

Self-Compassion and Emotional Intelligence in Adolescence: A Multigroup Mediation Study of the Impact of Shame Memories on Depressive Symptoms

Paula Castilho¹ · Sérgio A. Carvalho¹ · Sara Marques¹ · José Pinto-Gouveia¹

Published online: 22 November 2016
© Springer Science+Business Media New York 2016

Abstract Several studies have highlighted the adaptive role of self-compassion on human suffering and on a wide range of psychopathological conditions. Extensive research has shown that emotional intelligence has been associated with well-being, mental and physical health and quality of interpersonal relationships. We set out to explore the mediating role of self-compassion and emotional intelligence on the relationship between shame traumatic memories and depressive symptoms, and to explore if these were different between female and male adolescents. The sample was composed of 1101 adolescents from general population, whose age ranged from 14 to 18 years. Participants filled out a battery of self-report questionnaires designed to measure shame traumatic memories, self-compassion, emotional intelligence and depressive symptoms. Correlational analysis showed that in male and female adolescents, shame traumatic memories are associated with more depressive symptoms and with lower levels of self-compassion and emotional intelligence. Multigroup analysis showed that emotional intelligence has a greater impact on depression in female adolescents. Also, the impact of shame traumatic memories on depression is stronger in males, even though females report shame traumatic memories as more impactful. This study provides preliminary evidence that self-compassion and emotional intelligence are important emotion regulation processes for depressive symptoms in adolescence.

Keywords Self-compassion · Emotional intelligence · Shame traumatic memories · Depressive symptoms · Adolescence

Introduction

Shame experiences are considered a form of negative experiences in which one is criticized, rejected, excluded or ignored by others (Gilbert 1998). Memories of shame experiences can be an emotionally charged piece of autobiographical memory (Matos and Pinto-Gouveia 2010) and may present traumatic features, such as intrusion, emotional avoidance, flashbacks, hyperactivation, fragmented states of mind and dissociation (Ehlers and Clark 2000; Gilbert 2002; Gilbert and Irons 2004; Gilbert and Procter 2006; Matos and Pinto-Gouveia 2010). Research has shown that early life shame experiences, by acting as conditioned emotional memories, may trigger intrusions, physiological arousal and avoidance, and negative emotional states like depression and anxiety. In adolescence, individuals increase engagement with autobiographical reasoning processes and begin making connections between the self and past events, which makes them more vulnerable to experience the emotional impact of shame memories (Cunha et al. 2012). Research shows that persistent criticism, shaming and put-down experiences might lead to the development of a sense of self as flawed, inferior, rejectable (Castilho et al. 2014; Gilbert 2002; Mikulincer and Shaver 2007), inadequate and worthless (Claesson and Sohlberg 2002; Gilbert et al. 1996; Gilbert and Gerlsma 1999), and is associated with depressive symptoms (e.g., Carvalho et al. 2015; Gilbert et al. 1996). Additionally, when considering gender differences,

✉ Paula Castilho
paulacastilhofreitas@gmail.com

¹ Cognitive and Behavioural Centre for Research and Intervention, University of Coimbra, Coimbra 3001–802, Portugal

it seems that girls present higher levels of shame, self-criticism and psychopathological symptoms than boys (Hankin 2008; Hankin and Abramson 2002; Lang et al. 2007; MacPhee and Andrews 2006; Rubeis and Hollenstein 2009; Skrove et al. 2013).

The evolutionary basis of early parent-child relationship has been greatly debated, particularly the adaptive nature of attachment behaviors (Bowlby 1969; Gillath et al. 2005). In fact, it has been suggested that the quality of the relationship between a child and his/her caregiver greatly impacts the experience of psychopathological symptoms in adulthood (Gilbert et al. 1996). In accordance to this, it is agreed that when caregivers are able to understand and empathize with the child's emotions and behaviors, as well as when they are capable of making the child feel loved, cared for and safe, this will have a major impact on the development of the child's sense of identity, and on the maturation of affect regulation systems, i.e., their ability to understand and regulate emotions and to develop self-soothing (Gilbert 2007; Shaver and Mikulincer 2007; Schore 1998). On the other hand, when the child's day-to-day experience with caregivers is characterized by criticism, shame and put-down, the child can develop harsh and self-critical ways of self-to-self relating (Gilbert 2005; Gilbert et al. 2004; Jaenicke et al. 1987; Sachs-Ericsson et al. 2006; Thompson and Zuroff 1999).

Research in neuroscience has proposed different affect regulation systems (Depue and Morrone-Strupinsky 2005) whose maturation seems to be influenced by rearing experiences with others (Gilbert 2005, 2007, 2010). One of the systems is linked to threat-detection and self-protection, and is responsible for activating defensive emotions (e.g., anxiety, depression, anger) and behaviors (e.g., fight, flight, submission) when facing a perceived threat (Gilbert 2003, 2005; LeDoux 1996). These defensive behaviors and emotions can be disabled by a system of warmth-affiliation linked to feelings of contentment, soothing and social safeness, deeply associated with the evolution of attachment behavior, and might result in the regulation of affect through warm and kind interpersonal interactions (Gilbert 2005, 2010; Uvans-Morberg 1998). It is suggested that negative rearing experiences, particularly at the hands of caregivers, might overstimulate the threat-defense system (Gilbert 2005) and/or understimulate the warmth-affiliation system (Irons et al. 2006). Given that shame feelings are associated with the perception of the self as an object of negative evaluation by others, anticipating their rejection and/or attack (Gilbert 2000, 2002), shame experiences will activate the evolution-derived defense-threat system, triggering a set of appeasement behaviors (e.g., keep head down, avoid eye gaze, hide and escape) aiming at de-escalating and/or avoiding interpersonal conflict that could lead to social rejection (Gilbert 2002; Gilbert and McGuire 1998).

Gilbert (2005, 2009, 2010) designed Compassion Focused Therapy (CFT) to specifically address issues of self-criticism and shame, with the main purpose of promoting self-compassion. This positive self-to-self form of relating involves being open to suffering, experiencing feelings of warmth, care, kindness and understanding towards the self, with an attitude of curious observation and a nonjudgmental understanding towards our mistakes and inadequacies, as they are part of common human experience (Neff 2003). In fact, self-compassion, by activating the soothing-affiliation system, and consequently de-activating the threat-defense system, can be an important antidote to shame feelings and psychopathology (Gilbert 2005; Gilbert and Procter 2006). In line with this, higher levels of self-compassion have been shown to predict less depression symptoms in a non-clinical sample of young adults (Raes 2011). Particularly in adolescence, some studies show that self-compassion is associated with greater mental health, feelings of social connectedness, a better self-soothing competence, higher levels of positive emotional memories, and with less depression, anxiety, self-criticism, stress and negative affect (Bluth and Blanton 2014; Cunha et al. 2013; Neff et al. 2007; Neff and McGehee 2010). Additionally, it seems that female adolescents have lower self-compassion than male adolescents (Bluth and Blanton 2015; Cunha et al. 2015). Self-compassion has also been shown to mediate the relationship between attachment and mental health (Raque-Bogdan et al. 2011), self-criticism and depression (Joeng and Turner 2015), maladaptive perfectionism and depressive symptoms (Mehr and Adams 2016), social support and post-traumatic symptoms (Maheux and Price 2016), the recall of parental criticism and social anxiety (Potter et al. 2014), and between victimization and psychological maladjustment in a sample of 109 adolescents (Játiva and Cerezo 2014). Nevertheless, although self-compassion has been presented in literature as an antidote to shame and self-criticism that result from previous shaming and critical experiences (Claesson and Sohlberg 2002; Gilbert and Gerlsma 1999), its mediating role on the impact of shame memories in depression are yet to be explored in adolescents.

Emotional intelligence has been described as the capacity to perceive, express and regulate emotions (Mayer and Salovey 1997), which is thought to be rooted in evolutionary processes that promote empathy and communication of emotions (e.g., Buck 1984). In fact, it is suggested that emotionally intelligent individuals choose adaptive strategies do down-regulate emotions such as sadness (Hertel et al. 2009) and shame (Mikolajczak et al. 2008). In line with this, there is evidence suggesting that promoting emotional intelligence leads to less clinical symptomatology (Aradilla-Herrero et al. 2014; Balluerka et al. 2013), with results maintained up to 6-months after the

intervention (Ruiz-Aranda et al. 2012). Several empirical studies have also demonstrated that adolescents who perceive themselves as having greater ability to understand and regulate their emotions seem to use more adaptive coping strategies (Davis and Humphrey 2012). Other studies found that adolescents who are more capable of clearly discriminating feelings and regulating emotional states show lower levels of anxiety and depression (Fernandez-Berrocal et al. 2006; Mavroveli et al. 2007), have greater life satisfaction (Rey et al. 2011) and show a better social functioning (Mavroveli et al. 2007). Although the relationship between shame experiences and emotional intelligence, to our knowledge, has not been empirically explored, some studies have suggested that children with a history of maltreatment present more difficulties in recognizing, expressing and regulating emotions (Smith and Walden 1999). In fact, it is acknowledged that experiences during childhood and adolescence, particularly with parents, have an impact on emotional socialization (see Eisenberg et al. 1998).

Our study has three main goals: (1) to explore the relationship between shame traumatic memories, self-compassion, perceived emotional intelligence and depressive symptoms in adolescents, given the lack of studies exploring these variables in this age group. In addition, (2) we tested whether self-compassion and perceived emotional intelligence emerge as mediators in the relationship between shame traumatic memories and depressive symptoms. In the theoretical model, we predicted that shame traumatic memories would indirectly impact depression symptomatology through their effect on self-compassion and emotional intelligence. Finally, we aimed (3) to explore if the model is invariant between male and female adolescents.

Method

Participants

Participants in this study were 1101 adolescents from general population: 57.4 % were female ($n = 632$) and 42.6 % were male ($n = 469$). The mean age was 15.94 ($SD = 1.21$). In regard to their education, 18.3 % of participants attended 9th grade ($n = 202$), 38.0 % the 10th grade ($n = 418$), 27.7 % the 11th grade ($n = 305$), and 16.0 % the 12th grade ($n = 176$). There were no statistically significant differences between gender regarding age ($t = .456$, $p = .648$).

Procedure

Participants were recruited in several Secondary Schools of the Northern and Center Regions of Portugal. The questionnaires were administered by the author S.M., and included a battery of self-report questionnaires designed to

measure shame traumatic memories, self-compassion, emotional intelligence and depressive symptoms.

The schools' boards were previously contacted and the objectives of the study were explained. After the school board provided written authorization for data collection, students were given an explanation of the study and its voluntary nature, and were invited to participate. Students who agreed to take part in the study had to bring one informed consent from their parents, in which they were provided with a detailed description of the study, as well as the confidentiality and anonymity of the data.

Participants who were authorized by their parents to take part in the study also provided written consent to participate in the study. All participants filled the self-report questionnaires in the presence of the researcher in class. The battery of questionnaires took on average 30 min to complete. There were no dropouts.

Measures

Trait Meta-Mood Scale (TMMS; Goldman et al. 1995; Dinis and Pinto-Gouveia 2006) is a self-report measure that aims to assess perceived emotional intelligence. It evaluates the extent to which people attend to and value their feelings, to how they make a clear distinction between them, and use them to think and repair negative moods. The full version of this instrument is composed by 48 items organized into a structure of three key factors: Attention to Emotions, Clarity of Feelings and Repair of Emotional State, with internal consistencies of respectively .86, .88, and .82. The authors recommend the 30 item version of the scale, which we have used. Participants are asked to assess the degree to which they agree with each item on a Likert scale of 5 points, ranging from 1 (strongly disagree) to 5 (strongly agree). Given the objectives of our study, and since the scale is still in the process of adaptation for the Portuguese adolescent population, the total score of the TMMS was used. We found it to have a good internal consistency, with a Cronbach's alpha of $\alpha = .83$.

Impact of Event Scale for Adolescents (IES-R-A; Weiss and Marmar 1997; Cunha et al. 2013) is a self-report measure of subjective distress for any specific life event that was recently adapted to assess traumatic memories of shame (Matos and Pinto-Gouveia 2011). This version resulted from the adaptation of the original IES designed to assess subjective stress of an event. The version contains 22 items, each rated on a 5-point scale (0–4). This scale comprises three subscales that measure the three main characteristics of traumatic memories: Intrusion (intrusive thoughts, nightmares, intrusive feelings and images, dissociative reexperiencing), Avoidance (numbing of responsiveness, avoidance of feelings, situations and ideas), and Hyperarousal (anger, irritability, hypervigilance, difficulty on

concentrating, heightened startle). The current study uses the IES-R version for adolescents (Cunha et al. 2013), which presented an excellent internal consistency with a Cronbach's alpha of $\alpha = .94$ for the total scale, and a moderate temporal stability $r = .67$. We found an internal consistency of $\alpha = .93$. In the current study, all analyses were conducted using the total of the IES-R-A, since the validation study for the Portuguese population found a one-dimensional structure that revealed strong psychometric properties.

Self-Compassion Scale (SCS-A; Neff 2003; Cunha et al. 2015) comprises 26 items, organized into six subscales that assess the following dimensions: Self-Kindness, Self-Judgment, Common Humanity, Isolation, Mindfulness and Over-Identification. Participants must indicate their responses to each item using a 5-point scale ranging from 1 (*Almost Never*) to 5 (*Almost Always*). The results obtained by Neff (2003) in the original version applied in adults, revealed very good levels of internal consistency for the total of the measure ($\alpha = .92$) and good test-retest reliability ($\alpha = .93$). In The Portuguese version for adolescents (Cunha et al. 2015), the total of the measure also revealed a good internal consistency ($\alpha = .88$). In this study, the internal consistency was $\alpha = .88$. For the purposes of this study, only total scores were analyzed.

Children's Depression Inventory (CDI; Kovacs 1985; Marujo 1994) is a self-report measure composed by 27 items that intend to assess depressive symptoms in children and adolescents aged from 7 to 18 years. This scale is one of the most common and most often cited instruments in the literature about depression in childhood and adolescence. In order to answer each item, participants must choose one of three sentences classified with a value of 0, 1 and 2, where higher values imply an increased severity of symptoms. The Portuguese version of this inventory has shown good accuracy, with high levels of internal consistency ($\alpha = .80$) (Marujo 1994). In this study, the Cronbach's alpha was $\alpha = .85$.

Data Analyses

The current study follows a cross-sectional design. All analyses were carried out using SPSS, version 22 (IBM Corp., Armonk, NY, USA) and AMOS version 23 (SPSS Inc, Chicado, IL, USA). Gender differences were tested using independent sample *t*-tests. Effect sizes of gender differences in each variable were calculated using Cohen's *d*, with .2 indicating a small effect, .5 a medium effect and .8 a large effect (Cohen 1988). Then two-tailed Pearson correlation coefficients were performed to explore the relationships between variables in study. The strength of the correlations was interpreted according to Cohen's suggestions: correlations between .1 and .3 are small, between

.3 and .5 are moderate and above .5 are considered large associations.

Multivariate outliers were screened using Mahalanobis squared distance (MD^2) method (i.e., $p_1; p_2 < .05$) and uni and multivariate normality was assessed by Skewness (Sk) and kurtosis (KU) coefficients. There was no severe violation of normal distribution ($|Sk| < 3$ and $|Ku| < 8-10$; Kline 2005). In regard to missing values, wherever participants did not respond to less than 5 % of a measure, a mean imputation was conducted. One participant missed more than 5 % of a measure (did not complete the whole TMMS), and was therefore excluded from our sample.

In the mediational study, we tested whether self-compassion (SCS-A) and emotional intelligence (EI) (mediator endogenous variables) mediated the effect of shame traumatic memory (IES-R-A) (independent exogenous variables) on depressive symptoms (CDI). A path analysis was carried out to test for the mediator effects described previously. This procedure is a special case of structural equation modeling (SEM) and considers hypothetical relations between variables that have already been defined (Maroco 2010; Kline 2011). Additionally, we have conducted a multigroup regression analysis as a means to determine if the tested model was statistically different between male and female adolescents in our sample. The significance of regression coefficients was assessed through maximum likelihood method, in which effects with $p < .05$ were considered statistically significant. Differences between males and females were assessed by comparing the unconstrained model (with free structural parameter coefficients) and the equality constrained model (i.e., parameters equally constrained across groups). Chi-square difference test was used to assess difference between groups, as well as critical ratios for differences among estimates, with *Z*-values larger than 1.96 indicating that males and females differ significantly in that path (Byrne 2010).

Results

Two tailed Pearson's correlations for all variables are reported in Table 1, for males and females.

Results from correlation analyses show that shame traumatic memories are negatively and moderately associated with self-compassion and emotional intelligence in both genders. Additionally, emotional intelligence and self-compassion are negatively associated with depressive symptoms both in males and females. These correlations are large in females and moderate to large in males. Finally, results also show that self-compassion is positive and significantly correlated with emotional intelligence, presenting a large association in females and a moderate one in males.

Table 1 Correlations (two tailed Pearson *r*) between variables in males (*n* = 469; inferior diagonal) and in females (*n* = 632; superior diagonal in bold)

Variables	IES-R-A	TMMS-A	SCS-A	CDI
1. Shame traumatic memories (IES-R-A)	–	–.35**	–.41**	.44**
2. Emotional intelligence (TMMS-A)	–.30**	–	.58**	–.61**
3. Self-compassion (SCS-A)	–.41**	.48**	–	–.62**
4. Depression (CDI)	.49**	–.42**	–.52**	–

***p* ≤ .01

Table 2 *t*-test differences between males (*n* = 469) and females (*n* = 632)

	Total (<i>N</i> = 1101)				<i>t</i>	<i>p</i>	<i>d</i>
	Males		Females				
	Mean	SD	Mean	SD			
Shame traumatic memories (IES-R-A)	30.34	16.56	37.17	17.34	6.581	<.001	.40
Emotional intelligence (TMMS-A)	163.07	16.82	160.65	17.39	2.310	.021	.14
Self-compassion (SCS-A)	83.80	12.93	77.51	14.49	7.58	<.001	.46
Depression (CDI)	9.86	5.47	12.88	6.37	8.45	<.001	.51

Results from comparative analysis between genders for all variables were obtained by student’s *t*-test, and are presented in Table 2. The student’s *t*-test analysis showed the existence of statistically significant differences between genders in all variables, in which females presented significantly higher mean scores of shame traumatic memories and depressive symptoms. In turn, males had significantly higher average values of self-compassion and emotional intelligence than females (see Table 2).

We sought to determine whether the effect of shame traumatic memories on depressive symptoms occurs indirectly through (diminished) self-compassion and emotional intelligence abilities, and particularly to explore if this comprehensive model is invariant in male and female adolescents.

Given that the initial model is just-determined, i.e., presented zero degrees of freedom and perfectly fit the data, the adjustment indices were not analyzed or reported (Maroco 2010; Kline 2005). The model explains 47 % of depression, 19 % of self-compassion and 11 % of emotional intelligence. Results showed a direct effect of shame traumatic memories on depression ($\beta = .238$). Also, the indirect effect of shame traumatic memories on depression through self-compassion ($\beta = .158$) and through emotional intelligence ($\beta = .087$) were statistically significant 95 % CI [.214; .277], *p* = .001, as was hypothesized.

Regarding multi-group analysis, results from the chi-square difference test showed that the hypothesized model was not invariant between males and females, $\chi^2_{dif(5)} = 21.496$, *p* = .001, i.e., there are statistically significant differences in the model in males and females in our sample. In males (Fig. 1), the model explains 9 % of emotional intelligence, 17 % of self-compassion and 39 % of depression.

In females (Fig. 2), the model explains 12 % of emotional intelligence, 17 % of self-compassion and 50 % of depression.

Critical ratios for differences in parameters showed that there are significant differences between males and females in two paths of the model: emotional intelligence and depression are more strongly related in females ($Z = 3.532$, $\beta = -.125$, *p* < .001,) than in males ($\beta = -.059$, *p* < .001). On the other hand, shame traumatic memories are more strongly associated with depression in males ($Z = -2.114$, $\beta = .102$, *p* < .001) than in females ($\beta = -.065$, *p* < .001).

Discussion

Built on previous research showing that self-compassion and emotional intelligence play an important role in adolescents’ well-being (Bluth and Blanton 2014; Cunha et al. 2013; Davis and Humphrey 2012; Hertel et al. 2009; Mavroveli et al. 2007; Neff and McGehee 2010; Rey et al. 2011), we aimed to explore whether perceived emotional intelligence and self-compassion emerged as mediators in the relationship between shame traumatic memories and depressive symptoms in an adolescent population. Also, we aimed to explore if the impact of these processes are significantly different in male and female adolescents.

Firstly, correlational analyses showed that adolescents who experience more shame traumatic memories have more depressive symptoms, as found in previous studies (Cunha et al. 2012). On the other hand, adolescents who have more shame traumatic memories have less self-compassion and self-soothing abilities and are less capable to attend to and value their feelings, to make a clear distinction between

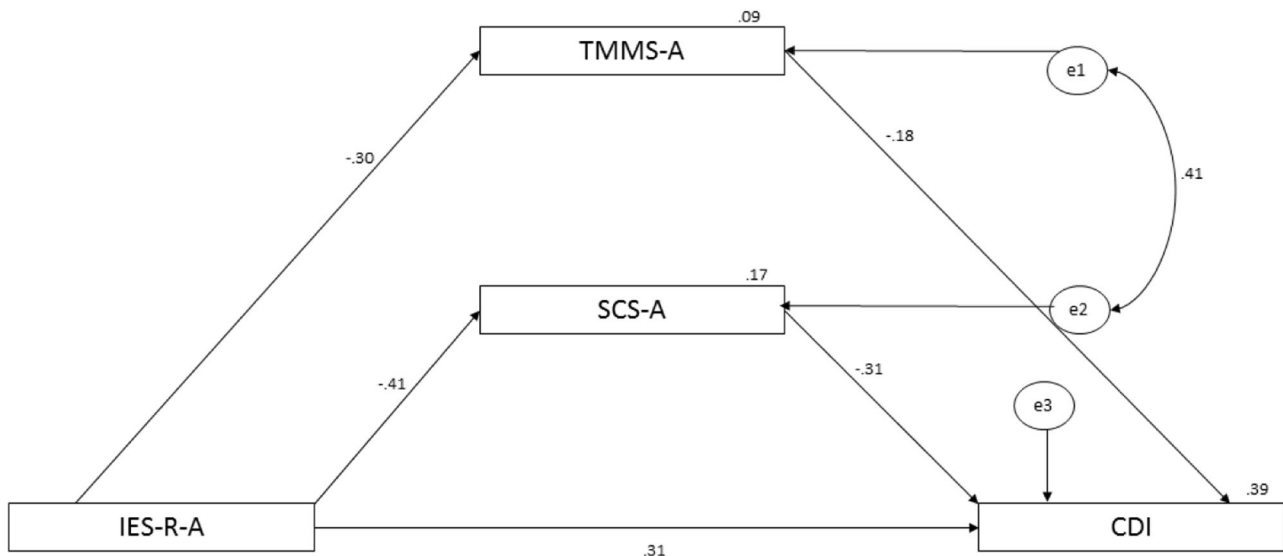


Fig. 1 Results of path analysis showing the relationship between self-compassion, emotional intelligence, shame traumatic memories and depressive symptoms, standardized estimates for male adolescents;

IES-R-A = Shame Traumatic Memories; TMMS-A = Emotional Intelligence; SCS-A = Self-compassion; CDI = Depressive symptoms

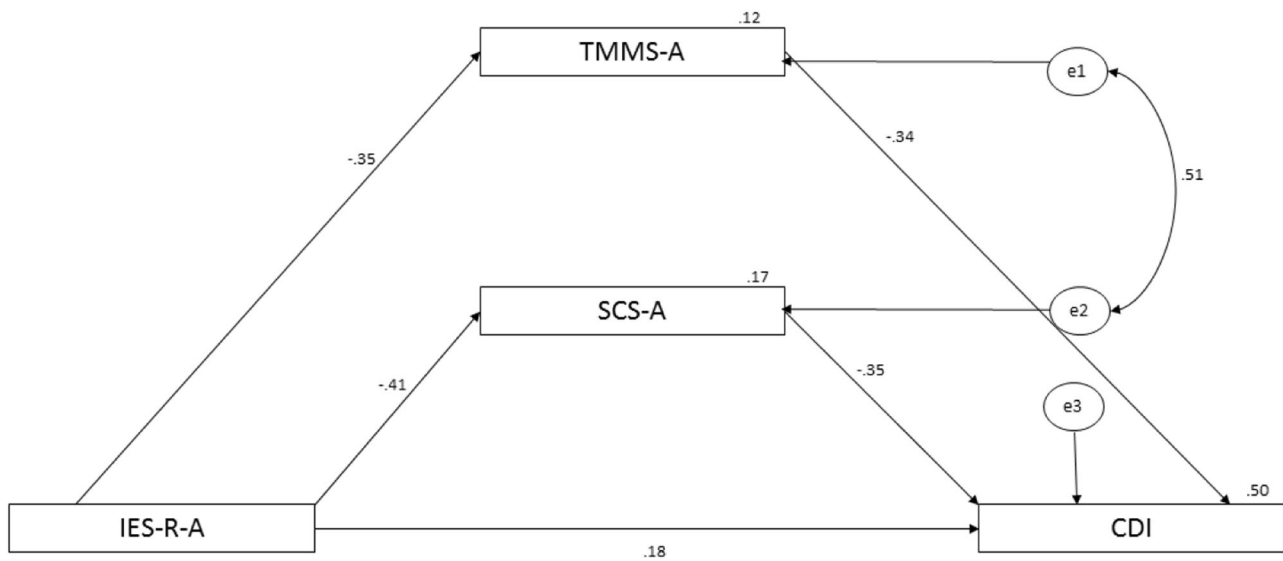


Fig. 2 Results of path analysis showing the relationship between self-compassion, emotional intelligence, shame traumatic memories and depressive symptoms, standardized estimates for female adolescents;

IES-R-A = Shame Traumatic Memories; TMMS-A = Emotional Intelligence; SCS-A = Self-compassion; CDI = Depressive symptoms

them and to regulate them. Also worth mentioning is that these associations were stronger in females than in male adolescents in our sample. Overall, this seems to be in line with the empirical and theoretical suggestion that adolescents with more impactful shame traumatic memories might have an overstimulated threat-defense system and an understimulated soothing system, generating difficulties in stress reduction as well as feelings safeness and social affiliation (Depue and Morrone-Strupinsky 2005; Gilbert

2009). Adolescence is a developmental stage in which concerns regarding social presentation, integration, acceptance and appreciation by others arise (Gilbert and Irons 2009), and therefore a particular vulnerable period for emotional problems, such as the experience of shame and depression symptoms.

Regarding self-compassion and emotional intelligence, we found that adolescents who have these abilities showed a lower tendency to experience depressive symptoms. These

findings are supported by previous researches, which demonstrate that adolescents who present a self-compassionate attitude when facing hard situations, manifest less tendency to experience depressive symptoms (Cunha et al. 2013; Neff and McGehee 2010). There are previous studies suggesting that high levels of emotional intelligence are correlated with effective strategies to deal with emotional issues, such as diminishing rumination after experiencing certain emotions, and this is actually associated with low levels of depression (Hertel et al. 2009; Mikolajczak et al. 2008).

Moreover, emotional intelligence and self-compassion showed a positive association, which suggests that adolescents more open to suffering, to experience feelings of warmth, that are understanding towards themselves, and are more capable of self-soothing, tend to pay more attention to their feelings, make a clear distinction between them and are more able to regulate their emotions. These results are consistent with work conducted with young adults (Neff 2003) and adolescents (Neff and McGehee 2010), in which self-compassion and emotional intelligence seem to be related constructs, as self-compassion encompasses the ability to regulate one's negative emotions and see them with clarity. In fact, a few studies have found significant associations between self-compassion and emotional intelligence, in a sample of 135 American nurses (Heffernan et al. 2010), in a sample of 571 Turkish nursing students (Şenyuva et al. 2014) and in 272 undergraduate Egyptian students (Taleb and Al Awamleh 2013).

In addition, our results suggest significant differences between genders. The impact of shame traumatic memories was significantly higher in female adolescents. Additionally, female adolescents also presented more depressive symptoms. This goes in line with other studies reporting that female adolescents have higher levels of shame (internal and external) and depression, with more symptoms of worthlessness and lack of pleasure (Hankin 2008; Hankin and Abramson 2002; Lang et al. 2007; MacPhee and Andrews 2006; Rubeis and Hollenstein 2009; Skrove et al. 2013). Regarding male adolescents, results showed that they are more self-compassionate and have more emotional intelligence. This is in line with previous studies in which girls were reported having lower skills when it came to being aware of the experience of the present moment, in a mindful and balanced way (Bluth and Blanton 2015; Cunha et al. 2015). Additionally, studies also suggest that girls tend to be more self-judgmental, to feel isolated when confronted with painful feelings, and have less awareness of their negative and undesirable feelings and thoughts (Bluth and Blanton 2015; Cunha et al. 2013, 2015).

In line with our last prediction and main goal, emotional intelligence and self-compassion were found to mediate the relationship between shame traumatic memories and

depressive symptoms in both males and females. Interestingly enough, some differences were observed; our results suggest that the path from emotional intelligence (or, more accurately, lower levels of) to depression in our model is stronger in female adolescents than in male. On the other hand, it is particularly interesting that although female adolescents presented more shame traumatic memories, these shame memories were more strongly related to depression in male adolescents, according to critical ratios differences. A tentative interpretation of this result may be that shame memories are typically associated with an internalization of a self-identity (e.g., as inferior, vulnerable, flawed, weak) that is not in accordance with characteristics and personality traits socially expected for males (strength, confidence, decisiveness) throughout the socialization of gender roles (Benetti-McQuoid and Bursik 2005). In turn, this may explain why even shame memories reported as less impactful were more strongly linked to depression in males than in females. On the other hand, it may also be the case that males responded to IES with more social desirability, or even concealing their emotional difficulties, which may explain their lower levels of shame memories when compared to females. More research is needed in order to put forward more accurate explanations of gender differences in the impact of shame memories.

Our data suggest that traumatic shame memories impacts on depression in part through the existence of a lower ability to hold one's feelings of suffering with a sense of warmth, connection, and concern, and through a perception of having a low capacity to understand, express and regulate emotions. Literature has shown that self-compassion is an important self-regulatory process to mitigate several detrimental processes (e.g., shame) and symptoms (e.g., depression) (e.g., Gilbert 2009). Additionally, self-compassion seems to increase affiliative and social connectedness (e.g., Neff et al. 2007) that in turn are well-known antidotes against depression (see Sloman and Gilbert 2000). Feelings of self-acceptance and self-kindness and the ability to frame one's experience as part of the common human experience provides a sense of interpersonal connectedness that can help adolescents coping with shame and fears of social rejection. On the other hand, by facilitating the capacity of emotional recognition and discrimination will enable the emotional modulation, which is a useful tool in coping with low mood states (e.g., Aradilla-Herrero et al. 2014; Balluerka et al. 2013). Indeed, a considerable amount of research has highlighted the positive association between emotional intelligence and positive psychological health in adolescents (e.g., Davis and Humphrey 2012). Thus, self-compassion and emotional intelligence seem to be important to educational and clinical interventions. In fact, few programs focus on the development of these skills, and they present innovative and promising interventions for

emotional growth. Kristin Neff and Chris Germer have developed the Mindful Self-Compassion training program, which was designed to cultivate self-compassion and was recently adapted to adolescents in a program named Making Friends with Yourself (MFY; Bluth et al. 2016). This study found that adolescents seem to increase in self-compassion and decrease in depressive symptoms when compared to a waitlist control group, and actually self-compassion predicted increases in depression after the intervention (Bluth et al. 2016). In regard to emotional intelligence, Ciarrochi et al. (2007) created the Mindfulness-Based Intelligence Training, which is an Acceptance & Commitment Therapy (ACT) adaptation for the organizational context. Nevertheless, the latter is not specifically designed to address adolescence-specific issues, which seems to be an evidence for the need to designing programs that promote the development of emotional intelligence skills in adolescence. Indeed, a study on a 24-week emotional intelligence-based educational program found that adolescents who participated in the program presented better mental health indicators (including depression) when compared to a control group (Ruiz-Aranda et al. 2012).

Future research could deepen the knowledge on the benefits of emotional intelligence and self-compassion by developing intervention programs that would incorporate both in a complementary manner, particularly when working with adolescents with traumatic shame memories. In addition, it would be important to test this model longitudinally, in order to draw more robust conclusions regarding causal relationships between variables, which this study is not able to do. In order to generalize our findings to adolescents with clinical problems, it is also important to replicate this study in a clinical sample. It would also be important to explore these results according to age differences and its influence on emotional regulation skills (e.g., emotional intelligence, self-compassion, mindfulness). Furthermore, future research should focus on developing and testing the efficacy of interventions that encompass both self-compassion and emotional intelligence tailored for adolescents.

Limitations

Some limitations should be considered. The first one is the cross-sectional and correlational design of this study, which doesn't allow us to determine with precision the nature of the relationships between variables. Another limitation is related to the use of self-report measures to evaluate shame memories, which may raise some concerns regarding the influence of current emotional states on these recollections. Nevertheless, it is worth restating that our goal was not to study shame experiences but rather the impact of memories of shame experiences, which makes self-report measure a

suitable means to assess that. Issues relating to social desirability may also have influenced the responses of the subjects in the various measures. We consider that it would be important to use structured interviews to evaluate shame, depression and the mediational variables (self-compassion and emotional intelligence).

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no competing interests.

Ethical Approval The current study was conducted in compliance with institutional and national committees' ethical standards as well as in accordance with ethical principles for research involving human subjects (1964 Helsinki declaration).

References

- Aradilla-Herrero, A., Tomás-Sábado, J., & Gómez-Benito, J. (2014). Associations between emotional intelligence, depression and suicide risk in nursing students. *Nurse Education Today*, 34(4), 520–525. doi:10.1016/j.nedt.2013.07.001.
- Balluerka, N., Aritzeta, A., Gorostiaga, A., Gartzia, L., & Soroa, G. (2013). Emotional intelligence and depressed mood in adolescence: A multilevel approach. *International Journal of Clinical and Health Psychology*, 13, 110–117. doi:10.1016/s1697-2600(13)70014-0.
- Benetti-McQuoid, J., & Bursik, K. (2005). Individual differences in experiences of and responses to guilt and shame: Examining the lenses of gender and gender role. *Sex Roles*, 53, 133–142. doi:10.1007/s11199-005-4287-4.
- Bluth, K. L., & Blanton, P. W. (2014). Mindfulness and self-compassion: Exploring pathways to adolescent emotional well-being. *Journal of Child and Family Studies*, 23(7), 1298–1309. doi:10.1007/s10826-013-9830-2.
- Bluth, K. L., & Blanton, P. W. (2015). The influence of self-compassion on emotional well-being among early and older adolescent males and females. *Journal of Positive Psychology*, 10(3), 219–230. doi:10.1080/17439760.2014.936967.
- Bluth, K., Gaylord, S. A., Campo, R. A., Mullarkey, M. C., & Hobbs, L. (2016). Making friends with yourself: A mixed methods pilot study of a mindful self-compassion program for adolescents. *Mindfulness*, 7(2), 479–492. doi:10.1007/s12671-015-0476-6.
- Bowlby, J. (1969). *Attachment and loss: Volume 1. Attachment*. New York, NY: Basic Books.
- Buck, R. (1984). *The communication of emotion*. New York: Guilford Press.
- Byrne, B. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). New York, NY: Routledge, Taylor & Francis Group.
- Carvalho, S., Dinis, A., Pinto-Gouveia, J., & Estanqueiro, C. (2015). Memories of shame experiences with others and depression symptoms: The mediating role of experiential avoidance. *Clinical Psychology & Psychotherapy*, 22(1), 32–44. doi:10.1002/cpp.1862.
- Castilho, P., Pinto-Gouveia, J., Amaral, V., & Duarte, J. (2014). Recall of threat and submissiveness in childhood and psychopathology: The mediator effect of self-criticism. *Clinical Psychology and Psychotherapy*, 21(1), 73–81. doi:10.1002/cpp.1821.
- Ciarrochi, J., Blackledge, J., Bilich, L., & Bayliss, V. (2007). Improving emotional intelligence: A guide to mindfulness-based

- emotional intelligence training. In J. Ciarrochi & J.D. Mayer (Eds.), *Applying Emotional Intelligence: A Practitioner's Guide* (pp. 89–124). New York: Psychology Press.
- Claesson, K., & Sohlberg, S. (2002). Internalized shame and early interactions characterized by indifference, abandonment and rejection: Replicated findings. *Clinical Psychology & Psychotherapy*, 9, 277–284. doi:10.1002/cpp.331.
- Cohen J (1988) *Statistical Power Analysis for the Behavioral Sciences* (2nd edn). Hillsdale, NJ: Lawrence Erlbaum.
- Cunha, M., Matos, M., Faria, D., & Zagalo, S. (2012). Shame memories and psychopathology in adolescence: The mediator effect of shame. *International Journal of Psychology & Psychological Therapy*, 12(2), 203–218.
- Cunha, M., Xavier, A., Matos, M., & Zagalo, S. (2013, May). The traumatic impact of shame experiences: Study of the psychometric properties of the impact event scale in adolescents (IES-A). Poster session presented at the meeting of the I World Congress of children and youth health behaviors/4th National Congress on Health Education, Viseu, Portugal.
- Cunha, M., Xavier, A., & Castilho, P. (2015). Understanding self-compassion in adolescents: Validation study of the self-compassion scale. *Personality and Individual Differences*, 93, 56–62. doi:10.1016/j.paid.2015.09.023.
- Cunha, M., Xavier, A., & Vitória, I. (2013). Avaliação da auto-compaixão em adolescentes: Adaptação e qualidades psicométricas da Escala de Auto-Compaixão [Assessment of self-compassion in adolescents: Adaptation and psychometric properties of the self-compassion scale]. *Journal of Child and Adolescent Psychology*, 4(2), 95–117.
- Davis, S. K., & Humphrey, N. (2012). The influence of emotional intelligence (EI) on coping and mental health in adolescence: Divergent roles for trait and ability EI. *Journal of Adolescence*, 35, 1369–1379. doi:10.1016/j.adolescence.2012.05.007.
- Depue, R. A., & Morrone-Strupinsky, J. V. (2005). A neurobehavioral model of affiliative bonding: Implications for conceptualizing a human trait of affiliation. *Behavioral and Brain Sciences*, 28(3), 313–350.
- Dinis, A., & Pinto Gouveia, J. (2006). Versão portuguesa do Trait - Meta Mood Scale - TMMS. [unpublished manuscript].
- Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research Therapy*, 38, 319–45.
- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychological Inquiry*, 9(4), 241–273.
- Fernandez-Berrocal, P., Alcaide, R., Extremera, N., & Pizarro, D. (2006). The role of emotional intelligence in anxiety and depression among adolescents. *Individual Differences Research*, 4(1), 16–27.
- Gilbert, P. (1998). What is shame? Some core issues and controversies. In P. Gilbert, & B. Andrews (Eds.), *Shame: Interpersonal behavior, psychopathology and culture*. New York, NY: Oxford.
- Gilbert, P. (2000). The relationship of shame, social anxiety and depression: The role of the evaluation of social rank. *Clinical Psychology & Psychotherapy*, 7(3), 174–189.
- Gilbert, P. (2002). Body shame: A biopsychosocial conceptualisation and overview, with treatment implications. In P. Gilbert, & J. Miles (Eds.), *Body shame: Conceptualisation, research and treatment*. London: Routledge.
- Gilbert, P. (2003). Evolution, social roles and the differences in shame and guilt. *Social Research*, 70, 1205–1230.
- Gilbert, P. (2005). Compassion and cruelty: A biopsychosocial approach. In P. Gilbert (Ed.), *Compassion: Conceptualisations, research and use in psychotherapy*. London/New York, NY: Routledge.
- Gilbert, P. (2007). The evolution of shame as a marker for relationship security: A biopsychosocial approach. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp. 283–309). New York, NY: Guilford.
- Gilbert, P. (2009) Introducing compassion-focused therapy. *Advances in Psychiatric Treatment*, 15(3), 199–208.
- Gilbert, P. (2010). *Compassion focused therapy: Distinctive features*. London: Routledge.
- Gilbert, P., Allan, S., & Goss, K. (1996). Parental representations, shame, interpersonal problems, and vulnerability to psychopathology. *Clinical Psychology & Psychotherapy*, 3(1), 23–24. doi:10.1002/(SICI)1099-0879(199603)3:1<23::AID-CPP66>3.0.CO;2-O.
- Gilbert, P., Clarke, M., Kempel, S., Miles, J. N. V., & Irons, C. (2004). Criticizing and reassuring oneself: An exploration of forms style and reasons in female students. *British Journal of Clinical Psychology*, 43, 31–50. doi:10.1348/014466504772812959.
- Gilbert, P., & Gerlsma, C. (1999). Recall of shame and favouritism in relation to psychopathology. *The British Journal of Clinical Psychology*, 38, 357–373.
- Gilbert, P., & Irons, C. (2004). A pilot exploration of the use of compassionate images in a group of self-critical people. *Memory*, 12(4), 507–516. doi:10.1080/09658210444000115.
- 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.
- Gilbert, P., & McGuire, M. (1998). Shame, status and social roles: Psychobiology and evolution. In P. Gilbert, & B. Andrews (Eds.), *Shame: Interpersonal behavior, psychopathology and culture*. New York, NY; Oxford: Oxford University Press.
- Gilbert, P., & Procter, S. (2006). Compassion mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology & Psychotherapy*, 13, 353–379. doi:10.1002/cpp.507.
- Gillath, O., Shaver, P. R., & Mikulincer, M. (2005). An attachment-theoretical approach to compassion and altruism. In P. Gilbert (Ed.), *Compassion: Its nature and use in psychotherapy* (pp. 121–147). London: Brunner-Routledge.
- Goldman, S. L., Mayer, J. D., Palfai, T. P., Salovey, P., & Turvey, C. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the trait meta-mood scale. In J. W. Pennebaker (Ed.), *Emotion, disclosure, and health* (pp. 125–154). Washington, DC: American Psychological Association.
- Hankin, B. L. (2008). Rumination and depression in adolescence: Investigating symptom specificity in a multiwave prospective study. *Journal of Clinical Child & Adolescent Psychology*, 37(4), 701–713. doi:10.1080/15374410802359627.
- Hankin, B. L., & Abramson, L. Y. (2002). Measuring cognitive vulnerability to depression in adolescence: Reliability, validity, and gender differences. *Journal of Clinical Child & Adolescent Psychology*, 31(4), 491–504. doi:10.1207/S15374424JCCP3104_8.
- Heffernan, M., Quinn Griffin, M. T., McNulty, S. R., & Fitzpatrick, J. J. (2010). Self-compassion and emotional intelligence in nurses. *International Journal of Nursing Practice*, 16(4), 366–373. doi:10.1111/j.1440-172X.2010.01853.x.
- Hertel, J., Schütz, A., & Lammers, C. H. (2009). Emotional intelligence and mental disorder. *Journal of Clinical Psychology*, 65, 942–954. doi:10.1002/jclp.20597.
- 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(3), 297–308. doi:10.1348/014466505X68230.
- Jaenicke, C., Hammen, C., Zupan, B., Hiroto, D., Gordon, D., Adrian, C., & Burge, D. (1987). Cognitive vulnerability in children at risk for depression. *Journal of Abnormal Child Psychology*, 15, 559–572.

- Játiva, R., & Cerezo, M. A. (2014). The mediating role of self-compassion in the relationship between victimization and psychological maladjustment in a sample of adolescents. *Child Abuse & Neglect*, 38(7), 1180–1190. doi:10.1016/j.chiabu.2014.04.005.
- Joeng, J. R., & Turner, S. L. (2015). Mediators between self-criticism and depression: Fear of compassion, self-compassion, and importance to others. *Journal of Counseling Psychology*, 62(3), 453–463. <http://dx.doi.org/10.1037/cou0000071>.
- Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York, NY: Guilford Press.
- Kline, R. B. (2011). Convergence of structural equation modeling and multilevel modeling. In M. Williams, & W. P. Vogt (Eds.), *Handbook of methodological innovation in social research methods* (pp. 562–589). London: Sage.
- Kovacs, M. (1985). The children's depression inventory (CDI). *Psychopharmacology Bulletin*, 21, 995–998.
- Lang, N. D., Ferdinand, R. F., & Verhulst, F. C. (2007). Predictors of future depression in early and late adolescence. *Journal of Affective Disorders*, 97, 137–144. doi:10.1016/j.jad.2006.06.007.
- LeDoux, J. E. (1996). *The emotional brain*. New York, NY: Simon and Schuster.
- MacPhee, A. R., & Andrews, J. J. W. (2006). Risk factors for depression in early adolescence. *Adolescence*, 41, 435–466.
- Maheux, A., & Price, M. (2016). The indirect effect of social support on post-trauma psychopathology via self-compassion. *Personality and Individual Differences*, 88, 102–107. doi:10.1016/j.paid.2015.08.051.
- Maroco, J. (2010). *Análise estatística: com utilização do SPSS* (3rd ed.). Lisboa: Edições Sílabo, Lda.
- Marujo, H. (1994). *Síndromas depressivos na infância e na adolescência* (doctoral dissertation), University of Lisbon, Portugal.
- Matos, M., & Pinto Gouveia, J. (2010). Shame as a traumatic memory. *Clinical Psychology and Psychotherapy*, 17, 299–312. doi:10.1002/cpp.659.
- Matos, M., & Pinto-Gouveia, J. (2011). Can shame memories become a key to identity? The centrality of shame memories predicts psychopathology. *Applied Cognitive Psychology*, 25(2), 281–290. doi:10.1002/acp.1689.
- Mavroveli, S., Petrides, K. V., Rieffe, C., & Bakker, F. (2007). Trait emotional intelligence, psychological well-being, and peer-rated social competence in adolescence. *British Journal of Developmental Psychology*, 25, 263–275. doi:10.1348/026151006X118577.
- Mayer, J., & Salovey, P. (1997). What is emotional intelligence?. In P. Salovey, & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3–31). New York, NY: Basic Books.
- Mehr, K. E., & Adams, A. C. (2016). Self-compassion as a mediator of maladaptive perfectionism and depressive symptoms in college students. *Journal of College Student Psychotherapy*, 30(2), 132–145.
- Mikolajczak, M., Nélis, D., Hansenne, M., & Quoidbach, J. (2008). If you can regulate sadness, you can probably regulate shame: Associations between trait emotional intelligence, emotion regulation and coping efficiency across discrete emotions. *Personality and Individual Differences*, 44, 1356–1368. doi:10.1016/j.paid.2007.12.004.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. New York, NY: Guilford.
- Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2, 223–250. doi:10.1080/15298860390209035.
- Neff, K. D., Kirkpatrick, K. L., & Rude, S. S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality*, 41, 139–154. doi:10.1016/j.jrp.2006.03.004.
- Neff, K. D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity*, 9(3), 225–240. doi:10.1080/15298860902979307.
- Potter, R. F., Yar, K., Francis, A. P., & Schuster, S. (2014). Self-compassion mediates the relationship between parental criticism and social anxiety. *International Journal of Psychology and Psychological Therapy*, 14(1), 33–43.
- Raes, F. (2011). The effect of self-compassion on the development of depression symptoms in a non-clinical sample. *Mindfulness*, 2(1), 33–36.
- Raque-Bogdan, T. L., Ericson, S. K., Jackson, J., Martin, H. M., & Bryan, N. A. (2011). Attachment and mental and physical health: Self-compassion and mattering as mediators. *Journal of Counseling Psychology*, 58(2), 272.
- Rey, L., Extremera, N., & Pena, M. (2011). Perceived emotional intelligence, self-esteem and life satisfaction in adolescents. *Psychosocial Intervention*, 20(1), 227–234. doi:10.5093/in2011v20n2a10.
- Rubeis, S., & Hollenstein, S. (2009). Individual differences in shame and depressive symptoms during early adolescence. *Personality and Individual Differences*, 46, 477–482. doi:10.1016/j.paid.2008.11.019.
- Ruiz-Aranda, D., Castillo, R., Salguero, J. M., Cabello, R., Fernández-Berrocal, P., & Balluerka, N. (2012). Short- and mid-term effects of emotional intelligence training on adolescent mental health. *Journal of Adolescent Health*, 51(5), 462–467. doi:10.1016/j.jadohealth.2012.02.003.
- Sachs-Ericsson, N., Verona, E., Joiner, T., & Preacher, K. J. (2006). Parental verbal abuse and the mediating role of self-criticism in adult internalizing disorders. *Journal of Affective Disorders*, 93, 71–78. doi:10.1016/j.jad.2006.02.014.
- Schore, A. N. (1998). Early shame experiences and infant brain development. In P. Gilbert, & B. Andrews (Eds.), *Shame: Interpersonal behavior: Psychopathology and culture*. New York, NY: Oxford University Press.
- Şenyuva, E., Kaya, H., Işık, B., & Bodur, G. (2014). Relationship between self-compassion and emotional intelligence in nursing students. *International Journal of Nursing Practice*, 20(6), 588–596. doi:10.1111/ijn.12204.
- Shaver, P. R., & Mikulincer, M. (2007). Adult attachment strategies and the regulation of emotion. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 446–465). New York, NY: Guilford.
- Skrove, M., Romundstad, P., & Indredavik, M. S. (2013). Resilience, lifestyle and symptoms of anxiety and depression in adolescence: The young-HUNT study. *Social Psychiatry and Psychiatry Epidemiology*, 48, 407–416. doi:10.1007/s00127-012-0561-2.
- Sloman, L., & Gilbert, P. (2000). *Subordination and defeat: An evolutionary approach to mood disorders and their therapy*. New York, NY: Psychology.
- Smith, M., & Walden, T. (1999). Understanding feelings and coping with emotional situations: A comparison of maltreated and non-maltreated preschoolers. *Social Development*, 8(1), 93–116.
- Teleb, A. A., & Al Awamleh, A. A. (2013). The relationship between self-compassion and emotional intelligence for university students. *Current Research in Psychology*, 4(2), 20.
- Thompson, R., & Zuroff, D. C. (1999). Development of self-criticism in adolescent girls: Roles of maternal dissatisfaction, maternal coldness, and insecure attachment. *Journal of Youth and Adolescence*, 28(2), 197–210. doi:10.1023/A:1021601431296.
- Uvans-Morberg, K. (1998). Oxytocin may mediate the benefits of positive social interaction and emotions. *Psychoneuroendocrinology*, 23, 819–835. doi:10.1016/S0306-4530(98)00056-0.
- Weiss, D. S., & Marmar, C. R. (1997). The impact of event scale-revised. In J. P. Wilson, & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD: A practitioner's handbook* (pp. 399–411). New York, NY: Guilford.