

RESEARCH ARTICLE

Abuse, invalidation, and lack of early warmth show distinct relationships with self-criticism, self-compassion, and fear of self-compassion in personality disorder

Iona Naismith¹  | Santiago Zarate Guerrero¹ | Janet Feigenbaum²

¹Department of Psychology, Universidad de los Andes, Bogota, Colombia

²Research Department of Clinical, Educational and Health Psychology, University College London, London, UK

Correspondence

Iona Naismith, Department of Psychology, Universidad de los Andes, Carrera 1 No 18^a - 12, Bogota, Colombia.
Email: ij.naismith@uniandes.edu.co

Abstract

Background: Cultivating self-compassion is increasingly recognized as a powerful method to regulate hyperactive threat processes such as shame and self-criticism, but fear of self-compassion (FSC) can inhibit this. These difficulties are underexplored in personality disorder (PD) despite their prevalence. Furthermore, little evidence exists regarding how these factors relate to adverse childhood experiences (ACEs) and attachment.

Method: Fifty-three participants with a diagnosis of PD completed measures including childhood abuse/neglect, invalidation, early warmth, self-compassion, shame, self-criticism, FSC, and anxious/avoidant attachment.

Results: Self-compassion was predicted uniquely by low early warmth; self-inadequacy by invalidation and abuse; and FSC by multiple ACEs. FSC and self-compassion were significantly correlated with self-criticism and shame, but not with one another.

Conclusions: Low self-compassion and high FSC appear to be distinct problems, substantiating physiological models proposing distinct threat and soothing systems. Results are consistent with theories positing that low self-compassion has distinct origins to shame, self-criticism, and FSC.

KEYWORDS

child abuse, child neglect, compassion, personality disorders, self-compassion, self-criticism

1 | INTRODUCTION

Although many psychotherapies predominantly target barriers to functioning, positive psychology approaches focus on building resources to support functioning. A range of compassion-based therapies exist, which share the principle that compassion is a powerful method of regulating threat-based emotions such as shame and self-criticism (Kirby, Tellegen, & Steindl, 2015). Compassion has been defined as “a sensitivity to suffering in self and others, with a commitment to try to alleviate and prevent it” (Gilbert, 2014, p.19). We can cultivate compassion in three orientations: giving compassion to others,

receiving from others, and self-compassion, upon which this article focuses. Related to self-compassion is self-reassurance, the specific ability to focus on one's positives when things go wrong and encourage oneself for the future (Gilbert et al., 2017).

Some psychologists have conceptualized a single dimension from self-compassion to self-criticism (e.g., Neff, 2003). However, this conflicts with evidence that the two phenomena involve distinct physiological systems. Self-criticism is associated with amygdala hyperactivity and activates the hypothalamic-pituitary-adrenal axis (HPA-axis), leading to secretion of “stress hormones” such as cortisol (Dickerson & Kemeny, 2004; Gotlib, Joormann, Minor, & Hallmayer, 2008; Longe

et al., 2010). This circuitry is also activated by other processes centred around negative evaluations of self, including shame elicitation (Gruenewald, Kemeny, Aziz & Fahey, 2004).

In contrast, compassion operates through a system involving the myelinated vagus nerve and hypothalamus, mediated by oxytocin (Brown & Brown, 2017; Porges, 2007). It is theorized to have evolved to motivate cooperative and caring behaviours that were adaptive during human evolution, as well as parent–infant caregiving behaviours that foster secure attachment (Depue & Morrone-Strupinsky, 2005). The “soothing system” can rapidly downregulate the “threat system” (HPA-axis and sympathetic arousal), presumably because giving and receiving care requires us to inhibit evaluating others as possible threats (Gilbert, 1993, 2015). Supporting this theory, administering oxytocin downregulates the amygdala and motivates prosocial behaviour, even towards those who have violated our trust (Baumgartner, Heinrichs, Fischbacher, & Fehr, 2008). Clinically, this implies that affiliative affect and behaviour could regulate a hyperactive threat system (including self-criticism and shame), which empirical evidence supports (Kirby et al., 2015). Threat processing can also be regulated using competitive motives (seeking superiority and status), but this strategy is limited because success is not always under self-control and is vulnerable to negative cognitive biases in psychopathology.

Despite potential benefits of compassion, some individuals experience fear of self-compassion (FSC), which predicts poorer responses to compassion interventions (Kelly, Carter, Zuroff, & Borairi, 2013). This fear may stem from learned rules like “compassion will impede self-improvement” or “compassion is self-pity,” or conditioned fear responses to compassion due to parents expressing abuse/contempt as well as care (Gilbert, 2010). Physiologically, this has been conceptualized as compassion activating the threat system, and indeed, self-reassurance produces amygdala activation in highly critical individuals (Longe et al., 2010).

Several key questions remain to be answered. First, to what extent are self-compassion and self-reassurance correlated with self-criticism, shame, and FSC? Theoretically, it should be possible for individuals high in FSC, shame, and self-criticism to also have high self-compassion/reassurance (or have low scores in all), because they reflect distinct physiological systems (Gilbert, 2010). However, Gilbert (2000) proposed that shame and self-criticism from an overactive threat system may overwhelm the soothing system, hindering attempts to be compassionate. FSC may also produce avoidance of self-compassion. These relationships need to be explored in clinical samples, because non-clinical samples have produced floor effects in some forms of self-criticism (Rockliff, Gilbert, McEwan, Lightman, & Glover, 2008).

Furthermore, most studies have measured self-compassion with the full-scale Self-Compassion Scale (SCS) score, which combines items measuring self-compassion with reverse-scored items measuring self-criticism. This is incompatible with the conceptualization of self-compassion and self-criticism as reflecting distinct physiological systems. Indeed, factor analysis indicates a two-factor solution that separates positively worded items from negatively worded items (López et al., 2015; Muris & Petrocchi, 2017). Using the full-scale SCS risks overestimating the relationship between self-compassion and psychopathy because the negative SCS items are almost

completely redundant with trait neuroticism (Pfattheicher, Geiger, Hartung, Weiss, & Schindler, 2017) and account for considerably more variance in mental health symptoms than positive items (Muris, Van den Broek, Otgaar, Oudenhoven, & Lennartz, 2018). Similarly, factor analyses indicate that self-criticism is distinct from reverse-scoring self-reassurance (Castilho, Pinto-Gouveia, & Duarte, 2015; Kupeli, Chilcot, Schmidt, Campbell, & Troop, 2013).

We identified only one study exploring these relationships in a clinical (depressed) sample using the two-factor solution (Gilbert, McEwan, Catarino, & Baião, 2014), which found that self-compassion negatively correlated with both FSC and self-criticism. Replication in other clinical populations is therefore warranted.

Second, it remains to be established whether self-compassion/reassurance have similar or distinct origins to shame, self-criticism, and FSC. Early life experiences strongly influence many processes involved in psychopathology or resilience. Understanding these pathways is important for formulating clients' difficulties and developing treatments. Explanations can be broadly grouped into those focusing on attachment styles versus those focusing on adverse childhood experiences (ACEs) such as neglect/abuse. These are different levels of explanation, but undoubtedly overlap: abuse and neglect are risk factors for both anxious and avoidant attachment (Mickelson, Kessler, & Shaver, 1997).

1.1 | Attachment and (fear of) self-compassion

Attachment evolved to enable infants to approach caregivers for protection/care (Bowlby, 1969). However, if caregivers themselves are unpredictable or unsafe, the infant develops negative working models of self and others. These are initially protective but hinder subsequent healthy relationship building. Bartholomew and Horowitz (1991) define attachment style according to two dimensions: attachment anxiety (characterized by dependent behaviour and negative beliefs about self-worth) and avoidance (self-reliant and emotionally distant due to negative beliefs about others' trustworthiness/supportiveness).

The negative self-views in anxious attachment are theorized to lead to difficulties with self-compassion, because individuals view themselves as undeserving of support (e.g., Gillath, Shaver, & Mikulincer, 2005; Neff & McGehee, 2010). Because avoidant attachment can be associated with negative or positive self-views, some theorists argue that it should not predict self-to-self relating (Pietromonaco & Feldman Barrett, 2000). However, social mentalities theory (Gilbert, 2000) suggests that social experiences influence self-relating not only by influencing working models but also because the soothing system (which underlies self- and other-relating) will not develop in the context of inadequate care. Furthermore, the consequence of avoidant attachment (avoiding closeness) may prevent the individual from developing relational templates for how to show compassion, consequently inhibiting self-compassion. This implies that both insecure attachment styles should correlate negatively with self-compassion.

In studies of non-clinical populations, self-compassion reliably produces negative correlations with anxious attachment, but weaker

or non-significant correlations with avoidant attachment, supporting the theorized role of negative self-views (Joeng et al., 2017; Neff & McGehee, 2010; Pepping, Davis, O'Donovan, & Pal, 2015; Raque-Bogdan, Ericson, Jackson, Martin, & Bryan, 2011; Wei, Liao, Ku, & Shaffer, 2011). However, in the only clinical population study we identified, low self-compassion was uniquely predicted by attachment-related avoidance, supporting social mentalities model (Mackintosh, Power, Schwannauer, et al., 2018).

Both avoidant and anxious attachment have been hypothesized to correlate with FSC. The inadequate/inconsistent caregiving underlying insecure attachment may cause conditioned fear responses to compassion, beliefs of not deserving compassion, or lack of compassionate relational templates, all of which are theorized causes of FSC. Indeed, FSC has been significantly correlated with avoidant and anxious attachment in depressed and non-clinical samples (Asano et al., 2017; Gilbert, McEwan, Catarino, Baiao, & Palmeira, 2014; Gilbert, McEwan, Matos, & Ravis, 2011; Joeng et al., 2017).

Insecure attachment may not only precede low-self-compassion and FSC but also maintain them: Individuals may avoid others' compassion due to beliefs of self-defectiveness (anxious attachment) or fear of closeness (avoidant attachment), preventing fear extinction and development of skills of compassionate relating.

1.2 | ACEs and (fear of) self-compassion

ACEs research typically distinguishes physical neglect (e.g., lack of adequate clothing, food, or supervision), emotional neglect (when caregivers fail to meet a child's basic psychological needs including love and support), physical abuse, emotional abuse (e.g., criticism or humiliation), and sexual abuse (Bernstein et al., 2003). Another commonly studied ACE is parental invalidation: inappropriate responses to a child communicating their private experiences (e.g., negating or overreacting), causing the child to conclude that they have socially unacceptable personality traits such as being oversensitive or not trying hard enough (Linehan, 1993). Although all the constructs above focus on adverse events or parental behaviours, ACEs can also be measured by recalled childhood emotions, such as feelings of warmth/safeness in childhood (Richter, Gilbert, & McEwan, 2009). Such measures are important because the same behaviour may be experienced distinctly by different individuals (Cicchetti & Rogosch, 2009). In fact, mental health symptoms are more strongly correlated with recalled feelings of lack of warmth or of being threatened than with recalled parental behaviours (Gilbert, Cheung, Grandfield, Campey, & Irons, 2003; Richter et al., 2009).

Self-compassion measured by the full-scale SCS correlates with various ACEs including low early warmth, parental rejection, and abuse (Neff & McGehee, 2010; Pepping et al., 2015; Tanaka et al., 2011; Vettese, Dyer, Li, & Wekerle, 2011). However, as noted above, use of the SCS full-scale means that this may just reflect previously established correlations between abuse and self-criticism (e.g., Sachs-Ericsson, Verona, Joiner, & Preacher, 2006). To our knowledge, only one study has correlated the positive SCS subscale with ACEs. This found self-compassion to correlate with early warmth,

but not parental rejection, in students (Kelly & Dupasquier, 2016). To date, this has not been explored in clinical populations.

Only two studies have examined associations between FSC and ACEs. Matos, Duarte, and Pinto-Gouveia (2017) found FSC to correlate with low warmth, which may reflect that engaging in self-compassion following a history of low warmth may trigger grief or anger about past experiences, or difficulties cultivating compassion due to a lack of relational templates (Gilbert, 2010). Boykin et al. (2018) found that FSC significantly correlated with childhood maltreatment, but did not distinguish abuse and neglect.

1.3 | Present study

The present study explored possible origins of self-compassion, FSC, shame, and self-criticism by examining their associations with attachment styles and ACEs (abuse, neglect, invalidation, and lack of warmth). Relationships between self-compassion, FSC, shame, and self-criticism were also explored. Unlike almost all studies examining these relationships, we measure self-compassion using only positive SCS items.

Despite clear clinical implications of modelling these relationships, most studies have examined non-clinical populations. Clinical samples may have higher biological vulnerability, lack of protective factors, and exposure to ACEs throughout the lifespan, which may increase the impact of ACEs and attachment insecurity. Furthermore, some variables such as self-hatred have produced floor effects in non-clinical populations, limiting analysis (Rockliff et al., 2008).

The present study explored these relationships in individuals with personality disorder (PD; predominantly borderline), who typically report numerous ACEs (Johnson, Cohen, Brown, Smailes, & Bernstein, 1999). Shame, self-criticism, and FSC are elevated in several PDs, including avoidant, dependent, narcissistic, and borderline personality disorder (BPD; Arntz, Weertman, & Salet, 2011; Ebert, Edel, Gilbert & Brüne, 2018; Ritter et al., 2014; Scheel et al., 2014). Importantly, BPD is not associated with elevated sympathetic activity to threat but with parasympathetic hypoactivity, highlighting the need to further understand self-compassion in this population (Austin, Riniolo, & Porges, 2007; Schmahl et al., 2004).

Specifically, we aimed to explore

1. Associations between FSC and self-compassion/self-reassurance;
2. Associations between these variables and shame, self-criticism, and anxious/avoidant attachment; and
3. Which ACEs (childhood abuse, neglect, invalidation, and lack of warmth) predicted shame, self-criticism, FSC, and self-compassion/reassurance.

2 | METHODS

2.1 | Participants

Fifty-three adults attending an out-patient PD service (94.3%) or awaiting treatment (5.7%) were recruited. There were 44 females

and nine males. Age ranged from 18 to 57 years ($M = 32$, $SD = 11.1$). Seventy-six percent were White, 11% Asian or Asian British, 6% Black or Black British, 4% mixed, and 4% other. All met Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) criteria for a diagnosis of a PD (American Psychiatric Association, 1994) as determined by the Structured Clinical Interview for DSM-IV-TR Axis II Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997); this was a requirement for joining the waitlist or the service. Forty-seven participants had a diagnosis of BPD, three of narcissistic PD, and one of personality disorder not otherwise specified. Data were missing for two participants. Common comorbid diagnoses included generalized anxiety disorder ($n = 12$) and major depressive disorder ($n = 9$). Clients with florid psychosis, learning disability, PD due to head injury, or previous experience of compassion-focused therapy (CFT) were excluded.

Patients were receiving standard dialectical behavioural therapy (Linehan, 2015), consisting of weekly individual therapy, skills groups (e.g., mindfulness), and out-of-office telephone support. Length of current treatment cycle at time of testing ranged from 0 to 22 months ($M = 6.5$, $SD = 5.2$).

2.2 | Measures

SCID-II (First et al., 1997) is a structured clinical interview tool for clinicians that identifies whether clients meet diagnostic criteria for PD, with high validity and reliability (Lobbestael, Leurgans, & Arntz, 2011; Shear et al., 2000). The SCID-II was administered by qualified, trained clinicians.

Childhood Trauma Questionnaire (CTQ) Short form (Bernstein et al., 2003) has 28 items measuring five factors: emotional, physical, and sexual abuse; and emotional and physical neglect. Participants rate frequency of traumas on a 5-point scale from 1 (*never true*) to 5 (*very often true*). The additional Minimization-Denial subscale was not used as it is not empirically supported (MacDonald, Thomas, MacDonald, & Sciolla, 2015). CTQ scores correlate highly with semistructured clinical interviews (Bernstein et al., 1994). The original validation study found high internal consistencies for four subscales ($\alpha = 0.81$ to 0.95) and acceptable for physical neglect ($\alpha = 0.61$ to 0.78), as found in the present study (see Table 1).

Early Memories of Warmth and Safeness Scale (EMWSS; Richter et al., 2009) is a retrospective 21-item single-factor measure of feelings of safety, warmth, and being cared for in childhood, with high test-retest reliability ($r = 0.91$) and internal consistency ($\alpha = 0.97$). Items include "I felt cared about" and "I felt appreciated the way I was," rated on a 5-point Likert scale from 0 (*no, never*) to 4 (*yes, most of the time*).

Invalidating Childhood Environments Scale (ICES; Mountford, Corstophine, Tomlinson, & Waller, 2007) is a retrospective measure of parental invalidation. Participants rate 14 parental behaviours towards them during childhood, from 1 (*never*) to 5 (*all the time*).

Self Compassion Scale -Short Form (SCS; Raes, Pommier, Neff, & Van Gucht, 2011) has 12 items and developed from an original 26-item scale (Neff, 2003). Participants rate frequency of self-compassionate behaviours on 5-point Likert scales. Recently, researchers have challenged the initial unifactorial model of these scales, favouring two or six factors (Costa, Marôco, Pinto-Gouveia, Ferreira, & Castilho, 2016; Muris & Petrocchi, 2017). This study uses

TABLE 1 Descriptive statistics and correlations between all scales and subscales

	M (SD)	α	1	2	3	4	5	6	7	8	9	10	11
1. CTQ total	69.02 (23.85)	*	—										
2. EMWSS	18.31 (19.79)	0.92	-0.632**	—									
3. ICES total	44.76 (14.25)	0.84	0.628**	-0.561**	—								
4. Fear of self-compassion	38.45 (13.42)	0.74	0.470**	-0.315*	0.358**	—							
5. SCS self-compassion	13.28 (5.69)	0.82	-0.297*	0.411**	-0.261	-0.240	—						
6. SCS self-criticism	9.64 (4.30)	0.77	0.280*	-0.412**	0.249	0.464**	-0.411**	—					
7. Self-reassurance	10.99 (6.89)	0.83	-0.300*	0.220	-0.149	-0.181	0.589**	-0.176	—				
8. Self-inadequacy	30.88 (5.27)	0.82	0.159	-0.287*	0.409**	0.431**	-0.366**	0.660**	-0.229	—			
9. Self-hatred	15.45 (4.06)	0.78	0.292*	-0.215	0.281*	0.403**	-0.396**	0.500**	-0.319*	0.587**	—		
10. ESS	86.83 (16.05)	0.89	0.099	-0.248	0.279*	0.340*	-0.367**	0.657**	-0.209	0.685**	0.561**	—	
11. ECR-S Anxiety	32.3 (6.64)	0.55	0.159	0.008	0.169	0.050	0.046	0.175	-0.037	0.314*	0.295	0.356**	—
12. ECR-S Avoidance	27.11 (8.11)	0.75	0.237	-0.191	0.319*	0.349*	-0.179	0.149	-0.196	0.332*	0.367**	0.138	-0.152

Note. Internal reliability for individual subscales is provided in the text. CTQ: Childhood Trauma Questionnaire—short form; ECR-S: Experiences in Close Relationships Scale—short form; EMWSS: Early Memories of Warmth and Safeness Scale; SCS: Self Compassion Scale; ESS: Experience of Shame Scale; ICES: Invalidating Childhood Environments Scale.

* $p < 0.05$. ** $p < 0.01$.

the two-factor model distinguishing self-compassion (positively worded items) from self-criticism (negatively worded items). In the present article, higher scores on positive SCS and negative SCS represent higher self-compassion and higher self-criticism, respectively.

Fear of Compassion towards Self scale (Gilbert et al., 2011) consists of 15 items measured on a 5-point Likert scale, including "I feel that I don't deserve to be kind and forgiving to myself." The original study found high internal consistency ($\alpha = 0.85$ to 0.92). Although conflicting evidence exists regarding whether or not the scale is unifactorial (Asano et al., 2017; Dentale et al., 2017), it has clinical utility for predicting symptoms (Dentale et al., 2017) and CFT treatment response (Kelly et al., 2013).

Forms of Self-Criticism/Attacking and Self-Reassuring Scale (FSCRS; Gilbert, Clarke, Hempel, Miles, & Irons, 2004). This scale consists of 22 items rated on 5-point Likert scales, producing three components: self-inadequacy, self-hatred, and self-reassurance. The original study found high internal consistency for all subscales ($\alpha = 0.86$ to 0.90).

Experience of Shame Scale (ESS; Andrews, Qian, & Valentine, 2002). This 25-item questionnaire assesses experiential, cognitive, and behavioural shame in different domains. Respondents rate to what extent they felt this type of shame in the past year, from 1 (*not at all*) to 4 (*very much*). The original paper found high test-retest reliability, $r = 0.83$, and excellent internal consistency.

Experiences in Close Relationships Scale-Short Form (Wei, Russell, Mallinckrodt, & Vogel, 2007) measures anxious attachment and avoidant attachment, each with six items. The original study found acceptable internal consistency for both subscales ($\alpha = 0.77$ to 0.78), but the present study found poor internal consistency for anxious attachment (see Table 1).

2.3 | Procedure

Ethical approval was obtained from the Research Ethics Committee London (Ref 15/LO/0747). Testing took place after weekly dialectical behavioural therapy groups. All group members were invited to participate by facilitators, and individuals on services' waiting lists were contacted via email. Participants completed the measures in the following order: demographics, FSCRS, Fear of Compassion towards Self, Experiences in Close Relationships Scale-Short Form, EMWSS, CTQ, ICES, ESS, and SCS-Short Form. Subsequently, participants received a £10 shopping voucher and were taught a simple CFT technique as remuneration for participating.

2.4 | Data analysis

Data analysis was run using SPSS v24 (IBM Corp, 2016). Square-root or logarithmic transformations were applied to variables that did not meet normality assumptions (EMWSS; CTQ emotional and physical neglect and emotional abuse subscales; and anxious attachment, ESS, self-inadequacy, self-hatred, and self-reassurance). The two-factor solution for the SCS was used (see measures).

The sample size for this study was predetermined at $N = 53$ because the dataset had been collected during a previous project. Therefore, prior to other analyses, sensitivity power analyses were run with GPower, using $\alpha = 0.05$ and 80% power.

Correlations were run between FSC, self-compassion, and self-reassurance, and between these variables and self-criticism, shame, and attachment styles. Sensitivity power analyses indicated that the minimum detectable effect was $r = 0.33$ (moderate), which was deemed acceptable (Cohen, 1988).

Multiple regressions were used to explore which ACEs predicted self-compassion, self-reassurance, FSC, shame, self-hatred, and self-inadequacy. EMWSS, ICES, and CTQ subscales of Physical abuse and Sexual abuse were included as predictors. CTQ physical neglect was excluded due to unacceptable internal consistency; CTQ emotional neglect/abuse was excluded due to theorized overlap with EMWSS and ICES, respectively. Variance inflation factors (VIFs) were all < 2 , indicating low risk of multicollinearity (Field, 2005). Data met assumptions of homogeneity of variance and normality. Sensitivity power analysis indicated a minimum detectable effect size of $f^2 = 0.12$. Table 2 presents post hoc power analyses.

3 | RESULTS

Mean CTQ scores indicated that patients reported severe-to-extreme emotional abuse ($M = 17.18$, $SD = 6.49$) and moderate-to-severe levels of emotional neglect ($M = 17.58$, $SD = 5.82$), physical neglect ($M = 11.49$, $SD = 4.64$), physical abuse ($M = 11.39$, $SD = 6.82$), and sexual abuse ($M = 11.38$, $SD = 7.86$), according to CTQ manual cut-offs (Bernstein & Fink, 1998).

Table 1 provides descriptive statistics for all measures, and correlations between measures.

3.1 | Correlations

Figure 1 illustrates the correlations between self-compassion, FSC, and other proximal variables.

FSC, shame, and all self-criticism measures (self-hatred, self-inadequacy, and negative SCS subscale) were significantly positively correlated with one another. Self-compassion (positive SCS subscale) significantly negatively correlated with all self-criticism variables and shame but showed a non-significant negative correlation with FSC ($p = 0.097$).

FSC was significantly correlated with avoidant attachment, but self-compassion was not. Neither FSC nor self-compassion significantly correlated with anxious attachment, although anxious attachment had poor internal consistency.

Duration of current treatment cycle significantly correlated with anxious attachment ($r = 0.321$, $p = 0.021$) but no other variables ($p \geq 0.365$). In case this was suppressing a relationship between FSC/self-compassion and anxious attachment, partial correlations between these variables were run (controlling for treatment duration) but were also non-significant ($p > 0.348$).

TABLE 2 Regressions of proximal variables with selected ACEs as predictors

Dependent variable		<i>t</i>	<i>p</i>	β	<i>F</i>	<i>df</i>	<i>p</i>	Adj <i>R</i> ²	Achieved power
Self-compassion	Overall model				2.107	40	0.100	0.100	0.97
	CTQ PA	1.101	0.278	0.196					
	CTQ SA	0.007	0.995	0.001					
	EMWSS	2.544*	0.015	0.497					
	ICES	0.061	0.952	0.012					
Self-reassurance	Overall model				1.939	42	0.124	0.082	0.94
	CTQ PA	1.956	0.058	0.342					
	CTQ SA	-0.479	0.634	-0.074					
	EMWSS	2.458*	0.019	0.467					
	ICES	0.647	0.522	0.119					
Fear of self-compassion	Overall model				2.680*	42	0.046	0.138	0.98
	CTQ PA	1.48	0.147	0.402					
	CTQ SA	1.28	0.207	0.271					
	EMWSS	-0.810	0.423	-0.149					
	ICES	0.412	0.683	0.074					
Self-inadequacy	Overall model				4.306**	42	0.006	0.239	0.99
	CTQ PA	2.769**	0.009	0.441					
	CTQ SA	1.163	0.252	0.164					
	EMWSS	1.738	0.090	0.300					
	ICES	-2.251*	0.030	0.378					
Self-hatred	Overall model				1.132	42	0.356	0.012	0.79
Shame	Overall model				1.153	42	0.347	0.014	0.80

Note. Significant *t* and *F* values are indicated in bold. Model parameters are not presented if neither these nor model is significant. CTQ PA: Childhood Trauma Questionnaire—Physical abuse; CTQ SA: Childhood Trauma Questionnaire—Sexual abuse; EMWSS: Early Memories of Warmth and Safeness Scale; ICES: Invalidating Childhood Environments Scale.

p* < 0.05. *p* < 0.01.

3.2 | Regressions between ACEs and proximal measures

Table 2 presents regression results. The model for FSC was significant and explained 22.0% of the variance, but no model parameter was individually predictive.

The model for self-inadequacy was significant and explained 31.2% of the variance, with ICES and physical abuse significantly predicting self-inadequacy (see Table 2).

No other overall models were significant. However, *t*-statistics indicated that both self-compassion and self-reassurance were significantly predicted only by EMWSS (see Table 2); therefore, simple regressions were run for these variables with only one predictor (EMWSS). A significant regression was found for self-compassion, $F(1,46) = 12.663, p = 0.001$, where EMWSS explained 21.6% of the variance of self-compassion. A significant regression was found for self-reassurance, $F(1,46) = 8.806, p = 0.005$, where EMWSS explained 15.0% of the variance of self-reassurance.

4 | DISCUSSION

Key findings are that self-compassion and self-reassurance were predicted uniquely by low early warmth; self-inadequacy uniquely by invalidation and physical abuse; and FSC by a combination of ACEs. FSC and self-compassion were not significantly correlated. Below, we interpret these findings in the context of previous psychological and neurophysiological findings.

4.1 | Proximal factors and ACEs

Self-compassion and self-reassurance were both predicted uniquely by early warmth. This corroborates other studies showing that

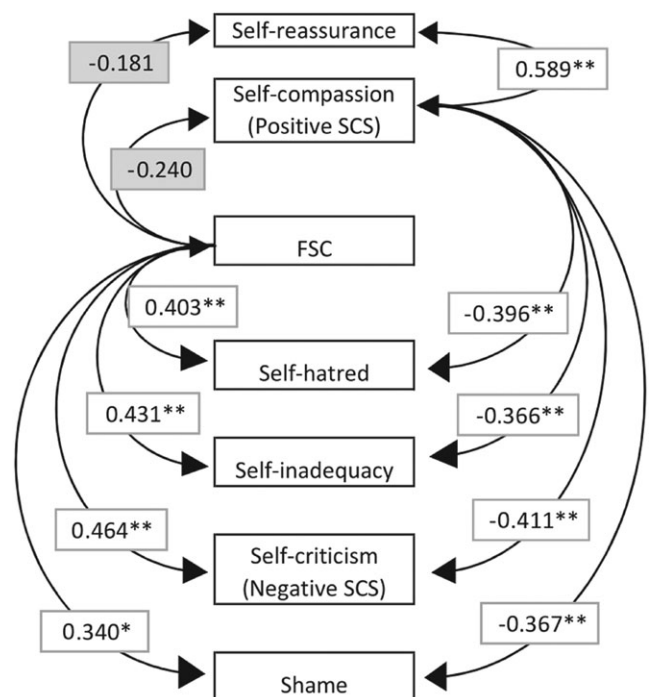


FIGURE 1 Correlation coefficients between proximal variables and self-compassion (right) and fear of self-compassion (left). Fear of self-compassion (FSC) is not significantly correlated with self-compassion or self-reassurance (marked in grey)

parental warmth, but not parental rejection, is significantly correlated with self-reassurance and self-compassion (Irons, Gilbert, Baldwin, Baccus, & Palmer, 2006; Kelly & Dupasquier, 2016; Richter et al., 2009). Our study extends the literature because only one study (Kelly & Dupasquier, 2016) used only the positive SCS subscale, and all used non-clinical populations, where ACEs are less prevalent.

These findings are consistent with theories positing that early warmth is essential for development of the “soothing system” that underlies self-compassion as well as social safeness (Gilbert, 2010; Gillath et al., 2005; Porges, 2007). This theorized pathway is substantiated by evidence that early neglect and low warmth are associated with physiological markers of soothing system functioning, such as oxytocin release following physical contact with a loved one (Ebert, Edel, Gilbert & Brüne, 2018; Wismer-Fries, Ziegler, Kurian, Jacoris, & Pollak, 2005). Physical and emotional abuse have also been associated with oxytocin release, but studies rarely control for early warmth/neglect (e.g., Heim et al., 2009; Seltzer, Ziegler, Connolly, Proski, & Pollak, 2014). Thus, further research is required to explore whether abuse as well as low warmth impacts soothing system functioning.

Self-inadequacy was predicted by parental invalidation and physical abuse only. This is compatible with theories viewing self-criticism as internalized criticism from others (Scharff & Tsounis, 2003) and replicates findings that parental rejection, but not low warmth, predicts self-inadequacy (Irons et al., 2006). This further supports the idea that high self-criticism and low self-compassion are distinct phenomena, with distinct origins. Figure 2 presents a hypothetical model of these pathways.

FSC was significantly predicted by a model using parental invalidation, EMWSS, and physical and sexual abuse as predictors. This corroborates evidence that FSC correlated with both shame memories and low warmth in a non-clinical population (Matos et al., 2017). These findings could indicate that a range of developmental pathways converge onto a single factor, FSC (equifinality). Alternatively, the FSC scale might tap into several distinct processes, each with different origins. Some items of this scale appear to measure soothing system hypoactivity, which we propose stems from low warmth (e.g., “When I try and feel kind and warm to myself I just feel kind of empty”). Other items seem to measure self-inadequacy (“If I become kinder and less

self-critical to myself then my standards will drop”), which we suggest stems from invalidation and physical abuse. Others might tap into self-hatred (“I don’t deserve to be kind and forgiving to myself”) or conditioned fear responses to compassion (“if I am too compassionate towards myself, bad things will happen”). A measure that distinguishes these different inhibitors may enable us to better explore their origins. As Figure 2 illustrates, if the FSC scale taps into both threat system hyperactivity (e.g., self-inadequacy) and soothing system hypoactivity (causing low self-compassion), we would expect it to correlate with multiple ACEs.

Self-hatred and shame were not predicted by any ACEs. Post hoc power analysis indicated that these models had power bordering on acceptable (0.79 to 0.80), suggesting that ACEs may predict these variables but are unlikely to explain much variance. Literature on this is limited, although one longitudinal study found that shame in adolescence was predicted by physical reprimands and parental rejection, but not sexual abuse or low warmth (Stuewig & McCloskey, 2005).

4.2 | Proximal factors and attachment styles

Drawing from theories of social mentalities (Gilbert, 2000) and internal working models (Bowlby, 1969), we hypothesized that clients with low self-compassion or high FSC would be avoidant- and anxiously-attached. FSC was indeed correlated with avoidant attachment, implying that FSC does not simply centre around the negative self-beliefs characteristic of anxious attachment. Probably, the causes of avoidant attachment (abusive/unresponsive caregivers) also trigger processes underlying FSC, such as conditioned fear responses to compassion or lack of compassion models. Anxious attachment and FSC did not correlate, but internal consistency was low for anxious attachment. Most previous studies found significant correlations between FSC and both insecure attachment styles (Asano et al., 2017; Gilbert et al., 2014; Joeng et al., 2017), although one found significant correlations only with anxious attachment (Gilbert et al., 2011).

Surprisingly, neither self-compassion nor self-reassurance significantly correlated with either attachment style. Based on power calculations conducted, we can be confident that we would have detected a correlation of ≥ 0.327 had it existed. One explanation is that

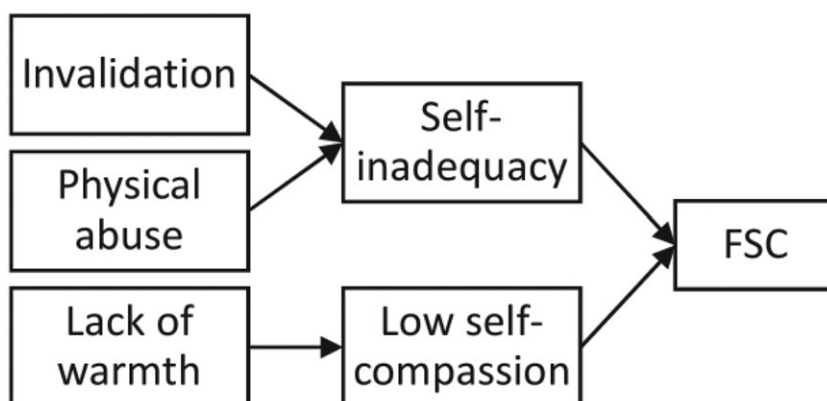


FIGURE 2 Hypothesized model of the origins of self-compassion, self-inadequacy, and fear of self-compassion (FSC)

insecure attachment reflects threat system hyperactivity rather than soothing system functioning: Indeed, insecurely attached individuals show amygdala hyperreactivity when reading about negative attachment experiences (Lemche et al., 2006). However, further research on attachment neurophysiology is required before drawing conclusions. Caution is warranted when interpreting present findings due to the poor internal consistency of anxious attachment. Furthermore, anxious attachment unexpectedly increased with treatment duration. This could indicate lack of insight of attachment anxiety early in therapy, which could confound results. It could also reflect that more anxiously attached clients tend to remain in treatment longer; however, anxious attachment did not significantly correlate with self-compassion nor FSC even after partialing out treatment duration, suggesting that this was not suppressing correlations.

The only study to date examining associations between attachment and self-compassion in a clinical population (anxious/depressed patients) used the full-scale SCS, which limits interpretability (Mackintosh et al., 2018). In non-clinical populations, self-compassion and self-reassurance produce significant negative correlations with anxious attachment, but non-significantly or much more weakly with avoidant attachment (Gilbert et al., 2011; Pepping et al., 2015; Raque-Bogdan et al., 2011; Wei et al., 2011). Given the conflicting results, larger sample longitudinal research and physiological studies are required.

4.3 | Self-compassion, FSC, shame, and self-criticism

Self-compassion and self-reassurance have been conceptualized as “antidotes” to self-criticism (Gilbert, 2010).

In this study, FSC and low self-compassion were correlated with all measures of self-criticism, replicating other findings involving the positive SCS subscale (Gilbert et al., 2011; Gilbert et al., 2017). Shame negatively correlated with self-compassion in the present study, tentatively supporting the hypothesis that self-compassion interventions may be important when shame is elevated (Gilbert, 2010). Interestingly, self-reassurance significantly negatively correlated with self-hatred but not with shame or self-inadequacy, suggesting that even clients highly prone to shame and self-inadequacy could remind themselves of their positive attributes and ability to cope, despite struggling with self-compassion and self-kindness. This may be an effect of therapy because in other clinical and non-clinical populations, self-reassurance correlates more strongly with self-hatred and self-inadequacy (e.g., Castilho et al., 2015).

Shame positively correlated with FSC, in keeping with theories suggesting that both stem from interpersonal traumas. Shame also correlated with FSC and low self-compassion (full-scale SCS) in a previous study of eating disorder clients (Kelly et al., 2013).

FSC was not significantly correlated with self-compassion nor self-reassurance in the present study, although results neared significance for self-compassion ($r = -0.24, p = 0.09$). Gilbert et al. (2011) found only small-to-medium negative correlations between FSC and self-compassion measured by positive SCS (-0.21) and self-

reassurance (-0.33) in students, further supporting the idea that these reflect distinct emotion regulation systems (Gilbert, 2010). Clinically, this would imply that individuals can have low self-compassion without fearing self-compassion or that they can engage in self-compassion whilst still experiencing fear, which is compatible with some findings that FSC does not predict compassion affect during CFT exercises (Naismith, Mwale, & Feigenbaum, 2018).

However, conflicting evidence exists. Two studies found that self-compassion strongly negatively correlated with FSC: whereas one is limited by using the full-scale SCS (Joeng & Turner, 2015), one used only positive SCS (Gilbert, McEwan, Catarino, & Baião, 2014). The contradictory results are explicable by our proposal that the FSC scale appears to combine multiple fears/inhibitors, some representing threat system hyperactivity like conditioned fear of affiliative emotions or fear of connecting to deep loneliness, and others representing soothing system hypoactivity like a lack of models of compassion to draw from (see Figure 2). In populations like the present one, variation in FSC may predominantly reflect variation in threat system hyperactivity, whereas in depressed populations like that of Gilbert, McEwan, Catarino, and Baião (2014), variation in FSC may also reflect variation in soothing system activity, meaning that self-compassion will correlate with FSC. More precise measurement of FSC will help elucidate this.

Even if (as our results indicate) self-compassion and FSC do not always correlate, they certainly interact. Self-compassion practice can reduce fear of compassion in all orientations (Jazaieri et al., 2013), which may reflect extinction of conditioned fear of compassion following exposure in a safe context. However, FSC can be a barrier to compassion interventions, predicting poorer treatment response (Cuppige, Baird, Gibson, Booth, & Hevey, 2018; Kelly et al., 2013).

4.4 | Strengths and limitations

Measurement of self-compassion has been a recent source of contention in the literature. A strength of this study is that it separates the positive and negative SCS components.

This study relied on retrospective reporting of ACEs, which typically underestimates rates of abuse/neglect. However, it has been deemed sufficiently valid for major adversities that rely less on judgement/interpretation, such as those measured in this study (Hardt & Rutter, 2004).

Another concern is that the relationship between ACEs and proximal variables may be concealed if the latter are updated through later reparative relationships, including therapy. Clients with PDs typically have long-standing histories of mental health service use (Lieb, Zanarini, Schmahl, Linehan, & Bohus, 2004). Nonetheless, all participants were in active treatment or on a waitlist, suggesting that the traumatic sequelae of ACEs had not been entirely overcome. Although data were not collected on previous treatment, current treatment duration only correlated with anxious attachment in this study, and partialing it out did not change results.

Unfortunately, the sample size was not large enough to conduct path models involving multiple dependent variables (Streiner, 2005) or mediation analyses (Fritz & MacKinnon, 2007), for example, exploring whether self-criticism or avoidant attachment mediates pathways from ACEs to FSC.

4.5 | Future research

This study only measured FSC. Future studies might investigate associations between ACEs and fears of other compassion orientations.

Present findings confirm the importance of distinguishing different maltreatment types. Given the considerable comorbidity between low warmth, neglect, and abuse, future studies should control for other ACEs when exploring the effects of one.

Qualitative studies suggest that numerous inhibitors of compassion may exist (e.g., Lawrence & Lee, 2014), which explains present findings of multiple pathways to FSC and the inconsistent factor structure of the fear of compassion scales (Asano et al., 2017). Developing measures that distinguish different inhibitors of compassion could increase understanding of this construct.

4.6 | Clinical implications

Although longitudinal studies are required to make definitive conclusions about causal pathways, current findings and previous studies of non-clinical populations are consistent with theoretical predictions that early warmth is essential for self-compassion/reassurance (e.g., Porges, 2007), whereas self-inadequacy originates in invalidation and abuse (Scharff & Tsigounis, 2003). This could be integrated into formulations to increase understanding and reduce shame about difficulties.

Absence of a significant negative correlation between FSC and self-compassion indicates that even individuals fearful of self-compassion can engage in it. Research is required to determine whether such individuals benefit from techniques to decrease FSC prior to increasing self-compassion. If so, identification of the different inhibitors of self-compassion will enhance such treatment. For example, conditioned fear towards compassion should benefit from exposure and response prevention, whereas FSC grounded in negative self-beliefs may require cognitive restructuring or guided discovery.

ACKNOWLEDGEMENTS

We would like to thank the NHS services for supporting the recruitment process and service users for participating in the study. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

ORCID

Iona Naismith  <https://orcid.org/0000-0003-3897-783X>

REFERENCES

- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Andrews, B., Qian, M., & Valentine, J. D. (2002). Predicting depressive symptoms with a new measure of shame. The Experience of Shame Scale. *British Journal of Clinical Psychology*, 41, 29–42. <https://doi.org/10.1348/014466502163778>
- Arntz, A., Weertman, A., & Salet, S. (2011). Interpretation bias in Cluster-C and borderline personality disorders. *Behaviour Research and Therapy*, 49(8), 472–481. <https://doi.org/10.1016/j.brat.2011.05.002>
- Asano, K., Tsuchiya, M., Ishimura, I., Lin, S., Matsumoto, Y., Miyata, H., ... Gilbert, P. (2017). The development of fears of compassion scale Japanese version. *PLoS ONE*, 12(10), e0185574. <https://doi.org/10.1371/journal.pone.0185574>
- Austin, M. A., Riniolo, T. C., & Porges, S. W. (2007). Borderline personality disorder and emotion regulation: Insights from the Polyvagal Theory. *Brain and Cognition*, 65(1), 69–76. <https://doi.org/10.1016/j.bandc.2006.05.007>
- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, 61, 226–244. <https://doi.org/10.1037/0022-3514.61.2.226>
- Baumgartner, T., Heinrichs, M., Vonlanthen, A., Fischbacher, U., & Fehr, A. (2008). Oxytocin shapes the neural circuitry of trust and trust adaptation in humans. *Neuron*, 58, 639–650. <https://doi.org/10.1016/j.neuron.2008.04.009>
- Bernstein, D. P., & Fink, L. (1998). *Childhood Trauma Questionnaire: A retrospective self-report manual*. San Antonio, TX: The Psychological Corporation.
- Bernstein, D. P., Fink, L., Handelsman, L., Foote, J., Lovejoy, M., & Wenzel, K. & Ruggiero, J. (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *The American Journal of Psychiatry*, 151(8), 1132–1136. <https://doi.org/10.1176/ajp.151.8.1132>
- Bernstein, D. P., Stein, J. A., Newcomb, M. D., Walker, E., Pogge, D., Ahluvalia, T., & Zule, W. (2003). Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse & Neglect*, 27, 169–190. [https://doi.org/10.1016/S0145-2134\(02\)00541-0](https://doi.org/10.1016/S0145-2134(02)00541-0)
- Bowlby, J. (1969). Attachment and loss. In *Attachment* (ed., Vol. 1). New York: Basic Books.
- Boykin, D. M., Himmerich, S. J., Pinciotti, C. M., Miller, L. M., Miron, L. R., & Orcutt, H. K. (2018). Barriers to self-compassion for female survivors of childhood maltreatment: The roles of fear of self-compassion and psychological inflexibility. *Child Abuse & Neglect*, 76, 216–224. <https://doi.org/10.1016/j.chiabu.2017.11.003>
- Brown, S. L., & Brown, R. M. (2017). Compassionate neurobiology and health. In E. M. Seppala, E. Simon-Thomas, S. L. Brown, M. C. Worline, C. D. Cameron, & J. R. Doty (Eds.), *The Oxford Handbook of Compassion Science* (pp. 159–172). New York: Oxford University Press.
- Castilho, P., Pinto-Gouveia, J., & Duarte, J. (2015). Exploring self-criticism: Confirmatory factor analysis of the FSCRS in clinical and nonclinical samples. *Clinical Psychology & Psychotherapy*, 22(2), 153–164. <https://doi.org/10.1002/cpp.1881>
- Cicchetti, D. & Rogosch, F. A. (2009). Adaptive coping under conditions of extreme stress: Multilevel influences on the determinants of resilience in maltreated children. *New Directions for Child and Adolescent Development*, 2009(124), 47–59. <https://doi.org/10.1002/cd.242>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

- Costa, J., Marôco, J., Pinto-Gouveia, J., Ferreira, C., & Castilho, P. (2016). Validation of the psychometric properties of the self-compassion scale. Testing the factorial validity and factorial invariance of the measure among borderline personality disorder, anxiety disorder, eating disorder and general populations. *Clinical Psychology and Psychotherapy*, 23, 460–468. <https://doi.org/10.1002/cpp.1974>
- Cuppige, J., Baird, K., Gibson, J., Booth, R., & Hevey, D. (2018). Compassion focused therapy: Exploring the effectiveness with a transdiagnostic group and potential processes of change. *British Journal of Clinical Psychology*, 57(2), 240–254. <https://doi.org/10.1111/bjc.12162>
- Dentale, F., Petrocchi, N., Vecchione, M., Biagioli, C., Gennaro, A., & Violani, C. (2017). Factorial structure and construct validity of an Italian version of the Fears of Compassion Scales: A study on non-clinical subjects. *Psychology and Psychotherapy: Theory, Research and Practice*, 90(4), 735–750. <https://doi.org/10.1111/papt.12136>
- Depue, R. A., & Morrone-Strupinsky, J. V. (2005). A neurobehavioral model of affiliative bonding: Implications for conceptualizing a human trait of affiliation. *Behavioral Brain Science*, 28, 313–350. <https://doi.org/10.1017/S0140525X05330068>
- Dickerson, S. S., & Kemeny, M. E. (2004). Acute stressors and cortisol response: A theoretical integration and synthesis of laboratory research. *Psychological Bulletin*, 130, 335–391.
- Ebert, A., Edel, M. A., Gilbert, P., & Brüne, M. (2018). Endogenous oxytocin is associated with the experience of compassion and recalled upbringing in Borderline Personality Disorder. *Depression and Anxiety*, 35(1), 50–57. <https://doi.org/10.1002/da.22683>
- Field, A. (2005). *Discovering statistics using SPSS*. (2nd ed.). London: Sage.
- First, M. B., Gibbon, M., Spitzer, R. L., Williams, J. B. W., & Benjamin, L. S. (1997). *Structured clinical interview for DSM-IV axis I personality disorders, (SCID-I)*. Washington, D.C.: American Psychiatric Press, Inc.
- Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological Science*, 18(3), 233–239. <https://doi.org/10.1111/j.1467-9280.2007.01882.x>
- Gilbert, P. (1993). Defence and safety: Their function in social behaviour and psychopathology. *British Journal of Clinical Psychology*, 32(2), 131–153. <https://doi.org/10.1111/j.2044-8260.1993.tb01039.x>
- Gilbert, P. (2000). Social mentalities: Internal “social” conflict and the role of inner warmth and compassion in cognitive therapy. In P. Gilbert, & K. G. Bailey (Eds.), *Genes on the couch: Explorations in evolutionary psychotherapy* (pp. 118–150). New York, NY, US: Brunner-Routledge.
- Gilbert, P. (2010). *Compassion focused therapy: Distinctive features*. London: Routledge.
- Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology*, 53, 6–41. <https://doi.org/10.1111/bjc.12043>
- Gilbert, P. (2015). Affiliative and prosocial motives and emotions in mental health. *Dialogues in Clinical Neuroscience*, 17, 381–389.
- Gilbert, P., Catarino, F., Duarte, C., Matos, M., Kolts, R., Stubbs, J., ... Pinto-Gouveia, J. (2017). The development of compassionate engagement and action scales for self and others. *Journal of Compassionate Health Care*, 4, 4.
- Gilbert, P., Clarke, M., Hempel, S., Miles, J. N. V., & Irons, C. (2004). Criticizing and reassuring oneself: An exploration of forms, styles and reasons in female students. *British Journal of Clinical Psychology*, 43, 31–50. <https://doi.org/10.1348/014466504772812959>
- Gilbert, P., Cheung, M. S. P., 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 and Psychotherapy*, 10, 108–115. <https://doi.org/10.1002/cpp.359>
- Gilbert, P., McEwan, K., Catarino, F., & Baião, R. (2014). *Fears of compassion in a depressed population: Implications for psychotherapy* (ed., Vol. S2) *Journal of Depression and Anxiety* <https://doi.org/10.4172/2167-1044.S2-003>.
- Gilbert, P., McEwan, K., Catarino, F., Baiao, R., & Palmeira, L. (2014). Fears of happiness and compassion in relationship with depression, alexithymia, and attachment security in a depressed sample. *British Journal of Clinical Psychology*, 53(2), 228–244. <https://doi.org/10.1111/bjc.12037>
- Gilbert, P., McEwan, K., Matos, M., & Rivas, A. (2011). Fears of compassion: Development of three self-report measures. *Psychology and Psychotherapy: Theory Research and Practice*, 84(3), 239–255. <https://doi.org/10.1348/147608310x526511>
- Gillath, O., Shaver, P. R., & Mikulincer, M. (2005). An attachment-theoretical approach to compassion and altruism. In P. Gilbert (Ed.), *Compassion: Conceptualisations, research and use in psychotherapy* (pp. 121–147). London: Routledge.
- Gotlib, I. H., Joormann, J., Minor, K., & Hallmayer, J. (2008). HPA axis reactivity: A mechanism underlying the associations among 5-HTTLPR, stress, and depression. *Biological Psychiatry*, 63, 847–851. <https://doi.org/10.1016/j.biopsych.2007.10.008>
- Gruenewald, T. L., Kemeny, M. E., Aziz, N., & Fahey, J. L. (2004). Acute threat to the social self: Shame, social self-esteem, and cortisol activity. *Psychosomatic Medicine*, 66(6): 915–924. <https://doi.org/10.1097/01.psy.0000143639.61693.ef>
- Hardt, J., & Rutter, M. (2004). Validity of adult retrospective reports of adverse childhood experiences: Review of the evidence. *Journal of Child Psychology and Psychiatry*, 45, 260–273. <https://doi.org/10.1111/j.1469-7610.2004.00218.x>
- Heim, C., Young, L. J., Newport, D. J., Mletzko, T., Miller, A. H., & Nemeroff, C. B. (2009). Lower CSF oxytocin concentrations in women with a history of childhood abuse. *Molecular Psychiatry*, 14, 954–958. <https://doi.org/10.1038/mp.2008.112>
- IBM Corp (2016). *IBM SPSS statistics for windows, version 24.0*. Armonk, NY: IBM Corp.
- 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. *The British Psychological Society*, 45, 297–308.
- Jazaieri, H., Jinpa, T., McGonigal, K., Rosenberg, E. L., Finkelstein, J., Simon-Thomas, E., ... Goldin, P. R. (2013). Enhancing compassion: A randomized controlled trial of a compassion cultivation training program. *Journal of Happiness Studies*, 14, 1113–1126. <https://doi.org/10.1007/s10902-012-9373-z>
- Joeng, J. R., Turner, S., Young Kim, E., Ae Choi, S., Jeong Lee, Y., & Ki Kim, J. (2017). Insecure attachment and emotional distress: Fear of self-compassion and self-compassion as mediators. *Personality and Individual Differences*, 112, 6–11. <https://doi.org/10.1016/j.paid.2017.02.048>
- 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. <https://doi.org/10.1037/cou0000071>
- Johnson, J. G., Cohen, P., Brown, J., Smailes, E. M., & Bernstein, D. P. (1999). Childhood maltreatment increases risk for personality disorders during early adulthood. *Archives of General Psychiatry*, 56(7), 600–606. <https://doi.org/10.1001/archpsyc.56.7.600>
- Kelly, A. C., Carter, J. C., Zuroff, D. C., & Borairi, S. (2013). Self-compassion and fear of self-compassion interact to predict response to eating

- disorders treatment: A preliminary investigation. *Psychotherapy Research*, 23(3), 252–264. <https://doi.org/10.1080/10503307.2012.717310>
- Kelly, A. C., & Dupasquier, J. (2016). Social safeness mediates the relationship between recalled parental warmth and the capacity for self-compassion and receiving compassion. *Personality and Individual Differences*, 89, 157–161. <https://doi.org/10.1016/j.paid.2015.10.017>
- Kirby, J., Tellegen, C. L., & Steindl, S. R. (2015). A meta-analysis of compassion-based interventions: Current state of knowledge and future directions. *Behavior Therapy*, 48, 778–792.
- Kupeli, N., Chilcot, J., Schmidt, U. H., Campbell, I. C., & Troop, N. A. (2013). A confirmatory factor analysis and validation of the forms of self-criticism/reassurance scale. *British Journal of Clinical Psychology*, 52(1), 12–25. <https://doi.org/10.1111/j.2044-8260.2012.02042.x>
- Lawrence, V. A., & Lee, D. (2014). An exploration of people's experiences of compassion-focused therapy for trauma, using interpretative phenomenological analysis. *Clinical Psychology & Psychotherapy*, 21(6), 495–507. <https://doi.org/10.1002/cpp.1854>
- Lemche, E., Giampietro, V. P., Surguladze, S. A., Amaro, E. J., Andrew, C. M., Williams, S. C., ... Phillips, M. L. (2006). Human attachment security is mediated by the amygdala: Evidence from combined fMRI and psychophysiological measures. *Human Brain Mapping*, 27, 623–635. <https://doi.org/10.1002/hbm.20206>
- Lieb, K., Zanarini, M. C., Schmahl, C., Linehan, M. M., & Bohus, M. (2004). Borderline personality disorder. *Lancet*, 364, 453–461. [https://doi.org/10.1016/S0140-6736\(04\)16770-6](https://doi.org/10.1016/S0140-6736(04)16770-6)
- Linehan, M. M. (1993). *Cognitive-behavioural treatment of borderline personality disorders*. New York: Guilford.
- Linehan, M. M. (2015). *DBT skills training manual* (2nd ed.). New York, US: Guilford Press.
- Lobbetael, J., Leurgans, M., & Arntz, A. (2011). Inter-rater reliability of the structured clinical interview for DSM-IV axis I disorders (SCID I) and axis II disorders (SCID II). *Clinical Psychology & Psychotherapy*, 18(1), 75–79. <https://doi.org/10.1002/cpp.693>
- Longe, O., Maratos, F. A., Gilbert, P., Evans, G., Volker, F., Rockliff, H., & Rippon, G. (2010). Having a word with yourself: Neural correlates of self-criticism and self-reassurance. *NeuroImage*, 49, 1849–1856. <https://doi.org/10.1016/j.neuroimage.2009.09.019>
- López, A., Sanderman, R., Smink, A., Zhang, Y., van Sonderen, E., Ranchor, A., & Schroevers, M. J. (2015). A reconsideration of the Self-Compassion Scale's total score: Self-compassion versus self-criticism. *PLoS One*, 10, e0132940.
- MacDonald, K., Thomas, M. L., MacDonald, T. M., & Sciolla, A. F. (2015). A perfect childhood? Clinical correlates of minimization and denial on the childhood trauma questionnaire. *Journal of Interpersonal Violence*, 30(6), 988–1009. <https://doi.org/10.1177/0886260514539761>
- Mackintosh, K., Power, K., Schwannauer, M., et al. (2018). The relationships between self-compassion, attachment and interpersonal problems in clinical patients with mixed anxiety and depression and emotional distress. *Mindfulness*, 1–11. <https://doi.org/10.1007/s12671-017-0835-6>
- Matos, M., Duarte, J., & Pinto-Gouveia, J. (2017). The origins of fears of compassion: Shame and lack of safeness memories, fears of compassion and psychopathology. *The Journal of Psychology*, 151(8), 804–819. <https://doi.org/10.1080/00223980.2017.1393380>
- Mickelson, K. D., Kessler, R. C., & Shaver, P. R. (1997). Adult attachment in a nationally representative sample. *Journal of Personality and Social Psychology*, 73(5), 1092–1106. <https://doi.org/10.1037/0022-3514.73.5.1092>
- Mountford, V., Corstophine, E., Tomlinson, S., & Waller, G. (2007). Development of a measure to assess invalidating childhood environments in the eating disorders. *Eating Behaviours*, 8, 48–58. <https://doi.org/10.1016/j.eatbeh.2006.01.003>
- Muris, P., & Petrocchi, N. (2017). Protection or vulnerability? A meta-analysis of the relations between the positive and negative components of self-compassion and psychopathology. *Clinical Psychology & Psychotherapy*, 24, 373–383. <https://doi.org/10.1002/cpp.2005>
- Muris, P., Van den Broek, M., Otgaar, H., Oudenhoven, I., & Lennartz, J. (2018). Good and bad sides of self-compassion: A face validity check of the Self-Compassion Scale and an investigation of its relations to coping and emotional symptoms in non-clinical adolescents. *Journal of Child and Family Studies*, 27(8), 2411–2421. <https://doi.org/10.1007/s10826-018-1099-z>
- Naismith, I., Mwale, A., & Feigenbaum, J. (2018). Inhibitors and facilitators of compassion-focused imagery in personality disorder. *Clinical Psychology and Psychotherapy*, 5(2), 283–291. <https://doi.org/10.1002/cpp.2161>
- Neff, K. D. (2003). Development and validation of a scale to measure self-compassion. *Self and Identity*, 2, 223–250. <https://doi.org/10.1080/15298860309027>
- Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindful self-compassion program. *Journal of Clinical Psychology*, 69, 28–44. <https://doi.org/10.1002/jclp.21923>
- Neff, K. D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity*, 9(3), 225–240. <https://doi.org/10.1080/15298860902979307>
- Pepping, C. A., Davis, P. J., O'Donovan, A., & Pal, J. (2015). Individual differences in self-compassion: The role of attachment and experiences of parenting in childhood. *Self and Identity*, 14(1), 104–117. <https://doi.org/10.1080/15298868.2014.955050>
- Pfafftheicher, S., Geiger, M., Hartung, J., Weiss, S., & Schindler, S. (2017). Old wine in new bottles? The case of self-compassion and neuroticism. *European Journal of Personality*, 31, 160–169.
- Pietromonaco, P. R., & Feldman Barrett, L. (2000). The internal working models concept: What do we really know about the self in relation to others? *Review of General Psychology*, 4, 155–175. <https://doi.org/10.1037/1089-2680.4.2.155>
- Porges, S. W. (2007). The polyvagal perspective. *Biological Psychology*, 74, 116–143. <https://doi.org/10.1016/j.biopsycho.2006.06.009>
- Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical Psychology & Psychotherapy*, 18, 250–255. <https://doi.org/10.1002/cpp.702>
- 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), 272–278. <https://doi.org/10.1037/a0023041>
- 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. <https://doi.org/10.1348/147608308X395213>
- Ritter, K., Vater, A., Ruesch, N., Schroeder-Abe, M., Schuetz, A., Fydrich, T., ... Roepke, S. (2014). Shame in patients with narcissistic personality disorder. *Psychiatry Research*, 215(2), 429–437. <https://doi.org/10.1016/j.psychres.2013.11.019>
- Rockliff, H., Gilbert, P., McEwan, K., Lightman, S., & Glover, D. (2008). A pilot exploration of heart rate variability and salivary cortisol responses to compassion-focused imagery. *Clinical Neuropsychiatry*, 5, 132–139.

- 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. <https://doi.org/10.1016/j.jad.2006.02.014>
- Scharff, J. S., & Tsigounis, S. A. (2003). *Self-hatred in psychoanalysis: Detoxifying the persecutory object*. New York, NY: Brunner-Routledge.
- Scheel, C. N., Bender, C., Tuschen-Caffier, B., Brodfuehrer, A., Matthies, S., Hermann, C., ... Jacob, G. A. (2014). Do patients with different mental disorders show specific aspects of shame? *Psychiatry Research, 220*(1–2), 490–495. <https://doi.org/10.1016/j.psychres.2014.07.062>
- Schmahl, C. G., Elzinga, B. M., Ebner, U. W., Simms, T., Sanislow, C., Vermetten, E., & Bremner, J. D. (2004). Psychophysiological reactivity to traumatic and abandonment scripts in borderline personality and posttraumatic stress disorders: A preliminary report. *Psychiatry Research, 126*, 33–42. <https://doi.org/10.1016/j.psychres.2004.01.005>
- Seltzer, L. J., Ziegler, T., Connolly, M. J., Prosofski, A. R., & Pollak, S. D. (2014). Stress-induced elevation of oxytocin in maltreated children: Evolution, neurodevelopment, and social behavior. *Child Development, 85*(2), 501–512. <https://doi.org/10.1111/cdev.12136>
- Shear, M. K., Greeno, C., Kang, J., Ludewig, D., Frank, E., Swartz, H. A., & Hanekamp, M. (2000). Diagnosis of nonpsychotic patients in community clinics. *American Journal of Psychiatry, 157*(4), 581–587. <https://doi.org/10.1176/appi.ajp.157.4.581>
- Streiner, D. L. (2005). Finding our way: An introduction to path analysis. *Canadian Journal of Psychiatry, 50*(2), 115–122. <https://doi.org/10.1177/070674370505000207>
- Stuewig, J., & McCloskey, L. A. (2005). The relation of child maltreatment to shame and guilt among adolescents: Psychological routes to depression and delinquency. *Child Maltreatment, 10*(4), 324–336. <https://doi.org/10.1177/1077559505279308>
- Tanaka, M., Wekerle, C., Schmuck, M., Paglia-Boak, A., & The MAP Research Team (2011). The linkages among childhood maltreatment, adolescent mental health, and self-compassion in child welfare adolescents. *Child Abuse & Neglect, 35*, 887–898. <https://doi.org/10.1016/j.chiabu.2011.07.003>
- Vettese, L. C., Dyer, C. E., Li, W. L., & Wekerle, C. (2011). Does self-compassion mitigate the association between childhood maltreatment and later emotion regulation difficulties? A preliminary investigation. *International Journal of Mental Health and Addiction, 9*(5), 480–491. <https://doi.org/10.1007/s11469-011-9340-7>
- Wei, M., Liao, K. Y., Ku, T., & Shaffer, P. (2011). Attachment, self-compassion, empathy, and subjective well-being among college students and community adults. *Journal of Personality, 79*(1), 191–221. <https://doi.org/10.1111/j.1467-6494.2010.00677.x>
- Wei, M., Russell, D. W., Mallinckrodt, B., & Vogel, D. L. (2007). The experiences in Close Relationship Scale (ECR)-Short Form: Reliability, validity, and factor structure. *Journal of Personality Assessment, 88*, 187–204. <https://doi.org/10.1080/00223890701268041>
- Wisner-Fries, A. B., Ziegler, T. E., Kurian, J. R., Jacoris, S., & Pollak, S. D. (2005). Early experience in humans is associated with changes in neuropeptides critical for regulating social behavior. *Proceedings of the National Academy of Sciences of the United States of America, 102*(47), 17237–17240. <https://doi.org/10.1073/pnas.0504767102>

How to cite this article: Naismith I, Zarate Guerrero S, Feigenbaum J. Abuse, invalidation, and lack of early warmth show distinct relationships with self-criticism, self-compassion, and fear of self-compassion in personality disorder. *Clin Psychol Psychother.* 2019;26:350–361. <https://doi.org/10.1002/cpp.2357>