

Deliberate self-harm in adolescence: The impact of childhood experiences, negative affect and fears of compassion

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Abstract: Adolescence is a developmental period of significantly risk for self-harm (SH). This paper aims to analyse the associations between experiences of threat and submissiveness in childhood, positive and negative affect, fears of compassion and SH behaviours. Furthermore, it aims to explore the relative contribution of early experiences of threat and submissiveness, negative affect and fears of compassion to the prediction of SH severity. Participants were 831 adolescents, aged between 13-18 years old, from schools in the central region of Portugal. Results show that personal feelings of threat and submissiveness, negative affect, fear of compassion for self and gender significantly predict SH. These results suggest that adolescents with deliberate SH have not only difficulties in dealing with negative emotions, but also fear of compassion towards the self. These findings emphasize the potential value of incorporating self-compassion approaches and addressing the fears of compassion in the treatment of SH in adolescents.

Keywords: Adolescence; childhood experiences; negative affect; fears of compassion; self-harm.

Autolesión deliberada en la adolescencia: Impacto de experiencias en la niñez, afecto negativo y temores de compasión

Resumen: La adolescencia es un período de desarrollo con elevado riesgo de autolesiones. En este trabajo analizamos la asociación entre experiencias de amenaza y sumisión en la infancia, afectividad, temores de compasión y autolesión. Asimismo, se pretende explorar la contribución de experiencias anticipadas de estas variables para la predicción de la gravedad de la autolesión. Participaron 831 adolescentes, con edades entre 13-18 años, de las escuelas de la región centro de Portugal. Los resultados muestran que los sentimientos de amenaza y sumisión, afecto negativo, temor a la compasión por sí mismo y el género predicen la autolesión de forma significativa. Así, los resultados sugieren que los adolescentes con autolesión deliberada no sólo presentan dificultades para afrontar las emociones negativas, sino miedo de compasión hacia el ser. Los resultados enfocan el valor potencial de incorporar la compasión y afrontar los temores de la compasión en el tratamiento de autolesiones en los adolescentes.

Palabras clave: Adolescencia; experiencias de la primera infancia; afecto negativo; temores de compasión; autolesión.

Adolescence is a developmental period of significantly risk for non-suicidal self-injury (NSSI) (Hawton, Saunders, & O'Connor, 2012; Klonsky, Muehlenkamp, Lewis, & Walsh, 2011). NSSI refers to an intentional self-inflicted damage of body tissue without suicidal intent and excluding socially accepted behaviours (Klon-

sky et al., 2011; American Psychiatric Association, 2013). In literature there are other alternative terms, such as deliberate self-harm, self-injury, self-mutilation. In this paper, we use henceforth the term self-harm (SH) in its broader meaning to indicate "culturally unacceptable behaviour that involves direct and deliberate infliction of physical harm to one's body, regardless of the presence of suicidal intent and in the absence of a pervasive developmental disorder" (Vrouva, Fonagy, Fearon, & Roussov, 2010, p.852).

Self-harm is more common in adolescents and young adults than in adults, as evidenced by prevalence rates of approximately 14%-39% in adolescent community samples (Cerrutti, Manca, Presaghi, & Gratz, 2011; Glass-

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man, Weierich, Hooley, Deliberto, & Nock, 2007; Giletta, Scholte, Engels, Ciairano, & Prinstein, 2012; Laye-Gindhu & Schonert-Reichl, 2005). There is evidence that deliberate self-harm typically begins between the ages of 12 and 16 years old (Klonsky et al., 2011) and the more common methods of self-harm across several studies are skin cutting and self-hitting (Madge et al., 2011; Cerutti et al., 2011). Concerning gender differences, research indicate that SH is more common in female adolescents than in male adolescents (Giletta et al., 2012; Hawton et al., 2012; Klonsky et al., 2011; Laye-Gindhu & Shonert-Reichl, 2005; Madge et al., 2011). However, other studies have found similar rates for both genders with significant differences in methods of self-injury (Cerutti et al., 2011; Hawton et al., 2012). Females appear more likely to cut their skin, whereas males appear more likely to burn or hit themselves and females tend to engage in more frequent SH (Klonsky et al., 2011; Laye-Gindhu & Shonert-Reichl, 2005).

Self-harm in adolescents is the result of complex relationships between genetic, biological, psychological, social and cultural factors (Hawton et al., 2012). For instance, research has documented strong associations between SH and several negative mental health outcomes, including depression, anxiety, interpersonal or family conflict, isolation or loneliness, impulsivity, psychiatric illness (e.g., borderline personality disorder), suicidal behaviour, self-derogation or self-criticism, externalizing disorders, substance abuse (Glassman et al., 2007; Klonsky et al., 2011; Madge et al., 2011). Furthermore, some risk factors for SH have been identified in environmental context, such as childhood abuse (e.g., sexual, physical and emotional abuse or neglect) and bullying experiences (e.g., peer victimization) (Hawton et al., 2012; Kaes et al., 2013; Kokouline & Fernández, 2014; McMahon, Reulbach, Keeley, Perry, & Arensman, 2012) and in individual characteristics, such as emotion dysregulation and negative emotionality (i.e., affect intensity/reactivity) (Hawton et al., 2012; Klonsky et al., 2011).

Regarding early experiences with caregivers, studies consistently show that negative experiences (e.g., parental unresponsiveness, neglect, criticism, shaming, abuse) are associated with various stress responses and psychopathology (Ferreira, Granero, Noorian, Romero, & Domènech-Llaberia, 2012; Schore, 2001). According to social rank theory (Gilbert, 2000), in face of these stressed, fearful and threatened environments, a child may adopt various submissive and low rank defensive behaviours (e.g., by submitting, avoiding, backing down if challenged, appeasing others, passive inhibition). Over the time and repeated aversive experiences, a child tends to be overly attentive to threats (rather than be able to

rely on parents for safety, emotional regulation and secure attachment) and, consequently, may be more vulnerable to depression, social anxiety, paranoia and shame (Gilbert, 2000; Gilbert, Cheung, Grandfield, Campey, & Irons, 2003; Gilbert & Irons, 2009; Irons, Gilbert, Baldwin, Baccus, & Palmer, 2006; Pinto-Gouveia, Matos, Castilho, & Xavier, 2012). In contrast, warm, nurturing and safe environments are associated with greater psychological adjustment indicators and lower risk of vulnerability to psychopathology (Cunha, Martinho, Xavier, & Espírito-Santo, 2013; Ritches, Gilbert, & MacEwan, 2009). The experience of safeness and soothing are not just linked to the absence of threat but also to the presence of specific affiliative signals and experiences (e.g., being loved, accepted, valued and chosen by others) (Ritches et al., 2009) that provide the deactivation of threat systems, offer essential resources for coping with adversity and promote feelings of safeness, regulating physiological and affective systems that may lead to health and well-being (Baldwin & Dandeneau, 2005; Gilbert, 2010; Zolkoski, & Bullock, 2012). Hence, memories of parents as rejecting or threatening are associated with the activation of threat systems, whereas memories of parents as warm, emotional responsive and nurturing are associated with abilities to self-reassure and self-compassion (Gilbert, 2010; Gilbert, Baldwin, Baccus, & Palmer, 2006; Gilbert & Irons, 2009; Gilbert & Procter, 2006).

There is increasing evidence that developing compassion, especially to deal with stressful difficulties and setbacks or failures, promotes psychological adjustment, social connectedness and well-being in adults and adolescents population (Barnard, & Curry, 2011; Gilbert & Procter, 2009; Neff & McGehee, 2010). However, for some people, positive emotions and compassionate feelings may give rise to avoidance or even fear reactions (Gilbert, 2010; Gilbert & Procter, 2006; Gilbert et al., 2010). In particular, individuals with high shame and self-criticism, from harsh backgrounds, tend to express fears, blocks and resistance to being kind to themselves, feeling self-warmth or being self-compassionate (Gilbert, 2010; Gilbert & Procter, 2006; Gilbert et al., 2010). According to Gilbert and colleagues (2010), the fears of compassion have three directions or dimensions: (i) *Fear of compassion for others*, which involves the compassion that we feel and express for others, related to our sensitivity to other people's thoughts and feelings; (ii) *Fear of compassion from others*, which includes the compassion that we receive and experience from others and respond to them; and (iii) *Fear of compassion of self*, which involves the compassionate feelings that we have for ourselves, particularly in times of suffering.

Recent studies suggest that these fears of compassion are linked to self-criticism, depression, anxiety and stress symptoms, alexithymia and difficulties with mindfulness abilities, feeling safe and being self-reassuring (Gilbert et al., 2010; Gilbert, McEwan, Gibbons, Chotai, Duarte, & Matos, 2011). Moreover, these fears may difficult the development of compassionate experiences or behaviours and social safeness system that underpins compassion (Gilbert, 2010). Given the benefits of interventions focused on compassion (e.g., Compassion-Focused Therapy – CFT; Gilbert, 2010) in a variety of mental health difficulties (e.g., shame, self-criticism, rumination, avoidance, negative affect, anxiety, depression; Barnard & Curry, 2011), the resistance to compassion should be addressed within the therapeutic context in order to promote internal affect regulation, affiliative connections and emotions (Gilbert, 2010). Moreover, the development of these compassionate abilities seems to be promising for adolescents (Gilbert & Irons, 2009; Neff & McGehee, 2010) and for particular psychological difficulties (e.g., non-suicidal self-injury; Vliet, & Kalnins, 2011) in that age group.

Even though there is strong empirical support for the role of adverse childhood experiences in the vulnerability for development of psychopathology, in general (Ferreira et al., 2012; Gilbert et al., 2003; Irons et al., 2006; Kokoulina & Fernández, 2014; Schore, 2001), and of deliberate self-harm, in particular (Kaes et al., 2013; Madge et al., 2011), the way how individuals recall these early experiences (rather than parent behaviours) has been less explored. Moreover, as far as we know the impact of early experiences and fears of compassionate feelings or behaviours on the severity of self-harm behaviours among young people has never been investigated.

Therefore, this study aims to analyse the relationships between early experiences of threat and submissiveness in childhood, positive and negative affect, fears of compassion and SH behaviours. Furthermore, it aims to explore the relative contribution of the early experiences of threat and submissiveness, negative affect and fear of compassion for self to the prediction of the severity SH behaviours in adolescents. Taken together the aforementioned theoretical and empirical accounts, we hypothesize that adolescents who recall threatening and fearful experiences would score higher in negative affect, fear of compassionate feelings and SH. We further expect that the resistance or fear to direct kindness and compassion towards the self will predict increased levels of SH. We also expect that negative affect will be linked to SH.

Method

Participants

The sample consists of 831 adolescents, 360 boys (43.3%) and 471 girls (56.7%), with a mean age of 15.31 ($SD = 1.55$), ranging between 13 and 18 years old. These adolescents attended the 7th to 12th grade (years of education $M = 9.88$, $SD = 1.41$) at schools from Coimbra, Portugal. Gender differences were found concerning age, $t_{(829)} = -2.591$, $p = .010$ and years of education, $t_{(829)} = -3.258$, $p = .001$, indicating that girls are older and have more years of education than boys (female mean age = 15.44, $SD = 1.57$ vs. male mean age = 15.16, $SD = 1.51$; female mean years of education = 10.02, $SD = 1.41$ vs. male mean years of education = 9.70, $SD = 1.39$). However, no correlations were found between age or years of education and the variables in study.

Measures

The Early Life Experiences Scale (ELES; Gilbert, Cheung, Grandfield, Campey, & Irons, 2003; Portuguese version for adolescents by Pinto-Gouveia, Xavier, & Cunha, 2015) consists of 15 items focusing on recall of perceived threat and subordination in childhood. This scale comprises three subscales: (i) *Threat*, which taps feelings of threat (6 items; e.g., “The atmosphere at home could suddenly become threatening for no obvious reason”); (ii) *Submissiveness*, which address feeling subordinate and acting in a submissive way (6 items; e.g., “I often had to give in to others at home”); and (iii) *(Un)valued*, which comprise positive items that assess the perception of being valued, feeling equal and relaxed in the family (3 items – reversed; e.g., “I felt very comfortable and relaxed around my parents.”). Respondents were asked to answer how frequently and how true each statement was for them in their childhood and each item is rated on a 5-point scale (1–5). The scale can be used as a single construct or as three separate subscales. In the original study, Gilbert and colleagues (2003) found a good Cronbach’s alpha for total score ($\alpha = .92$) and an adequate Cronbach alpha for the three subscales: .89 for threat, .85 for submissiveness and .71 for (un)valued. The Portuguese version for adolescents (Pinto-Gouveia et al., 2015) revealed also adequate internal consistency for the total score ($\alpha = .86$) and for each subscale, with Cronbach’s alphas of .77 for threat subscale, .74 for submissiveness subscale and .68 for (un)valued subscale. In the present study we only used the ELES total score, which presented a good internal consistency ($\alpha = .87$).

The Fears of Compassion Scales (FCS; Gilbert, McEwan, Matos, & Ravis, 2010; Portuguese version for adolescents by Duarte, Pinto-Gouveia, & Cunha, 2014) consists of three scales, measuring fear of compassion for others, from others and for self. The *Fear of compassion for Others* comprised 13 items that assess the compassion we feel for others, linked to our sensitivity to other people's thought and feelings (e.g., "Being too compassionate makes people soft and easy to take advantage of."). The *Fear of compassion from Others* consists of 15 items that measure the compassion that we experience from others and flowing into the self (e.g., "I try to keep my distance from others even if I know they are kind."). The *Fear of compassion for Self* comprises 17 items that taps the compassion we have for ourselves when we make mistakes or things go wrong in our lives (e.g., "I worry that if I start to develop compassion for myself I will become dependent on it."). The items were rated on a 5-point scale (0-4). In the original study (Gilbert et al., 2010), the Cronbach's alphas for these scales were .78 for *FC for others*, .87 for *FC from others*, and .85 for *FC for self*. In the present study the Cronbach's alphas were .81 for *FC for others*, .86 for *FC from others*, and .92 for *FC for self*.

The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; Portuguese version for Children and Adolescents by Carvalho, Baptista, & Gouveia, 2004) consists of 20-item scale that comprise two mood scales, one measuring positive affect (PA; 10-items) and other measuring negative affect (NA; 10-items). Respondents are asked to rate the extent to which they have experienced each particular emotion during the past week, using a 3-point scale (1 = not at all; 2 = sometimes; 3 = many times). The scores may range between 10 and 30 for each subscale and higher scores reflect greater positive affect and negative affect, respectively. In the original study, Watson and colleagues (1988) found high alpha reliabilities, ranging from .86 to .90 for PA and from .84 to .87 for NA. The Portuguese version (Carvalho et al., 2004) presented good internal consistency for both subscales, with Cronbach's alpha of .76 for PA and .83 for NA. In the present study, we obtained good internal consistency, with Cronbach's alpha of .86 for negative affect and .80 for positive affect.

The Risk-taking and Self-harm Inventory for Adolescents (RTSHIA; Vrouva et al., 2010; Portuguese version by Xavier, Cunha, Pinto-Gouveia, & Paiva, 2013) is a self-report measure that assesses risk-taking (RT) and self-harm (SH) behaviours in adolescents from community and clinical settings. The 8 RT-related items ranged from mild behaviours (e.g., smoking tobacco, taking

chances while doing one's hobbies) to serious RT (e.g., participating in gang violence). The 18 SH-related items are about intentionally behaviours, such as self-mutilation, disordered eating, self-demeaning behaviour, and SH ideation, with or without suicidal intent. The items were on a 4-point scale (0-3), referring to frequency of these behaviours in lifelong history. There is also one dichotomous question about the part(s) of the body that were deliberately injured, if applicable, followed by options (e.g., torso, belly, buttocks; hands, arms, fingers, nails). In the original study (Vrouva et al., 2010) both subscales revealed good internal consistency with Cronbach's alpha of .85 for RT (8 items) and .93 for SH (18 items). In the present study we obtained Cronbach's alphas of .76 for RT subscale and .89 for SH subscale. Taking into account the aims of the current study, we only used the SH dimension.

Procedure

Previous to the administration of the questionnaires, ethical approvals were obtained by the Ministry of Education and the National Commission for Data Protection from Portugal. Then, the Head Teacher of the school and parents were informed about the goals of the research and gave their consent. Adolescents were informed about the purpose of the study, aspects of confidentiality and consent. They voluntarily participated and filled out the instrument in the classroom. The questionnaires were administered by the author, A. X., in the presence of the teacher, in order to provide clarification if necessary and to ensure confidential and independent responding.

Data analysis

Statistical analyses were carried out using PASW Software (Predictive Analytics Software, version 18, SPSS, Chicago, IL, USA) for PCs. Descriptive statistics were computed to explore demographic variables and gender differences were tested using independent samples *t* test (Field, 2013). Pearson product-moment correlations were performed to explore the relationships between early experiences of threat and submissiveness (measured by ELES), fears of compassion (measured by FCS), negative and positive affect (measured by PANAS) and self-harm behaviours (measured by RTSHIA) (Field, 2013; Tabachnick, & Fidell, 2007). A multiple regression analysis, using the hierarchical regression method, was conducted to explore the contribution of early experiences, negative affect and FC for self as independent variables to predict the SH behaviours

(dependent variable). Effects with $p < .050$ were considered statistically significant (Field, 2013; Tabachnick, & Fidell, 2007).

Preliminary data analysis

A series of tests was conducted to examine the suitability of the current data for regression analyses. We performed an analysis of residuals scatter plots as it provides a test of assumptions of normality, linearity, and homoscedasticity between dependent variables scores and errors of prediction. The data showed that the residuals were normally distributed and had linearity and homoscedasticity. All variables showed adequate values of skewness and kurtosis ($Sk > |3|$ and $Ku > |10|$; Kline, 2005). Also, the independence of the errors was analyzed and validated through graphic analysis and the value of Durbin–Watson (value of 1.878). No evidence of the presence of multicollinearity or singularity among the variables was found. These aspects were validated by the variance inflation factor (VIF) values indicated the absence of β estimation problems ($VIF < 5$). In general, the results indicate that these data are adequate for regression analyses.

Results

History of self-harm

In this sample, 21.7% ($n = 180$) of adolescents reported at least once deliberate self-harm behaviour in their lifetime history. For these adolescents who en-

gaged in self-harm, the parts of the body more reported were hands, arms, fingers, nails (13.5%, $n = 112$) and legs, feet, toes (1.9%, $n = 16$).

Descriptive statistics

The descriptive statistics for this study are reported in Table 1. Results show that there are gender differences for fear of compassion from others (Fears of Compassion Scales), negative affect (PANAS) and Self-harm subscale (RTSHIA). In particular, these findings suggest that girls had significantly higher mean scores on fear of compassion *from others* than boys ($M = 17.73$, $SD = 9.79$ vs. $M = 16.26$, $SD = 9.73$). Additionally, girls report more levels of negative affect than boys ($M = 18.55$, $SD = 3.99$ vs. $M = 16.38$, $SD = 4.10$). Girls endorse more self-harm behaviours than boys ($M = 4.44$, $SD = 6.52$ vs. $M = 3.03$, $SD = 5.29$).

Correlation analysis

Table 2 presents the Pearson's correlation coefficients (two-tailed) for all variables in study. The results of correlation analysis show that there are positive and significant correlations between early experiences of threat and submissiveness (ELES) and the fears of compassion. As expected, early experiences of threat and submissiveness (ELES) have a positive association with negative affect and a negative correlation with positive affect (PANAS). There is a positive and significant association between these early experiences of threat and submissiveness (ELES) and SH behaviours. In addition,

Table 1. Means (M), standard deviations (SD) and gender differences on variables in study ($N = 831$)

Variables	Total ($N = 831$)		Boys ($n = 360$)		Girls ($n = 471$)		t	p
	M	SD	M	SD	M	SD		
<i>Early Life Experiences</i>								
ELES Total	31.46	9.76	32.00	9.37	31.04	10.04	1.406	.160
<i>Fears of Compassion</i>								
FC for others	21.42	8.00	20.97	7.87	21.77	8.13	-1.423	.155
FC from others	17.09	9.78	16.26	9.73	17.73	9.79	-2.144	.032
FC for self	15.65	12.42	15.41	12.43	15.84	12.43	-.503	.615
<i>PANAS</i>								
Negative Affect	17.61	4.17	16.38	4.10	18.55	3.99	-7.674	<.001
Positive Affect	23.03	3.51	23.19	3.52	22.92	3.50	1.086	.278
<i>RTSHIA</i>								
SH	3.83	6.05	3.03	5.29	4.44	6.52	-3.453	.001

Note. ELES = Early Life Experiences Scale; FC = Fears of Compassion; PANAS = Positive and Negative Affect Schedule; RTSHIA = Risk-taking and Self-harm Inventory for Adolescents; SH = Self-harm subscale.

there are positive and significant correlations between fears of compassion and negative affect. Only fears of compassion *from others* and *for self* have a significant and a negative association with positive affect (PANAS). Finally, fears of compassion *from others* and *for self* are positively associated with overall levels of self-harm behaviours.

Multiple regression analysis

A multiple regression analysis, using hierarchical method, was conducted to examine the predictor effect of experiences of threat and submissiveness in childhood (ELES total score), negative affect (PANAS) and fear of compassion for self (FC for self) on the severity of self-harm behaviours (SH subscale of the RTSHIA). In order to control the effect of gender on the variables in study, we entered gender in the first step of this analysis. As can be seen in Table 3, the regression analysis' results revealed that the predictor variables produce a significant model, $F_{(3,826)} = 69.006, p \leq .001$, accounting for 21% of the variance in self-harm behaviours. Negative affect emerged as the best global predictor ($\beta = .205, p \leq .001$), followed by early experiences of threat and submissiveness ($\beta = .201, p \leq .001$), fear of compas-

sion for self ($\beta = .187, p \leq .001$) and gender ($\beta = .070, p = .032$).

Discussion

Self-harm is considered as a major public health concern in adolescents, with high prevalence rates among young people from community (Cerrutti et al., 2011; Hawton et al., 2012; Klonsky et al., 2011; Gilletta et al., 2012). A wide range of risk factors is associated with self-harm, including individual (e.g., genetic vulnerability), psychological, familiar, social and cultural factors (Hawton et al., 2012; Madge et al., 2011). Even though literature consistently shows the crucial role of adverse experiences and negative life events on the aetiology of self-harm behaviours, this study intend to explore particular set of personal feelings in the interaction with caregivers, rather than parental behaviour. Moreover, the present study aims to analyse the relationship between recall of feeling frightened and subordinate in early interactions with parents, fears of compassion (for others, from others and for self), negative and positive affect and the severity of self-harm behaviours among community adolescents.

The prevalence rate of self-harm behaviours in this Portuguese adolescents' sample is high and it is in ac-

Table 2. Correlations (2-tailed Pearson r) between ELES, fears of compassion, PANAS, RTSHIA subscales ($N = 831$)

	ELES total	FC for others	FC from others	FC for self	NA	PA
FC for others	.31***					
FC from others	.39***	.51***				
FC for self	.37***	.43***	.70***			
Negative affect	.29***	.28***	.36***	.40***		
Positive affect	-.22***	ns	-.24***	-.21***	-.21***	
Self-harm subscale	.33***	ns	.30***	.35***	.36***	-.18***

Note. *** $p < .001$. ns = nonsignificant; FC = Fears of Compassion; NA = Negative Affect subscale; PA = Positive Affect subscale.

Table 3. Model summary for regression analysis using early experiences of threat and submissiveness (ELES), fear of compassion for self (FC for self) and negative affect (PANAS) (independent variables) to predict self-harm behaviours (RTSHIA) (dependent variable) ($N = 831$)

Model	Predictors	R	R ²	R ² adj.	F	β	p
1		.116	.013	.012	11.282		.001
	Gender					.116	.001
2		.459	.211	.207	69.006		<.001
	Gender					.070	.032
	ELES Total					.201	<.001
	FC for self					.187	<.001
	Negative affect (PANAS)					.205	<.001

Note. ELES = Early Life Experiences Scale; FC = Fears of Compassion; PANAS = Positive and Negative Affect Schedule; RTSHIA = Risk-taking and Self-harm Inventory for Adolescents.

cordance with research among adolescents from community (Cerrutti et al., 2011; Giletta et al., 2012). In regard to gender differences, girls tend to have fear of compassion that they receive and experience from others, to endorse more levels of negative affect and to report more self-harm behaviours than boys. These results are in line with previous studies, showing that females adolescents are more vulnerable for the development of depressive symptoms (Nolen-Hoeksema, 2001) and self-harm (Madge et al., 2011; Giletta et al., 2012; Hawton et al., 2012; Klonsky et al., 2011; Laye-Gindhu & Shonert-Reichl, 2005).

Consistent with our hypothesis, correlation analysis results suggest that adolescents who recall feelings of threat, submissiveness and unvalued in their childhood tend to have more fears of compassion (for others, from others and for self), to report higher levels of negative affect and lower levels of positive affect and to endorse more self-harm behaviours. Adolescents with more fear of compassionate feelings towards themselves tend to endorse higher levels of negative affect and more self-harm. Previous data in adult samples demonstrates that experiences of threat and submissiveness in childhood are associated to depression (Gilbert et al., 2003). Additionally, Gilbert (2007) found that the fear of self-compassion is linked to low affection or abusive, neglected and critical backgrounds. Our findings extend research in adolescence on the relationship between early threatening experiences and psychopathology, including emotional negative states and self-destructive behaviours.

The results of multiple regression analysis indicate that experiences of threat and submissiveness in childhood, fear of compassion for self and negative affect have a significant and an independent contribution on the prediction of the severity of self-harm behaviours. In accordance with our prediction, this finding suggests that the risk factors for engagement in self-harm behaviours are adolescents from fearful, threatened environments and with submissive behaviours; adolescents who experienced negative affect; adolescents who fear of being self-kind and self-compassionate; and being a girl.

Our results add to research on risk factors for self-harm among adolescents, showing the important role of perceived threat and submissiveness in early childhood experiences. Indeed, when individuals are subjected to threat and neglect they become more threat sensitive, more focused on cues of social rank position and competition (e.g., by displaying submissive behaviours), and more likely to be self-critical, to experience shame and depression (Gilbert & Irons, 2009; Gilbert et al., 2003; Irons & Gilbert, 2006). These individuals are not only self-critical but also may be limited in their ability to be

self-soothing and reassuring (Gilbert, 2010; Gilbert & Procter, 2006; Irons & Gilbert, 2009). These data may also explain the association between early adverse experiences (e.g., abuse, neglect, low affection) and fear of compassion from others, for others and for self.

In the present study we also found that the risk for self-harm among adolescents is not only explained by the presence of negative affect but also of the fear of compassionate feelings towards themselves. The key finding here is that adolescents with deliberate self-harm may experience negative affect and struggle with fear of compassionate feelings by avoiding these feelings and displaying active resistance to engage in compassionate experiences or behaviours. It seems that adolescents with inability to direct kindness and compassion towards the self are more vulnerable to engage in self-destructive behaviours. This finding offers novel insight about the impact of fears of compassion on self-harm behaviours.

Additionally, girls seem to be more susceptible to engage in self-harm behaviours. This result is in line with previous data (Giletta et al., 2012; Hawton et al., 2012; Klonsky et al., 2011; Laye-Gindhu & Shonert-Reichl, 2005; Madge et al., 2011). Overall, these results highlight the importance of early threatening experiences and fears of self-compassionate feelings for the vulnerability to self-harm behaviours in young people.

Some limitations of this study should be considered when interpreting our findings. Firstly, although the overall sample size was large, girls are older and have more years of education than boys. However, no correlations were found between age and variables in study, suggesting that age does not compromise our findings. In addition, the sample consists of adolescents who attended schools from Coimbra, so it cannot be considered as a representative sample of the general population of Portuguese adolescents. Secondly, the conclusions are based on a community sample and may not generalize to other populations. Further research should replicate these findings in clinical populations. Third, this study is a cross-sectional design and the direction of causality cannot be assumed. Clearly, prospective and longitudinal studies are needed for examine the causal links among aetiological factors of self-harm. Finally, the data were collected through self-report measures and are retrospective in nature. Future studies would great benefit from including other measures to assess frequency, methods and functions of self-harm, such as structured interviews.

Despite the limitations aforementioned, the present study may have some clinical implications. Generally speaking, female adolescents who recall adverse experiences, feel greater negative affect and have more diffi-

culty in being self-reassuring and self-soothing tend to be more vulnerable for engagement in deliberate self-harm behaviours. Indeed, these results suggest that adolescents with deliberate self-harm have not only negative memories and negative affect associated, but also difficulties in emotion regulation processes. Such difficulties in emotion regulation are translated in adolescents' fears for and resistance to compassionate feelings and behaviours towards themselves.

These findings emphasize the potential value of incorporating self-compassion approaches and addressing the fears of compassion in the treatment of SH behaviours in adolescents. In other words, our findings reinforce the literature (Gilbert, 2010; Gilbert et al., 2010, 2012), proposing that the abilities in accessing to compassion and experiencing the benefits of affiliative emotions are linked to an adaptive emotion regulation and mental health. Thus, preventive actions for adolescents should promote positive, safe and supportive interpersonal relationships in academic, family and community environments in order to provide opportunities to develop adaptive emotional skills.

References

- American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Washington, DC: American Psychiatric Association.
- Baldwin, M. W., & Dandeneau, S. D. (2005). Understanding and modifying the relational schemas underlying insecurity. In M.W. Baldwin (Ed.), *Interpersonal cognition* (pp. 33-61). New York: The Guilford Press.
- Baptista, A., Gouveia, J., & Gouveia, J. (2004). Análise da estrutura factorial de uma medida de auto-avaliação da afectividade negativa e positiva para crianças e adolescentes [Analysis of the factor structure of a self-report of positive and negative affectivity in children and adolescents]. *Avaliação Psicológica: Formas e Contextos*, Braga, Portugal. Retrieved from <http://cae.ulufona.pt/artigos/An%C3%A1lise%20da%20estrutura%20factorial%20de%20uma%20medida%20de%20avalia%C3%A7%C3%A3o%20da%20afectividade%20em%20crian%C3%A7as.pdf>
- Barnard, L. K., & Curry, J. F. (2011). Self-compassion: Conceptualizations, correlates, & interventions. *Review of General Psychology*, *15*, 289-303. doi: 10.1037/a0025754
- Cerutti, R., Manca, M., Presaghi, F., & Gratz, K.L. (2011). Prevalence of clinical correlates of deliberate self-harm among a community sample of Italian adolescents. *Journal of Adolescence*, *34*, 337-347.
- Cunha, M., Martinho, M.I., Xavier, A., & Espírito-Santo, H. (2013, April). Early Memories of Positive Emotions and its Relationships to Attachment Styles, Self-Compassion and Psychopathology in Adolescence. Poster session presented at the meeting of the 21st European Congress of Psychiatry, Nice, France. URL: http://epa.ekconnect.co/swf/poster_viewer.aspx
- Duarte, C., Pinto-Gouveia, J., & Cunha, M. (2014, November). Fears of compassion in adolescence: Fears of Compassion Scales' examination and implications in this population. Poster session presented at the meeting of the 3rd International Conference on Compassion Focused Therapy, Birmingham, UK.
- Ferreira, E., Granero, R., Noorian, Z., Romero, K., & Domènech-Llberia, E. (2012). Acontecimientos vitales y sintomatología depresiva en población adolescente [Life events and depressive symptoms in adolescents]. *Revista de Psicopatología y Psicología Clínica*, *17*, 123-136. doi: <http://dx.doi.org/10.5944/rppc.vol.17.num.2.2012.11209>
- Field, A. (2013). *Discovering Statistics using IBM SPSS Statistics* (4th ed.). London: SAGE Publication Ltd.
- Gilbert, P. (2000). Varieties of submissive behaviour: Evolution and role in depression. In L. Sloman & P. Gilbert (Eds.), *Subordination and defeat: An evolutionary approach to mood disorders* (pp. 3-46). Hillsdale, NJ: Lawrence Erlbaum.
- Gilbert, P. (2010). *Compassion focused therapy. Distinctive features*. London: Routledge.
- Gilbert, P., & Irons, C. (2009). Shame, self-criticism and self-compassion in adolescence. In N. B. Allen, & L. B. Sheeber (Eds.), *Adolescent emotional development and the emergence of depressive disorders* (pp. 195-214). Cambridge: Cambridge University Press. doi: <http://dx.doi.org/10.1017/CBO9780511551963.011>
- Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy*, *13*, 353-379. doi: 10.1002/cpp.507
- Gilbert, P., Baldwin, M. W., Irons, C., Baccus, J. R., & Palmer, M. (2006). Self-criticism and self-warmth: An imagery study exploring their relation to depression. *Journal of Cognitive Psychotherapy*, *20*, 183-200. doi: 10.1891/jcop.20.2.183
- Gilbert, P., Cheung, M., Grandfield, T., Campey, F., & Irons, C. (2003). Recall of threat and submissiveness in childhood: Development of a new scale and its relationship with depression, social comparison and shame. *Clinical Psychology & Psychotherapy*, *10*, 108-115. doi: 10.1002/cpp.359
- Gilbert, P., McEwan, K., Gibbons, L., Chotai, S., Duarte, J., & Matos, M. (2012). Fears of compassion and happiness in relation to alexithymia, mindfulness, and self-criticism. *Psychology and Psychotherapy: Theory, Research and Practice*, *85*, 374-390. doi: 10.1111/j.2044-8341.2011.02046.x
- Gilbert, P., McEwan, K., Matos, M., & Rivis, A. (2010). Fears of compassion: Development of three self-report measures. *Psychology and Psychotherapy: Theory, Research and Practice*, *84*, 239-255. doi: 10.1348/147608310X526511
- Giletta, M., Scholte, R.H.J., Engels, R.C.M.E., Ciairano, S., & Prinstein, M.J. (2012). Adolescent non-suicidal self-injury: A cross-national study of community samples from Italy, the Netherlands and the United States. *Psychiatry Research*, *197*, 66-72. doi:10.1016/j.psychres.2012.02.009
- Glassman, L.H., Weierich, M.R., Hooley, J.M., Deliberto, T.L., & Nock, M.K. (2007). Child maltreatment, non-suicidal self-injury, and the mediating role of self-criticism. *Behaviour Research and Therapy*, *45*, 2483-2490. doi:10.1016/j.brat.2007.04.002

- Hawton, K., Saunders, K.E.A., & O'Connor, R.C. (2012). Self-harm and suicide in adolescents. *Lancet*, *379*, 2373-2382. doi:10.1016/S0140-6736(12)60322-5
- Irons, C., Gilbert, P., Baldwin, M.W., Baccus J. R., & Palmer, M. (2006). Parental recall, attachment relating and self-attacking/self-reassurance: Their relationship with depression. *British Journal of Clinical Psychology*, *45*, 297-308. doi:10.1348/014466505X68230
- Kaess, M., Parzer, P., Mattern, M., Plener, P.L., Bifulco, A., Resch, F., & Brunner, R. (2013). Adverse childhood experiences and their impact on frequency, severity, and the individual function of nonsuicidal self-injury in youth. *Psychiatric Research*, *206*, 265-272. doi: 10.1016/j.psychres.2012.10.012
- Kline, R. B. (2005). *Principles and Practice of Structural Equation Modelling (2nd ed.)*. New York: Guilford Press.
- Klonsky, E.D., Muehlenkamp, J.J., Lewis, S., & Walsh, B. (2011). *Non-suicidal self-injury. Advances in psychotherapy: Evidence-based practice*. Cambridge, MA: Hogrefe Publishing.
- Kokoulina, E., & Fernández, R. (2014). Maltrato físico y emocional en la infancia y conducta suicida en el adulto [Childhood physical and emotional maltreatment and adulthood suicidal behavior]. *Revista de Psicopatología y Psicología Clínica*, *19*, 93-103. doi: http://dx.doi.org/10.5944/rppc.vol.19.num.2.2014.13060
- Laye-Gindhu, A., & Schonert-Reichl, K.A. (2005). Nonsuicidal self-harm among community adolescents: Understanding the "whats" and "whys" of self-harm. *Journal of Youth and Adolescence*, *34*, 447-457. doi: 10.1007/s10964-005-7262-z
- Madge, N., Hawton, K., McMahon, E.M., Corcoran P., De Leo, D., de Wilde, E.J., ... Arensman, E. (2011). Psychological characteristics, stressful life events and deliberate self-harm: Findings from the Child & Adolescent Self-harm in Europe (CASE) Study. *European Child and Adolescent Psychiatry*, *20*, 499-508. doi: 10.1007/s00787-011-0210-4
- McMahon, E. M., Reulbach, U., Keeley, H., Perry, I. J., & Arensman, E. (2012). Reprint of: Bullying victimisation, self-harm and associated factors in Irish adolescent boys. *Social Science & Medicine*, *74*, 490-497. doi:10.1016/j.socscimed.2011.12.001
- Neff, K., & McGehee, P. (2010). Self-compassion resilience among adolescents and young adults. *Self and Identity*, *9*, 225-240. doi:10.1080/15298860902979307
- Nolen-Hoeksema, S. (2001). Gender differences in depression. *Current Directions in Psychological Science*, *10*, 173-176. doi: 10.1111/1467-8721.00142
- Pinto-Gouveia, J., Matos, M., Castilho, P., & Xavier, A. (2012). Differences between depression and paranoia: The role of emotional memories, shame and subordination. *Clinical Psychology & Psychotherapy*, *21*, 49-61. doi:10.1002/cpp.1818
- Pinto-Gouveia, J., Xavier, A., & Cunha, M. (2015). Confirmatory Factor Analysis of the Early Life Experiences Scale for Adolescents. *Journal of Child and Family Studies*. doi: 10.1007/s10826-015-0202-y
- Richter, A., Gilbert, P., & McEwan, K. (2009). Development of an early memories of warmth and safeness scale and its relationship to psychopathology. *Psychology and Psychotherapy: Theory, Research and Practice*, *82*, 171-184. doi:10.1348/147608308X395213
- Schore, A. N. (2001). Effects of a secure attachment relationship on right brain development, affect regulation, and infant mental health. *Infant Mental Health Journal*, *22*, 7-66. doi: 10.1002/1097-0355(200101/04)22:1<7::AID-IMHJ2>3.0.CO;2-N
- Tabachnick, B., & Fidell, L. (2007). *Using multivariate statistics (5th ed.)*. New York, NY: Pearson Education Inc.
- Vliet, K.J., & Kalnins, G.R. (2011). A compassion-focused approach to nonsuicidal self-injury. *Journal of Mental Health Counselling*, *33*, 295-311.
- Vrouva, I., Fonagy, P., Fearon, P., & Roussow, T. (2010). The risk-taking and self-harm inventory for adolescents: Development and psychometric evaluation. *Psychological Assessment*, *22*, 852-865. doi:10.1037/a0020583
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063-1070. doi:10.1037/0022-3514.54.6.1063
- Xavier, A., Cunha, M., Pinto-Gouveia, J., & Paiva, C. (May, 2013). Exploratory study of the Portuguese version of the Risk-taking and Self-harm Inventory for adolescents. *Atención Primaria*, *45*, Especial Congreso I (I World Congress of Children and Youth Health Behaviors/ IV National Congress on Health Education), 165. doi:10.1016/S0212-6567(13)70034-9
- Zolkoski, S. M., & Bullock, L. M. (2012). Resilience in children and youth: A review. *Children and Youth Services Review*, *34*, 2295-2303. doi:10.1016/j.childyouth.2012.08.009