais com interferência ≥ 2	6. Identidade instável, ou 7. Sentimentos de vazio, ou 8. Dissociação *(pontuação do mais elevado)*	
	9. Autodireção indefinida	
	10. Falta de empatia	
	12. Intimidade/Instabilidade relacional; 13. Abandono *(pontuação do mais elevado)*	
		PONTUAÇÃO Ausente/presente (0-2)
B 4 critérios ou mais definitivamente presentes (2). Obrigatória presença de 13, 16 ou 1	5. Labilidade/instabilidade emocional	
	2. Ansiedade	
	3. Ansiedade de separação	
	4. Depressão	
	13. Impulso	
	16. Comportamentos de risco	
	1. Raiva/hostilidade	

DIAGNÓSTICO DE PBP
Grupo A: reúne 2 ou mais critérios de interferência igual ou superior a 2 +
Grupo B: definitivamente presentes 4 ou mais critérios (em que pelo menos um é 16, 13 ou 1)

DIAGNÓSTICO SUBCLÍNICO DE PBP
Grupo A: reúne 2 critérios de interferência igual ou superior a 2 +
Grupo B: definitivamente presentes 3 critérios

DIAGNÓSTICO AUSENTE
Grupo A: reúne 1 ou menos critérios de interferência igual ou superior a 2 +
Grupo B: definitivamente presentes 3 ou menos critérios

Apêndice: Comportamentos autolesivos

Caso o/a avaliado/a tenha pontuado nas questões relacionadas com comportamentos autolesivos, este apêndice pode ser útil para explorar mais aprofundadamente informação relativa a esse assunto.

Frequência: Com que frequência costumas ter este tipo de comportamentos (*e.g. cortar-se, queimar-se, arranhar-se, etc.*)? Em média?

0 Nunca
1 1 vez em 6 meses
2 2 vezes em 6 meses
3 1 vez por mês
4 1 vez em 3 semanas
5 1 vez em 2 semanas
6 2 vezes em 3 semanas
7 1 vez por semana
8 várias vezes por semanas
9 quase diariamente
10 diariamente

Fizeste isso sozinho/a ou em grupo? _____

Alguém sabe destes comportamentos? Contaste a alguém? _____

Motivos e funções: Vou agora dar-te alguns exemplos de motivos ou razões para as pessoas terem estes comportamentos, para me dizeres quanto se aplicam a ti.

Motivos e funções		Nunca	Rara-mente	Algumas vezes	Muitas vezes	Sempre
Regulação emocional	[illegible]					
	[illegible]					
Autopunição	[illegible]					
	[illegible]					
	[illegible]					
Comunicação	[illegible]					
	[illegible]					
	[illegible]					
Expressão emocional	[illegible]					
	[illegible]					

Motivos e funções		Nunca	Rara-mente	Algumas vezes	Muitas vezes	Sempre
Evitamento de dissociação	[illegible]					
	[illegible]					
	[illegible]					
Evitamento de agressão	[illegible]					
	[illegible]					
	[illegible]					
Outros motivos	[illegible]					
	[illegible]					
	[illegible]					
	[illegible]					
	[illegible]					
	[illegible]					
	Por algum outro motivo? Qual?_____ _____					
	Por algum outro motivo? Qual?_____ _____					

Intencionalidade e ideação suicida: Já tentaste alguma vez o suicídio?	Sim	Não
Alguma vez te magoaste com o objetivo de acabares com a tua vida?	Sim	Não

(SE SIM) Que método usaste? _____

Qual era a tua intenção de te matares de 0 (nenhuma) a 10 (toda)? _____

[illegible]

Appendix 4

Date: _____

Subject ID: _____

Interviewer: _____

CI-BOR Adolescents

CLINICAL INTERVIEW FOR BORDERLINE PERSONALITY DISORDER ACCORDING TO THE DSM-5* FOR ADOLESCENTS

Original version by Diogo Carreiras, Marina Cunha, Carla Sharp & Paula Castilho (2022)

English version by Diogo Carreiras, Julieta Azevedo, Stephanie Hastings, Michaela Swales, Carla Sharp, Marina Cunha & Paula Castilho

*includes categorical and dimensional approach.

INITIAL INFORMATION FOR THE INTERVIEWER

The CI-BOR-A is a clinical interview designed to assess borderline personality disorder (BPD) in adolescents, according to the DSM-5 (APA, 2013). It is important to point out that assigning a BPD diagnosis (or other personality disorder) to adolescents is controversial. This is related to several reasons, such as the stigma associated with that label, the instability and turmoil typical of adolescence could be the basis of some dysfunctional behaviours and the possible spontaneous remission of these difficulties with age. Nevertheless, the early diagnosis, when properly and justifiably applied (in the presence of a consistent cognitive, emotional, and behavioural pattern in the last year), can be useful for an adequate referral and treatment, thus preventing the worsening of symptoms. We encourage clinicians to consider that the display of dysfunctional behaviours by adolescents might be the consequence of environmental factors, such as abuse, neglect, and exploitation.

CATEGORICAL AND DIMENSIONAL APPROACH TO PERSONALITY DISORDERS

In the DSM-5, a reference is made to the complexity of personality disorders, and it is assumed that there is still a long way to go regarding the scientific knowledge in this field. In line with this, the DSM-5 presents two approaches for this diagnosis: the **categorical approach**, which defines that each personality disorder is a singular and distinct clinical entity different from the rest of personality taxonomies and from a healthy personality; and the **dimensional approach**, which states that symptoms vary along a continuum. This explains their heterogeneity and differences between diagnostic categories. Both approaches are valid, and clinicians and researchers can follow the model that resonates with them more and that best applies to their cases.

For this reason, this interview allows the clinical diagnosis of BPD according to both approaches, having two decision tables at the end. The clinician can copy the scores assigned throughout the interview to these tables and decide on the diagnosis. To follow the categorical approach, only the items in grey boxes need to be used. To follow the dimensional approach, it is recommended that the interview is delivered in full.

CI-BOR-A STRUCTURE AND RATING SCALES

The CI-BOR-A is composed of:

Initial questions: Sociodemographic questions and optional questions about the young person.

Section 1: **Affectivity**, which includes items to assess negative affect (anger, anxiety, separation anxiety), as well as emotional/affective instability.

Section 2: **Self**, which concerns questions about identity, feelings of emptiness, self-criticism, dissociation, and self-direction.

Section 3: **Relationships**, included questions about relational instability, intimate relationships, paranoia, empathy and abandonment.

Section 4: **Impulsivity**, related to risk situations exposure, difficulties in controlling impulses and non-suicidal self-injury behaviours.

Decision-tables: Which facilitates the decision-making regarding the BPD diagnosis, where both the categorical and dimensional approach (DSM-5) are contemplated.

Appendix to further explore non-suicidal self-injury behaviours: applicable when these behaviours are present (optional).

In this interview, there are two rating scales: one to determine the absence/presence of the diagnostic criterion and another about the impairment in personal and interpersonal functioning. Below each item, there is a blank space where the clinician should write the score that better reflects the answers given by the adolescent. The absence/presence scale varies between 0 and 2:

0	1	2
Absent	Probably present	Definitely present

Items should also be scored according to the impairment in personal and interpersonal functioning using the following scale:

0	1	2	3	4
Little or no impairment	Some impairment	Moderate impairment	Severe impairment	Extreme impairment

In scoring, clinicians should take extreme care to ensure that behaviours and experiences reported are outside the norm for typically developing adolescents.

DECISION-MAKING REGARDING BPD DIAGNOSIS

After administering the interview, two decision tables will help clinicians to make a decision regarding the BPD diagnosis.

Categorical approach: the adolescent must have at least 5 of the 9 diagnostic criteria "definitely present" (score 2).

Dimensional approach: two groups of criteria must be considered for the diagnosis:

- Group A is composed of 2 intrapersonal criteria, which represent personality functioning (identity and self-direction), and 2 interpersonal criteria (empathy and intimacy). These items should be rated according to the functional impairment (0 = *little or no impairment*; 4 = *extreme impairment*).
- Group B is composed of 7 pathological personality traits: emotional lability, anxiety, separation anxiety, depression (Negative affectivity domain), impulsivity, risk behaviours (Disinhibition domain) and hostility (Antagonism domain).

The adolescent must meet at least 2 criteria from Group A with at least moderate impairment (≥ 2) and definitely present a minimum of 4 pathological personality traits (Group B), of which at least one is impulsivity, risky behaviours or hostility.

Detailed information can be found on the DSM-5 Section II (Personality Disorders) and III (Alternative Model of Personality Disorders) (APA, 2013).

Initial questions

1. How old are you? _____
2. Which gender do you identify with? _____
3. What school year are you in? _____
4. How are your grades/marks?
   How are you getting on at school, academically?
   Do you deliberately skip school? _____
5. Do your parents live together? _____
6. Do you have siblings? _____
7. *(If so)* How many? _____
8. Are you in a current romantic relationship? _____
9. Do you have close friends? _____
10. *(If so)* How many? Would you like to have more? _____
11. How frequently do you talk to them? _____

Optional questions	
Now, I am going to ask you about your way of being and how you have behaved in your life...	
19. Is there something about the way you behave, think or feel that causes you problems or bothers you? (at home, school, with friends? How?)	
20. How do you describe yourself as a person?	
21. How do you think other people would describe you as a person?	
22. What do you usually do in your free time?	
23. If you could change anything about your personality, what would it be?	

Before we start, keep in mind that I am going to ask you questions about the last year since you were (*say respective age*) and were in the (*say respective grade/school year*). I am interested in understanding your feelings, thoughts and behaviours in the last year. However, some questions will be about specific times when you might have been particularly upset or troubled.

During the last year…

SECTION 1: AFFECTIVITY	
Item	Questions
1. Anger/ hostility Absent/Present: _____ (0-2) Impairment: _____ (0-4)	Have you often felt anger? How many times a week? _____ Several times have you felt anger inside you, but you were able to manage it so that other people would not notice? Have you frequently behaved in an irritable/angry manner (e.g., often provoking other people by saying mean things, like calling names, insulting, swearing), yelling at people, or repeatedly breaking things? Did this happen in response to small things, insignificant events or because someone said something you did not like? Have you felt so angry that you ended up involved in physical fights with someone close to you? *If not already discussed, check:* How much of a problem has this been?
2. Anxiety Absent/Present: _____ (0-2) Impairment: _____ (0-4)	Have you felt very tense, anxious, nervous, and/or starting to panic (e.g., heart beating faster, sweating, shaking)? Have you felt like this after an argument with someone or problems with your friends? Or because you were worried about something that happened in the past or afraid of what could happen in the future? For feeling uncertainty? Have you been afraid of losing control? Or failing? *If not already discussed, check:* How much of a problem has this been?
3. Separation anxiety Absent/Present: _____ (0-2) Impairment: _____ (0-4)	Have you felt an intense fear that people important to you would reject you or leave? Or very worried that something bad would happen to them or they could die? Have you felt an intense fear of being left alone when someone important to you was not physically present? Have you feared becoming too dependent on others and losing your independence, space, or freedom? *If not already discussed, check:* How much of a problem has this been?

Observations:_____

SECTION 2: EU/*SELF*	
Item	Questions
6. Unstable identity Absent/Present: _____ (0-2) Impairment: _____ (0-4)	Have you been unsure about who you are? Have you frequently oscillated between feeling ok about yourself and feeling that you were mean, unkind, nasty or something even stronger than that? Have you often felt that you did not have a consistent or constant identity? As if you did not have a sense of self? An identity of your own? No idea about who you are and what you believe in? As if you did not exist or that you are nothing? And have you persistently criticized yourself? Taking yourself down? Belittling yourself? *If not already discussed, check:* How much of a problem has this been?
7. Feelings of emptiness Absent/Present: _____ (0-2) Impairment: _____ (0-4)	Have you often experienced feelings of emptiness? Felt useless, alone and bored altogether at the same time? Has it ever seemed like you had no feelings inside you? As if you had nothing inside? Like as if you were empty? *If not already discussed, check:* How much of a problem has this been?
8. Dissociation Absent/Present: _____ (0-2) Impairment: _____ (0-4)	Have you frequently felt bodily/physically disconnected from your feelings or as if you were seeing yourself at a distance? Have you often felt like you were in a dream or like you were separated from the world by a pane of glass? Like being inside a bubble? Have you repeatedly felt detached or numb? Like a zombie? And then you could not remember what happened? Have you felt emotionally dead? *(If so, to any of the above)* Did these feelings come and go, or did it feel like they were always there? Did they happen only when you were under stress? Did they get worse when you were under stress? When you are calm, does this stops happening or happens less?

Observations:_____

_____

_____

_____

SECTION 3: RELATIONSHIPS	
Item	Questions
10. Lack of empathy Absent/Present: _____ (0-2) Impairment: _____ (0-4)	Do you think you can understand how others are feeling? Their needs? Can you put yourself in someone else's shoes? Have you ever been told otherwise? Have you not responded to others' needs because you did not know how to deal with it? Because it was hard to bear? Because you did not know what the person needed at that moment? Do you usually see other people as having lots of flaws or negative characteristics? Do you think other people are always complaining unnecessarily? *If not already discussed, check:* How much of a problem has this been?
11. Paranoia Absent/Present: _____ (0-2) Impairment: _____ (0-4)	Have you often felt very suspicious or mistrusting of other people? Thinking they would harm you or that they were dangerous? Have you believed others were taking advantage of you or blaming you for things that were not your responsibility? Have you felt like others were looking at you, talking about you behind your back or laughing at you? *If not already discussed, check:* How much of a problem has this been?
12. Intimacy/ relational instability Absent/Present: _____ (0-2) Impairment: _____ (0-4)	Have you frequently gone from loving and admiring someone to feeling that you could not stand or hated that person? Have you frequently gone from feeling that you could not live without someone to pulling away from them? For example, getting overly close to that person and then pushing them away? Have you had relationships that had a lot of conflict or relationships with several ups and downs? Relationships with frequent and intense arguments? Have you stopped talking or seeing each other? (*If so*) Did you get back together afterwards? *If not already discussed, check:* How much of a problem has this been?

Observations: _____

_____

_____

_____

_____

SECTION 4: IMPULSIVITY	
Item	Questions
14. Impulse Absent/Present: _____ (0-2) Impairment: _____ (0-4)	Have you often acted impulsively (without thinking)? Have you engaged in dangerous activities unnecessarily and without planning? Have you said something that you deeply regretted? In the end, any of these behaviours were bad for you? Did they put your well-being or life at risk? Can you give some examples? Have you felt very frustrated/restless/agitated because you had to wait for something you wanted or needed but could not have at that moment? As if you wanted everything for yesterday? Do you need everything you want to happen immediately? *If not already discussed, check:* How much of a problem has this been? Have you hurt yourself when you were in difficult situations or in a lot of pain? *(If so, make a bridge with the next item)*
15. Non-suicidal self-injury Absent/Present: _____ (0-2) 0 = never 1 = once 2 = twice or more Impairment: _____ (0-4)	Have you hurt yourself on purpose without having the intention to kill yourself (e.g., cutting, burning, punching, breaking glasses with your hands, punching walls, hitting your head against something, biting, pinching, pulling your hair out)? *(If so)* How often? _____ Have you tried to kill yourself? *If not already discussed, check:* How much of a problem has this been? *(If the adolescent presents with non-suicidal self-injury or suicidal behaviour, the interviewer can go to the appendix at the end of the interview and then return to this point to continue)*

Decision tables: BPD Diagnosis according to the DSM-5

(more information can be found at the beginning of the interview)

Categorical approach

ITEM	SCORE Absent/Present (0-2)
1. Anger/hostility	
5. Emotional lability/instability	
6. Unstable identity	
7. Feeling of emptiness	
8. Paranoia or 11. Dissociation *(higher score)*	
12. Intimacy/relational instability	
13. Abandonment	
15. Risky behaviours	
16. Non-suicidal self-injury	

BPD DIAGNOSIS
5 or more criteria scored 2

SUBCLINICAL BPD DIAGNOSIS
4 criteria scored 2

ABSENT DIAGNOSIS
3 or less criteria scored 2

Dimensional approach

	ITEM	SCORE Impairment (0-4)
A 2 or more criteria with impairment ≥ 2	6. Unstable identity, or 7. Feeling of emptiness, or 11. Dissociation *(higher score)*	
	9. Undefined self-direction	
	10. Lack of empathy	
	12. Intimacy/unstable relationships; 13. Abandonment *(higher score)*	
		SCORE Absent/Present (0-2)
B 4 or more criteria definitely present (2). It required the presence of 13, 16 or 1	5. Emotional lability/instability	
	2. Anxiety	
	3. Separation anxiety	
	4. Depression	
	13. Impulse	
	16. Risky behaviours	
	1. Anger/hostility	

BPD DIAGNOSIS
Group A: 2 or more impairment criteria equal or superior to 2 +
Group B: definitely present 4 or more criteria (at least one of them is item 16, 13 or 1)

SUBCLINICAL BPD DIAGNOSIS
Group A: 2 impairment criteria equal or superior to 2 +
Group B: definitely present 3 criteria

ABSENT DIAGNOSIS
Group A: 1 or less impairment criteria equal or superior to 2 +
Group B: definitely present 3 criteria or less

Appendix: Suicidal behaviour and non-suicidal self-injury

Where an adolescent scored more than 0 in the questions about non-suicidal self-injury, this appendix would be useful to explore this issue more thoroughly.

Frequency: How often do you usually engage in these behaviours (e.g., cutting, burning, scratching, etc.). On average?

0 Never
1 Once in 6 months
2 Twice in 6 months
3 Once a month
4 Once in 3 weeks
5 Once in 2 weeks
6 Twice in 3 weeks
7 Once a week
8 Several times a week
9 Almost daily
10 Daily

Have you done it alone or in a group of people? _____

Does anyone know about these behaviours? Have you told anyone? _____

Motives and functions: I will now give you some examples of reasons for people to engage in these behaviours so that you can tell me whether they apply to you.

Motives and functions		Never	Rarely	Some times	Often	Always
Emotional regulation	[illegible]					
	[illegible]					
Self-punishment	[illegible]					
	[illegible]					
	[illegible]					
Communication	[illegible]					
	[illegible]					
	[illegible]					
Emotional expression	[illegible]					
	[illegible]					

Motives and functions		Never	Rarely	Sometimes	Often	Always
Dissociation avoidance	[illegible]					
	[illegible]					
	[illegible]					
Aggression avoidance	[illegible]					
	[illegible]					
	[illegible]					
Other motives	[illegible]					
	[illegible]					
	[illegible]					
	[illegible]					
	[illegible]					
	[illegible]					
	[illegible]					
	Other motive? Which?_____ _____					
	Other motive? Which?_____ _____					

Suicidal ideation and behaviour: Have you ever tried to kill yourself?	yes	no
Have you ever hurt yourself intending to end your life?	yes	no

(If so) Which method did you use? _____

How was your intention to kill yourself from 0 (none) to 10 (definitely)? _____

What thoughts crossed your mind at that time?_____

[illegible]

Appendix 5

BPFS-P
Como o seu filho/a se sente em relação a si próprio/a e aos outros

(BPFSP-11: Sharp, C., Mosko, O., Chang, B., & Ha, C., 2010)
(Versão Portuguesa: Carreiras, D., Loureiro, A., Cunha, M., Sharp, C., & Castilho, P., 2020)

Instruções: Aqui estão algumas afirmações sobre o modo como o seu filho/a ou educando/a se pode sentir em relação a si próprio/a e aos outros. Percebemos que, por vezes, possa ser difícil saber o que ele/a está a pensar ou a sentir, mas tente responder o melhor que conseguir. Coloque um X na opção que melhor se aplica ao seu filho/a ou educando/a.

	Nunca verdadeiro	Quase nunca verdadeiro	Às vezes verdadeiro	Muitas vezes verdadeiro	Sempre verdadeiro
1. Ele/a parece sentir-se muito sozinho/a.					
2. Ele/a faz coisas que as outras pessoas consideram impulsivas ou fora do controlo.					
3. Ele/a parece sentir que há algo importante nele que falta, mas não sabe o que é.					
4. Ele/a tem escolhido amigos que o/a têm tratado mal.					
5. Ele/a parece que oscila entre sentimentos diferentes, como estar zangado/a, triste ou feliz.					
6. Ele/a mete-se em problemas por fazer coisas sem pensar.					
6. Sinto que as pessoas que me foram próximas desiludiram-me.					
7. Oscilo entre sentimentos diferentes, como estar zangado ou triste ou feliz.					
8. Meto-me em problemas porque faço coisas sem pensar.					
9. Preocupa-me que as pessoas que são importantes para mim se vão embora e não voltem.					
10. A maneira como me sinto muda muito.					

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Portuguese adolescents' perception of the Covid-19 pandemic: Gender differences and relation with psychopathological symptoms

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Abstract

The Covid-19 pandemic is having a great impact on people's mental health all over the world. Adolescents have been facing several potential stressors. The aim of this study was to explore how Portuguese adolescents were perceiving the Covid-19 outbreak and the relationship between the perceived impact of the pandemic and mental health. Participants were 130 adolescents (97 girls) who completed online questionnaires about the Covid-19 pandemic and the DASS-21. Around 73% of the adolescents agreed that the Covid-19 pandemic affected their lives and 45% felt emotionally affected. Feeling uncomfortable around family during quarantine was correlated with depression (r = .39), anxiety (r = .44), and stress symptoms (r = .37), and feeling capable to deal with the pandemic was negatively correlated with psychopathological symptoms. Girls seemed to be more emotionally affected. Results revealed the negative effect of the Covid-19 pandemic on Portuguese adolescents' mental health.

Keywords: Covid-19 pandemic, adolescents, anxiety, depression, stress

PERCEÇÃO DOS ADOLESCENTES PORTUGUESES DA PANDEMIA COVID-19: DIFERENÇAS DE GÉNERO E RELAÇÃO COM SINTOMAS PSICOPATOLÓGICOS

Resumo

A pandemia de Covid-19 está a ter um grande impacto na saúde mental das pessoas em todo o mundo. Os adolescentes têm enfrentado diversos potenciais stressores. O objectivo deste estudo foi explorar como os adolescentes portugueses percecionaram o surto do Covid-19 e a relação entre o impacto percebido da pandemia e a saúde mental. Os participantes foram 130 adolescentes (97 do sexo feminino) que responderam a questionários online sobre a pandemia de Covid-19 e DASS-21. Cerca de 73% dos adolescentes concordaram que a pandemia afectou as suas vidas e 45% sentiu-se emocionalmente afectado. Sentir-se desconfortável perto da família durante a quarentena mostrou-se correlacionado com sintomas de depressão (r = .39), ansiedade (r = .44) e stress (r = .37) e sentir-se capaz de lidar com a pandemia esteve negativamente correlacionado com sintomas psicopatológicos. Adolescentes do sexo feminino pareceram ficar mais emocionalmente afectadas. Esses resultados apontam para o efeito negativo da pandemia de Covid-19 na saúde mental dos adolescentes portugueses.

Palavras-chave: pandemia Covid-19, adolescentes, ansiedade, depressão, stress

LA PERCEPCIÓN DE LOS ADOLESCENTES PORTUGUESES SOBRE LA PANDEMIA DE COVID-19: DIFERENCIAS DE GÉNERO Y RELACIONES CON LOS SÍNTOMAS PSICOPATOLÓGICOS

Resumen

La pandemia de Covid-19 está teniendo un gran impacto en la salud mental de las personas. Los adolescentes se han enfrentado a varios posibles estresores. El objetivo de este estudio fue explorar cómo los adolescentes portugueses percibieron el brote de Covid-19 y la relación entre el impacto percibido

de la pandemia y la salud mental. Los participantes fueron 130 adolescentes (97 mujeres) que respondieron cuestionarios online sobre la pandemia Covid-19 y DASS-21. 73% de los adolescentes estuvo de acuerdo en que la pandemia de Covid-19 afectó sus vidas y el 45% se sintió emocionalmente afectado. Sentirse incómodo con la familia durante la cuarentena se correlacionó con síntomas de depresión (r = .39), ansiedad (r = .44) y estrés (r = .37), y sentirse capaz de lidiar con la pandemia se correlacionó negativamente con los síntomas psicopatológicos. Las adolescentes parecían estar más emocionalmente afectadas. Estos resultados apuntan al efecto negativo de la pandemia Covid-19 en la salud mental de los adolescentes portugueses.

Palabras clave: pandemia Covid-19, adolescentes, ansiedad, depresión, estrés

The Covid-19 pandemic is one of the major health crises that the world has faced in the last centuries. Contact restriction measures, isolation, and economic shutdown are important changes that have the potential to affect people's mental health (Fegert et al., 2020). Outbreaks of infectious diseases are related with psychopathological symptoms and psychological distress (Bao et al., 2020; Rajkumar, 2020). In fact, some studies have already showed the psychological effects that the Covid-19 pandemic have generated in people with different ages from the general population (Wang, Pan et al., 2020; Zandifar & Badrfam, 2020). Several stressors due to the pandemic may be responsible for these effects, such as fear related to being ill or dying, fear of losing family members or friends, diminished social contact, loss of employment or homelessness (Kavoor, 2020). Anxiety symptoms seem to be the most common ones, followed by depression symptoms and stress (Wang, Pan et al., 2020). Indeed, people with greater vulnerability to mental health issues would be at a higher risk to develop a psychopathology during the Covid-19 pandemic, for example depression or anxiety disorders, causing a burden in mental health services (Kavoor, 2020).

Based on our literature review and considering the recent outbreak of the Covid-19 pandemic, there is a lack of national and international studies with adolescent populations. Nevertheless, several changes might have an impact on adolescents' mental health. The closure of schools represented an interruption of important routines for children and adolescents, and social distancing measures may result in isolation from friends and significant teachers, which means being confined to their homes (Wang, Zhang et al., 2020). Being everyday with all family members for weeks in a period of uncertainty might generate conflicts and, in abusive familiar environments, violence may increase (Lee, 2020). Home-schooling and possible postponement of exams may represent additional stress for adolescents. Leisure time activities have been limited, and adolescents were restricted from their social groups, sports clubs, and other activities. Also, a drastic decrease of physical activity was reported by adolescents, which negatively impacts physical and mental health (Xiang & Zhang, 2020). Additionally, the economic situation indirectly affects children and adolescents by rising levels of unemployment and putting great pressure on the household (Fegert et al., 2020).

Liang et al. (2020) shed light on the negative impact that the Covid-19 pandemic had on adolescents' and young adults' mental health. The results revealed that 40% of participants, two weeks after the outbreak in China, tended to develop psychological problems. Chen et al. (2020) reported that girls were at an increased risk of depression and anxiety during the pandemic and that older adolescents presented higher depression symptoms than the younger ones. Anxiety symptoms, however, did not present an association with age. A comprehensive and non-systematic review in databases was conducted by Miranda et al. (2020) to appraise the pandemic's global effect on children's and adolescents' mental health. The authors concluded that, although the number and designs of recent studies are not very robust to draw

consistent conclusions, children and adolescents are a vulnerable population, and important measures might be taken to protect them from developing mental health issues given the pandemic context.

Accordingly, the aim of this study was to understand how Portuguese adolescents perceived the impact of the Covid-19 pandemic one month after the outbreak in Portugal and to explore the relationship of this perception with mental health variables. Researchers hypothesized that the current pandemic is having a significant negative effect on adolescents' emotional state.

Method

Procedures

Participants were part of an ongoing data collection for a longitudinal study about the evolution of borderline features in adolescents from the general population (project reference: SFRH/BD/129985/2017), sponsored by the Portuguese Foundation for Science and Technology (FCT). Accordingly, parents and adolescents had already given their informed consent to the participant in the study. Inclusion criteria were: having between 13 and 18 years old and being of Portuguese nationality. Data were collected in April 2020, a month after the outbreak in Portugal, in schools from the center and north regions of Portugal, which had already agreed to collaborate in the research. Adolescents completed the longitudinal study questionnaires, and six questions were formulated to explore the perceived impact of the Covid-19 pandemic in their lives. Students were contacted by the class director via e-mail to complete the online self-report questionnaires (LimeSurvey online source, available at https://www.limesurvey.org), since they were confined at home. Around 300 adolescents were contacted, but only approximately half of them completed the questionnaires. A large rate of non-responses were expected, considering the lower response rates of online surveys in comparison to paper-based ones (Nulty, 2008).

All procedures take into account 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.

Measures

The sociodemographic questionnaire included questions about gender, age, years of education and perceived socioeconomic status (1 = "Very low"; 5 = "Very high").

A questionnaire to assess the Covid-19 pandemic impact was devised by the study authors. Six items were formulated to be rated on a 5-point Likert scale (1 = "Strongly dis-

agree"; 5 = "Strongly agree"). Items are "The Covid-19 pandemic has affected my life", "I have been feeling limited to do my usual activities due to the Covid-19 pandemic", "The Covid-19 pandemic has affected me emotionally (angry, scared, disturbed, depressed)", "I have been feeling uncomfortable to spend so much time with my family during quarantine", "I have been feeling isolated from my friends due to the Covid-19 pandemic", and "I have managed to deal with the Covid-19 pandemic challenges".

The Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995; Portuguese version by Pais-Ribeiro et al., 2004) is a self-report questionnaire with 21 items to assess depression, anxiety, and stress symptoms. Items are rated on a 4-point Likert scale (0 = "Did not apply to me at all"; 3 = "Applied to me very much, or most of the time") and higher scores mean higher negative affect. The original version showed good internal consistency (α = .91 for Depression, α = .84 for Anxiety, and α = .90 for Stress). The Portuguese version also showed good internal consistency (α = .85 for Depression, α = .74 for Anxiety, and α = .81 for Stress). In this study, the Cronbach's alpha was .92 for Depression, .87 for Anxiety, and .90 for Stress.

Data Analyses

Data were analyzed using IBM SPSS Statistics version 23. Normality assumption was tested though Kolmogorov-Smirnov test and skewness (*sk*) and kurtosis (*ku*) values (normality assumption assumed with *Sk* < 3 and *Ku* < 8) (Kline, 2011). Outliers were explored with the boxplot diagram.

Descriptive statistics were conducted, and group differences were tested through student's t-tests for independent samples. Effect sizes were interpreted according to Cohen (1988), considering *d* values between .20 and .49 small, between .50 and .79 medium, and above .80 large. Pearson correlation coefficients were used to explore the relationship between variables. Correlation coefficients between .10 and .39 were considered weak; between .40 and .69 considered moderate; and above .70 considered strong (Dancey & Reidy, 2017).

Considering our sample of 130 cases (97 females and 33 males), the G*Power software (version 3.1; alpha of .05) estimated a power of .94 for correlations and a power of .69 for student's t-tests (independent samples). Statistical significance was considered for *p* values under .05.

Results

Participants

Participants were 130 adolescents from the general population, of which 97 (74.60%) were girls and 33 (25.40%) were boys. The mean age of participants was 16.40 years old (*SD* = 0.95; range = 15-18) and they completed an average of 10.98 years in school (*SD* = 0.72). The majority of participants (82%) reported a medium socioeconomic status, while 12% re-

ported a high, 1% a very high and 5% a low status. Non-significant gender differences were found for age ($t(128)$ = 1.10, p = .273), years of schooling ($t(128)$ = 0.98, p = .327), and socio-economic status ($t(128)$ = 0.44, p = .663).

Preliminary Analyses

Kolmogorov-Smirnoff normality test was significant, but no severe violations of normality were found considering skewness and kurtosis values (Sk < 3 and Ku < 8-10) (Kline, 2011). Outliers were kept in order to maintain the natural variance and representation in the population. According to the preliminary results, parametric tests were conducted.

Perceived Impact of the Covid-19 Pandemic

In Table 1 are presented means, standard deviations, and frequencies for all the six items about the impact of the Covid-19 pandemic. Around 73% of adolescents agreed or strongly agreed that the Covid-19 pandemic affected their lives and around 45% agreed or strongly agreed that the Covid-19 pandemic affected them emotionally. In addition, 60% of adolescents considered that they were capable to manage the challenges raised due to the pandemic.

Table 1

Means (M), standard deviation (SD)*, and frequencies for the six Covid-19 pandemic items* (N = *130)*

Covid-19 questions	*M (SD)*	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
		n (%)	*n (%)*	*n (%)*	*n (%)*	*n (%)*
1. The Covid-19 pandemic has affected my life.	3.7 (1.0)	3 (2.4%)	15 (11.5%)	26 (20.0%)	58 (44.6%)	28 (28.5%)
2. I have been feeling limited to do my usual activities due to the Covid-19 pandemic.	3.7 (1.1)	7 (5.4%)	15 (11.5%)	17 (13.1%)	61 (46.9%)	30 (23.1%)
3. The Covid-19 pandemic has affected me emotionally (angry, scared, disturbed, depressed).	3.0 (1.4)	31 (23.9%)	22 (16.9%)	18 (13.8%)	38 (29.2%)	21 (16.2%)
4. I have been feeling uncomfortable to spend so much time with my family during quarantine.	2.3 (1.3)	49 (37.7%)	32 (24.6%)	23 (17.7%)	16 (12.3%)	10 (7.7%)
5. I have been feeling isolated from my friends due to the Covid-19 pandemic.	3.4 (1.3)	13 (10.0%)	25 (19.2%)	18 (13.8%)	49 (37.7%)	25 (19.2%)
6. I have managed to deal with the Covid-19 pandemic challenges.	3.7 (0.9)	4 (3.1%)	5 (3.8%)	43 (31.1%)	52 (40.0%)	26 (20.0%)

Demographic variables and the Covid-19 Pandemic Perceived Impact

Despite the disparity between boys and girls in the current sample, gender differences were explored regarding the perception of the impact of the new coronavirus pandemic. A student's t-test ($t_{(128)}$ = 3.82, p < .001) showed that girls presented a higher score (M = 3.2; SD = 1.3) in item 3 ("The Covid-19 pandemic have affected me emotionally") compared to boys (M = 2.2; SD = 1.5), with a medium effect size (d = 0.75). Non-significant differences were found between gender groups in the remaining items. Additionally, non-significant correlations were found between the six Covid-19-related items and age, years of education, and socioeconomic status.

Gender Differences in Depression, Anxiety, and Stress Symptoms During the Pandemic

Means and standard deviations for the total sample and gender groups are presented in Table 2. Results showed that girls exhibited higher levels of anxiety in comparison to boys ($t_{(128)}$ = 1.95, p = .05), with a small effect size (d = 0.42). A similar result was obtain for stress, with girls presenting higher scores than boys ($t_{(128)}$ = 2.78, p = .01), with a medium effect size (d = 0.55).

Table 2

Means (M), standard deviation (SD)*, and gender differences (student t-test) for the Depression Anxiety and Stress Scale for Adolescents* (N = *130)*

	Total sample	Boys (n = 33)	Girls (n = 97)	t (p-value)
	M (SD)	M (SD)	M (SD)	
Depression symptoms	5.44 (4.96)	4.39 (5.22)	5.79 (4.84)	1.41 (.16)
Anxiety symptoms	4.08 (4.23)	2.85 (3.41)	4.49 (4.41)	1.95 (.05)
Stress symptoms	6.17 (4.65)	4.27 (4.90)	6.81 (4.40)	2.78 (.01)

Relationship Between the Covid-19 Pandemic Perceived Impact and Negative Emotional States

Pearson correlations were conducted in order to explore the association between the perceived impact of Covid-19 and depression, anxiety, and stress symptoms (Table 3). Feeling emotionally affected was moderately correlated with stress (r = .45, p < .001) and depression (r = .43, p < .001) and weakly correlated with anxiety (r = .39, p < .001). Feeling uncomfortable to spend time with family during quarantine was moderately correlated with anxiety (r = .44,

$p < .001$) and weakly correlated with depression ($r = .39$, $p < .001$) and stress ($r = .37$, $p < .001$). Isolation from friends was weakly correlated with depression ($r = .22$, $p < .05$). Feeling able to deal with the pandemic challenges was weakly and negatively correlated with depression ($r = -.29$, $p < .001$), anxiety ($r = -.32$, $p < .001$), and stress ($r = -.30$, $p < .001$).

Table 3

Pearson correlations between the perceived impact of the Covid-19 pandemic and depression, anxiety, and stress (N = *130)*

Covid-19 questions	Depression (DASS-21)	Anxiety (DASS-21)	Stress (DASS-21)
1. The Covid-19 pandemic has affected my life.	.12	.07	.06
2. I have been feeling limited to do my usual activities due to the Covid-19 pandemic.	.15	.09	.08
3. The Covid-19 pandemic has affected me emotionally (angry, scared, disturbed, depressed).	.43**	.39**	.45**
4. I have been feeling uncomfortable to spend so much time with my family during quarantine.	.39**	.44**	.37**
5. I have been feeling isolated from my friends due to the Covid-19 pandemic.	.22*	.13	.17
6. I have managed to deal with the Covid-19 pandemic challenges.	-.29**	-.32**	-.30**

Note. * $p < .05$, ** $p < .001$. DASS-21 = Depression Anxiety Stress Scale.

Discussion

Considering the worldwide Covid-19 pandemic, the aim of the current study was to understand how Portuguese adolescents perceived the impact of the pandemic and to explore the association with mental health variables, a month after the outbreak. Previous studies have reported the negative impact of the Covid-19 pandemic, showing an association with depression, anxiety, and stress symptoms (Wang, Zhang et al., 2020; Xiang & Zhang, 2020); however there is a lack of studies with adolescent samples on this topic.

In the current study, the Covid-19 pandemic perceived impact appeared to have no relationship with age, which means that experienced difficulties about the pandemic and being able to manage them are not related to being younger or older. However, girls reported feeling more emotionally affected by the pandemic context than boys. Moreover, results showed that female adolescents presented higher anxiety and stress levels during the pandemic. Previous literature has discussed that female adolescents are more vulnerable to develop psychological distress, anxiety, and depression not only in general (Hayward & Sanborn, 2002; Van Droogenbroeck et al., 2018), but also in the pandemic context (Chen et al., 2020;

Miranda et al., 2020). Moreover, no relation was found between the perceived impact of the Covid-19 pandemic and years of education and socioeconomic status.

Around 73% of adolescents agreed that their lives were affected, and around 43% reported being emotionally affected, including feeling angry, scared, disturbed or depressed, since the outbreak in Portugal. Relational, cognitive, scholar, and economic challenges related to the Covid-19 pandemic are associated with negative emotional affect, which is a defensive response to deal with this context. Fegert et al. (2020) affirmed that changes related to pandemic occurrences have the potential to psychologically affect people, and it was expected that the pandemic context would have a negative impact on adolescents' mental health. In general, these results align with previous studies about the negative impact of the Covid-19 pandemic (Dubey et al., 2020; Wang, Zhang et al., 2020; Xiang & Zhang, 2020).

Results showed that depression, anxiety, and stress symptoms were positively associated with feeling emotionally affected by the pandemic and with feeling uncomfortable for spending time with family during the quarantine. This last matter is concerning and might be related to more frequent familiar conflicts in a period of uncertainty and additional stressors (unemployment, economic shutdown, diminished privacy, emotional vulnerability), with violence potentially increasing in abusive environments (Lee, 2020). Depression symptoms were also weakly associated with being isolated from friends, highlighting the importance of social interactions with same-age peers (Rohrbeck & Gray, 2014). The weak association might be related to using social media to contact friends by messages and/or videocalls, probably decreasing the feeling of isolation. Moreover, our sample might overly include adolescents with more well-heeled backgrounds, with access to several resources that might protect them from negative symptoms. We must also consider that adolescents who already presented psychopathological symptoms before the pandemic might be more prone to experience negative affect, although we cannot directly answer this question considering the cross-sectional data.

On the other side, around 60% of adolescents reported feeling able to deal with the current situation and, in our view, this might be an indicative of positive future outcomes. However, mental health-related policies are encouraged to prevent the development of some clinical psychological symptoms that might persist. Adolescents with vulnerability to developing mental health problems are important risk populations to be watched over. Also, girls seemed to be at a greater risk of feeling emotionally disturbed during this period and parents, teachers and doctors are encouraged to be alert and refer them to clinical assessment and treatment when necessary.

The current study was one of the first Portuguese studies shedding light on the emotional and psychological impact of the Covid-19 pandemic on adolescents. Nevertheless, it presents some limitations. Participants were a convenience sample, collected online (youth without internet access at home are not represented in this study) and with an uneven pro-

portion of boys and girls, which might not reflect a representative sample of Portuguese adolescents. Moreover, the cross-sectional data do not allow firmly inferring causality between variables, for example we cannot affirm whether psychopathological symptoms were caused by the pandemic or triggered by previous anxiety or stress symptoms. Although we know that a large number of adolescents reported feeling able to deal with the pandemic context, it would be important to further explore which coping strategies were employed and the potential effect of risk factors on mental health, such as violence exposure or adverse familial environment. Additionally, future studies could also investigate the effect of Covid-19 health literacy on mental health and emotional states, as well as the impact of the subsequently de-confinement measures. Overall, we must be prudent regarding our conclusions, and longitudinal and prospective studies are crucial to understand the evolution of emotional states during the Covid-19 pandemic in representative adolescent samples.

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to heal
you have to
get to the root
of the wound
and kiss it all the way up

- rupi kaur