UNIVERSIDADE D
COIMBRA

Dinis Rafael dos Santos Martins

# THE ORIGINS OF SUBMISSIVE COMPASSION:
## THE TRAUMATIC IMPACT OF EARLY SHAME EXPERIENCES, SHAME, SELF-CRITICISM AND SOCIAL ANXIETY

**Dissertação no âmbito do Mestrado Integrado em Psicologia, área de especialização em Psicologia Clínica e da Saúde, subárea de especialização em Intervenções Cognitivo-Comportamentais nas Perturbações Psicológicas e Saúde, orientada pela Professora Doutora Maria do Céu Salvador e apresentada à Faculdade de Psicologia e de Ciências da Educação.**

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*“If you're going to try, go all the way. (...) And it will be better than anything else you can imagine. If you're going to try, go all the way. There is no other feeling like that. You will be alone with the gods, and the nights will flame with fire. You will ride life straight to perfect laughter. It's the only good fight there is.”*

Charles Bukowski

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# The origins of submissive compassion: the traumatic impact of early shame experiences, shame, self-criticism and social anxiety

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## Abstract

While several studies have provided evidence of the positive effects of compassion on well-being, people can behave in prosocial ways for different reasons, not all genuinely compassionate. Submissive compassion - being caring in order to avoid rejection- has been linked to shame, submissiveness and anxiety. Furthermore, there is increasing evidence that early shame experiences revealing trauma characteristics are linked to shame and social anxiety. Self-criticism has also been linked to early shame experiences, shame and social anxiety. Since there were no prior studies addressing all these variables together, this was the aim of the present study, particularly to investigate whether the traumatic impact of early shame experiences was associated with submissive compassion and if shame, self-criticism and social anxiety mediated this relationship. The cross-sectional study included two populations (student and adult samples) but, since there were significant differences we decided to introduce population as a control variable in the subsequent models and thus, only the total sample was used ($N$ = 515: $M_{age}$ = 27.36; $SD$ = 11.69). Partial correlations revealed positive, moderate and significant associations between all variables. Four simple mediation models were estimated using PROCESS revealing that the traumatic impact of early shame experiences is directly and indirectly associated, through shame, self-criticism and social anxiety, to submissive compassion. In conclusion, the traumatic impact of early shame experiences, shame, self-criticism, and particularly social anxiety, seem to be at the core of submissive compassion. Other results are discussed, as well as contributions of the present study and possible clinical implications.



***Key-words:*** submissive compassion; the traumatic impact of early shame experiences; social anxiety; shame; self-criticism.

**Resumo**

Embora alguns estudos tenham comprovado os benefícios da compaixão no bem-estar, as pessoas podem comportar-se prossocialmente por diferentes motivos, nem todos genuinamente compassivos. A compaixão submissa - cuidar para evitar rejeição - tem sido relacionada com a vergonha, comportamentos submissos e ansiedade. Além disso, há evidência de que experiencias precoces de vergonha que revelam características traumáticas estão associadas com a vergonha e ansiedade social. O autocriticismo também tem sido relacionado com experiencias precoces de vergonha, vergonha e ansiedade social. Uma vez que não existiam estudos que relacionassem todas estas variáveis esse foi o objectivo do presente estudo, nomeadamente, investigar se o impacto traumático de experiencias precoces de vergonha estaria associado à compaixão submissa, e se a vergonha, autocriticismo e ansiedade social mediariam esta relação. O estudo transversal incluiu duas populações (estudantes e adultos) mas, uma vez que se verificaram diferenças significativas entre elas decidimos introduzir a população como variável de controlo e utilizar a amostra total ($N$ = 515: $M_{idade}$ = 27.36; $SD$ = 11.69). Correlações parciais revelaram associações positivas, moderadas e significativas entre todas as variáveis. Quatro modelos de mediação simples estimados com o PROCESS revelaram que o impacto traumático de experiências precoces está directamente e indirectamente associado, através da vergonha, do autocriticismo e da ansiedade social, com a compaixão submissa. Em conclusão, o impacto traumático de experiências precoces de vergonha, a vergonha, o autocriticismo e, particularmente, a ansiedade social aparentam estar no núcleo da compaixão submissa. Outros resultados são discutidos, tal como as contribuições do presente estudo e possíveis implicações clínicas.

***Palavras-chave:*** compaixão submissa; impacto traumático de experiencias precoces de vergonha; ansiedade social; vergonha; autocriticismo

## Introduction

From an evolutionary point of view (Gilbert, 2001) human relationships have evolved to provide a range of valued and necessary resources to individuals in form of protection, care, support, and opportunities for reproduction (Buss, 2003). It has been the selective pressure to develop ways to assure these resources that has driven human evolution and originated recent changes in brain architecture, language, and many other forms of social intelligence (Corballis, 1999). Thus, the need to affiliate with or belong to a social group is considered one of the central social motives of humans, with systems monitoring both inclusionary status (Baumeister & Leary, 1995) and social rank (Sapolsky, 2005). Therefore, social exclusion and social submission may threaten one's access to such group resources. To avoid these threats people developed, in the course of human evolution, innate role-forming systems evolved for social relating (Gilbert, 1989). The social rank system allows individuals to constantly monitor one's position in relation to others and uses that information to guide behaviour to successfully compete for a dominant position which allows access to more resources (Johnson & Carver, 2012). Similarly, the affiliation system seems to be designed to measure inclusionary status and to find others with whom one can connect and cooperate (Baumeister & Leary, 1995).

According to Trower and Gilbert (1989), socially anxious individuals tend to over-utilize the social rank system, and under-utilize the affiliation system and are extremely sensitive to signals of social threat (Joormann & Gotlib, 2006). Thus, socially anxious individuals are attuned to cues and signs of dominance and to the competitive dynamic of the social world at the expense of the attunement to signals of affiliation (Gilboa-Schechtman, Shachar & Helpman, 2014). The over-utilization of the social rank system can cause social anxious individuals to view themselves as inferior, inadequate, socially undesirable (e.g., Leary & Jongman-Sereno, 2014; Leary & Kowalski, 1995), and as lacking the ability to successfully compete with dominant others. Such perceptions might lead to the adoption of submissive behaviours (e.g., reduced eye-contact), in order to avoid possible punishments from dominant others (e.g., conflict or rejection) and the consequential loss of resources (Gilbert, 2001). Multiple recent investigations supported this perspective (Aderka, Weisman, Shahar, & Gilboa-Schechtman, 2009; Berger, Keshet & Gilboa-Schechtman, 2017; Weeks, Heimberg, &

Heuer, 2011; Weisman, Aderka, Marom, Hermesh, & Gilboa-Schechtman, 2011). Therefore, social anxiety can be characterized as a heightened sensibility to matters of social rank followed by a tendency to respond to social rank changes by lowering one's social profile (e.g. submissiveness, subordination).

### *Shame, Submissiveness and Social Anxiety*

Feelings of shame are positively associated with social anxiety (Gilbert, 2000; Gilbert & Miles, 2000; Matos, Pinto-Gouveia, & Gilbert, 2013; Weeks et al., 2011). Shame appears as a response to the social threat of being socially unattractive, that is, as a warning signal that one exists negatively in the mind of others, alerting individuals to changes within their social rank and social relationships and activating defensive strategies (e.g. submission, appeasement) to repair damage and consequent rejection, exclusion or harm (Gilbert, 1998, 2007). According to the biopsychosocial model of shame (Gilbert, 1998, 2007), two types of shame can be distinguished: external and internal. External shame is associated to how one experiences the self as living in the minds of others (e.g. as inferior, inadequate). In external shame, the social world is experienced as dangerous (e.g. others will be harsh and rejecting) and people engage in defensive strategies to try to positively influence one's image in the mind of others (e.g. by submitting or displaying desirable qualities). On the other hand, the internalization of these experiences can result in seeing and evaluating the self in the same way others have, as inferior, rejectable and globally self-condemning (i.e. internal shame; Gilbert, 1998, 2007; Mikulincer & Shaver, 2005). This internalized shame response may be seen as one of the main defensive strategies to (external) shame in that it involves a self-critical attitude towards the self and the implementation of submissive strategies associated with self-monitoring and self-blaming to limit possible attacks (Gilbert, 1998, 2007). Studies have indeed demonstrated that there is a consistent link between shame and submissive behaviour (Gilbert & Allan, 1996; Gilbert & Miles, 2000) and that shame (particularly internal shame) (Clark & Wells, 1995; Gilbert, 2001; Gilbert & McGuire, 1998; Gilbert & Trower, 2001), self-criticism and submissive behaviours are important features of social anxiety (e.g., Gilbert & McGuire, 1998; Weeks et al., 2011).

***Shame memories and Social Anxiety***

There is increasing evidence showing that early exposures to shame, neglect or abuse are associated with increased vulnerabilities to mental health problems (e.g., Castilho, Pinto-Gouveia, Amaral & Duarte, 2014; Gilbert, Cheung, Wright, Campey & Irons, 2003; Matos & Pinto Gouveia, 2010). Furthermore, research links early negative experiences and shame memories to the emergence of shame (Andrews, 2002; Gilbert et al., 2003) and social anxiety (Calvete, 2014; Gilbert & Miles, 2000). Shame experiences can give rise to strong emotions (e.g., anxiety), are typically associated with perceptions of being criticised and diminished by others for actions or attributes of the self that others find undesirable or unattractive (Gilbert, 1998), and tend to occur very early in life in our interactions with significant others (e.g., parents, peers, lovers) thus presenting a threat to the social self (Gilbert, 1998, 2003) and self-identity (Andrews, 2002; Andrews & Hunter, 1997). Indeed, research has found that early shame experiences were found to reveal traumatic memory features, capable of eliciting intrusions, strong emotional avoidance and hyperarousal symptoms, acting as threat-activating memories (Matos & Pinto-Gouveia, 2010). In addition, early shame experiences can also be recorded in autobiographical memory as central emotional memories that shape personal identity, structure the life narrative and create a salient reference point to give meaning to other events (Pinto-Gouveia & Matos, 2011). Such central and traumatic shame experiences have been found to increase current shame feelings and vulnerability to psychopathological symptoms, mainly depression and anxiety (Matos, Duarte & Pinto-Gouveia, 2017; Matos & Pinto-Gouveia, 2010, 2014; Pinto-Gouveia & Matos, 2011), and were associated with higher levels of external and internal shame (Matos & Pinto-Gouveia, 2010; Matos, Pinto-Gouveia & Duarte, 2013; Pinto-Gouveia & Matos, 2011) and social anxiety (Matos, Pinto-Gouveia & Gilbert, 2013). Experiencing shame events, especially with such characteristics, may cause one to feel inferior, defective and unattractive, and to perceive others as critical, rejecting or abusive, thus influencing the formation of negative self-other schemas (Matos & Pinto Gouveia, 2014; Matos et al., 2013). This, in turn, may originate a sense of constant threat to one's social self which triggers the threat system (Gilbert, 2010; Matos et al., 2013; Matos, Pinto-Gouveia & Duarte, 2015) – a system whose function is to notice threats quickly (through attention-focusing and attention-biasing) and then to give us

surges of feelings, such as anxiety, to alert and motivate us to take action (e.g., through submission; Gilbert 2001).

In regard to social anxiety, and as we have previously seen, if social anxious individuals over-utilize the social rank system and are extremely sensitive to signals of social threat, perceived social rank changes can be more easily seen as a threat and consequentially activate the threat system. Thus, if the traumatic impact of shame experiences result in an over-sensitivity of the threat system it could also explain the heightened sensibility to matters of social rank of social anxious individuals. In line with this, Gilbert and Irons (2004) suggested that when children are subjected to early negative experiences, they become more sensitive to threats and more focused on issues of social power. At the same time, such shame experiences may also be associated with the underdevelopment of the affiliative soothing affect regulation system - a system developed with the evolution of the affiliative system and linked to one's sense of social safeness and ability to regulate threat and negative emotions through affiliative affective and motivational states, such as compassion (Gilbert, 2010; Matos et al., 2015), - and thus also explain the under-utilization of the affiliative system in social anxious individuals.

***Self-criticism, Submissiveness and Social Anxiety***

Negative early experiences (such as parental criticism, rejection, submissiveness and shame experiences with central characteristics), have been found to be at the core of the development of self-criticism (e.g., Castilho, Pinto-Gouveia, Amaral, & Duarte, 2014; Irons, Gilbert, Baldwin, Baccus & Palmer, 2006; Muralidharan, Kotwicki, Cowperthwait, & Craighead, 2015; Pinto-Gouveia, Castilho, Matos & Xavier, 2013). Furthermore, shame and self-criticism have long histories of being associated with psychopathology (e.g., Allan & Gilbert, 1997; Gilbert, McEwan, Irons, Bhundia, Christie, Broomhead, & Rockliff, 2010; Pinto-Gouveia, Matos, Castilho, & Xavier, 2014). A child who has been repeatedly criticized, shamed or rejected learns a relation schema of others as being powerful, hostile and dominant and of the self as subordinate and vulnerable to their attacks and rejection (Castilho et al., 2014).

Standing from an evolutionary perspective, Gilbert (1989) suggested that innate role-forming systems evolved for social relating (e.g., social rank and affiliative systems) can be recruited into self-to-self relationships (Gilbert & Irons, 2005). Hence,

people may adopt submissive and appeasing orientations to their own self-attacks and condemnations, responding with the same response systems that we use to deal with external attacks and threats (i.e. the threat system). This self-to-self relationship that characterizes self-criticism, just as dominant–subordinate other-self interactions, will reinforce feelings of inferiority and submissiveness and consequentially could lead to negative emotions and psychopathology (Castilho et al., 2014; Gilbert, 2005, 2007). Following this conceptualization of self-criticism, social anxious individuals have higher levels of self-criticism as they tend to rely on dominant-submissive interpersonal schemes with others, and therefore also in their self-to-self relationship (Gilbert, 2010; Iancu, Bodner, & Ben-Zion, 2015; Muralidharan et al., 2015; Palmeira, Pinto-Gouveia, Cunha, & Carvalho, 2017; Shahar, Doron, & Szepsenwol, 2015). Finally, submissive interpersonal strategies (e.g., avoid eye contact) related to higher levels of self-criticism may elicit negative evaluations from others, which further reinforce their external shame, in a circular and mutually interactive way (Castilho, Pinto-Gouveia & Duarte, 2016).

***Compassion, Submissive Compassion and Social Anxiety***

In recent years, there has been an increasing interest in research regarding compassion and its positive effects on well-being (e.g., Gilbert, 2005, 2010; Goetz, Keltner, & Simon-Thomas, 2010; Neff, 2003). Compassion is typically defined as "a sensitivity to suffering in self and others with a motivation and commitment to try to prevent and alleviate it" (Gilbert, 2010), and evolutionary models locate some of its origins in the evolution of attachment and nurturing behaviour (Gilbert, 2009).

Furthermore, general altruism (e.g. being helpful and supportive) underpins prosocial behaviour (Penner, Dovidio, Piliavin, & Schroeder, 2005), and such care can create positive emotions in the minds of others towards the care provider (Catarino, Gilbert, McEwan, & Baião, 2014). Given that human status and acceptability often depend on appearing attractive and helpful to others (Gilbert, Allan, & Price, 1997), caring behaviour can also be used as a submissive tactic in individuals who feel at risk of rejection, such as social anxious individuals, with the goal of developing a good reputation and status in the minds of others (Buss, 2003), and this could have been one of compassion's evolution drivers (Goetz et al., 2010). Therefore, this source of caring motivation may be a form of submissive behaviour and has been called submissive

compassion (being caring in order to be liked; Gilbert, Catarino, Sousa, Ceresatto, Moore & Basran, 2017). Submissive compassion was found to be significantly associated with caring shame (fear of not being a good enough carer; Catarino et al., 2014), submissive behaviour (Catarino et al., 2014; Gilbert et al., 2017), shame (Catarino et al., 2014; Gilbert et al., 2017), self-criticism (Gilbert et al., 2017), negative self-evaluation (Gilbert et al., 2017), and symptoms of depression, anxiety and stress (Catarino et al., 2014; Gilbert et al., 2017), in a way that genuine compassion was not. Compassion is then affected by underlying motives and the degree to which one is threatened, shame-prone and critically self-focused (Gilbert et al., 2017). Caring shame (Catarino et al., 2014), submissive behaviour and shame (e.g., Gilbert & McGuire, 1998; Weeks et al., 2011), and negative self-evaluations (e.g. Clark & Wells, 1995; Leary & Jongman-Sereno, 2014) are processes that have been linked to social anxiety.

As seen above, the evolutionary model posits that socially anxious individuals are sensitive to threats to their status and belonging in a social group. In response to perceived threats, social anxious individuals can experience high levels of shame and self-criticism and thus engage in self-protective behavioural strategies characterized by submission and appeasement towards others. Submissive compassion can be one of these defensive coping behaviours.

***The present study***

As we've previously studies link the traumatic impact of early shame experiences with external shame, internal shame and social anxiety. Moreover, studies also link submissive compassion to shame, submissive behaviour and anxiety. Furthermore, to the best of our knowledge, no studies had investigated the relationship between submissive compassion and self-criticism and social anxiety. Likewise, no study had considered the relationships between all these variables and investigated how (i.e. through which cognitive and behavioural processes; e.g., shame, self-criticism and social anxiety) the traumatic impact of early shame experiences influence submissive compassion.

Therefore, our study's aim was to understand the relation between the abovementioned variables and their effect on submissive compassion. Early shame memories associated with perceptions of being criticised and diminished by others, and that reveal traumatic memory features, may cause one to experience the self as living in

the minds of others in a negative way (external shame). Such experiences may also cause one to perceive others as hostile and dominant, developing negative self-other schemas. These shame experiences can then be internalized (internal shame) and result in seeing and evaluating the self in the same way others have (e.g. as inferior, inadequate). This, in junction with negative self-other schemas, may originate a sense of constant threat to one's social self which triggers the threat system, explaining the over-utilization of the social rank system and the over-sensitivity to signals of social threat of social anxious individuals. Furthermore, this innate role forming system based on dominant-submissive interpersonal schemas (social rank) can be recruited into self-to-self relationships (self-criticism), activating the same subordinate strategies used to respond to external threat signals, involving the implementation of submissive and appeasement strategies towards others, to limit possible attacks. Caring behaviour can also be used as a submissive strategy with the goal of developing a good reputation and status in the minds of others (submissive compassion).

In line with this, we expected that the traumatic impact of early shame experiences, external shame, internal shame, self-criticism, submissive compassion and social anxiety to be positively correlated with each other (H1). It was also expected the traumatic impact of early shame experiences would predict submissive compassion (H2) and that this relationship would be mediated by external shame, internal shame, self-criticism and social anxiety (H3).

## Method

### *Sample*

With the objectives of the present study in mind we carried out a cross-sectional study with an adult Portuguese population. Exclusion criteria were: ages below 18 and over 60 years old, foreign nationality or evidence of random answers in the questionnaires. Two different samples were collected (student and general adult population) to obtain a more representative community sample.

#### *Student Sample*

The student sample consisted of 357 college students, of which 206 (57.7 %) female and 151 (42.3 %) male, with a mean age of 21 ($M$ = 20.54; $SD$ = 1.62). The average years of schooling were 13 ($M$ = 13.05; $SD$ = 1.49). The majority of the

students (93.6 %) were not having psychological counselling at the moment of the filling. There were statistically significant gender differences in age ($t_{(354)} = -3.04$, $p < .01$) and school years ($t_{(332,580)} = 2.02$, $p < .05$). However, Cohen's *d* for both gender differences revealed to be small (*d* = .3 for age and *d* = .2 for years of schooling).

*General Adult Population Sample*

The general adult population sample consisted of 158 participants of which 92 (58.2 %) female and 66 (41.8 %) male, with a mean age of 43 (*M* = 42.83; *SD* = 9.80). The average years of schooling were 13 (*M* = 12.66; *SD* = 3.00). The majority of participants had a medium socioeconomic level (53.8 %), followed by low (29.7 %) and high (13.9 %) socioeconomic levels. The majority of the population (95.6 %) were not having psychological counselling at the moment of the filling. There were statistically significant gender differences in age ($t_{(117,341)} = 2.19$, $p < .05$) but not in school years ($t_{(153)} = .30$, $p = .765$) or socioeconomic level ($\chi 2_{(2)} = 2.98$; $p = .226$). Cohen's *d* for age revealed to be medium (*d* = .4).

*Total Sample*

The total sample consisted of 515 participants of which 298 (57.9 %) female and 217 (42.1 %) male, with a mean age of 27 (*M* = 27.36; *SD* = 11.69). The average years of schooling were 13 (*M* = 12.93; *SD* = 2.07). The majority of participants were students (69.3 %) and therefore didn't have a socioeconomic level, followed by medium (16.5 %), low (9.1 %) and high (4.5 %) socioeconomic levels. The majority of the sample (94.2 %) was not having psychological counselling at the moment of the filling. There were no statistically significant gender differences in age ($t_{(485,200)} = .84$; $p = .400$), school years ($t_{(509)} = 1.42$, $p = .157$) or socioeconomic level ($\chi 2_{(3)} = 3.01$; $p = .391$).

***Measures***

A sociodemographic data questionnaire was administered in order to obtain information regarding gender, age, years of schooling successfully completed, occupation (in the case of the student sample: faculty and course), city and district of origin and if the participants were having psychological counselling at the moment of the filling. The following self-report instruments were administered in both samples:

The **Impact of Event Scale-Revised** (IES-R; Weiss & Marmar, 1997: Portuguese version: Matos & Pinto-Gouveia, 2006) is a 22-item self-report questionnaire designed to assess current subjective distress for any specific life event, measuring three specific characteristics related to trauma: intrusion, avoidance and hyperarousal. In this study before the filling of this questionnaire, participants were provided with a brief introduction about the concept of shame, and then asked to remember a shame experience from childhood or adolescence with parents, peers, significant others, or a teacher. They were then asked to answer the IES-R based on the traumatic impact of this experience. Each item of the IES-R is rated in a 5-point Likert scale (0 = "Not at all", 4 = "Extremely"). Although it was found a three-factor study in the original study, with alphas between .79 and .92, the Portuguese version revealed a single-factor structure with a Cronbach alpha of .96, and acceptable test-retest reliability, convergent and divergent validities. In the present study the IES-R showed a very good internal consistency for the student (α = .94), general adult population (α = .96) and total samples (.95).

The **External and Internal Shame Scale** (*Escala de Vergonha Externa e Interna; EVEI*; Moura-Ramos, Ferreira, Matos, & Galhardo, 2018) is comprised of 8 items and it is answered using a 5 point Likert scale (ranging from 0 = "Never" to 4 = "Always") regarding the frequency of shame feelings, in which higher scores represent a higher frequency of external and internal shame. In the original study, this scale presented a factorial structure comprised of external shame and internal shame, with Cronbach's alphas of .8 and .82, respectively, and a Cronbach's alpha of .89 for the global score, which represents a good internal consistency. In the present study, the subscale of external shame revealed good internal consistency for all samples (α = .79 for the student sample and α = .80 for the general population and total samples). The internal shame subscale also revealed good internal consistency for all samples (α = .81 for the student sample, α = .80 for the general population samples and α = .82 for the total samples).

The **Forms of Self-Criticizing and Self-Reassuring Scale** (FSCRS; Gilbert et al., 2004; Portuguese Version by Castilho & Pinto-Gouveia, 2011) intends to evaluate how people are self-critical and self-reassuring in situations of failure and error. It consists of 22 items distributed by 3 factors: 1) Inadequate Self (feelings of inadequacy

of the Self following failure – 10 items); 2) Hated Self (destructive response directed to the Self, characterized by a desire to hurt, persecute or attack the Self – 3 items); 3) Reassuring Self (positive, warm, comforting, and compassionate attitude towards to the self when things go wrong – 8 items). A measure of self-criticism is obtained through the combination of Inadequate Self and Hated Self factors. Participants respond to each item on the basis of a 5-point Likert scale ranging from 0 ("I'm nothing like that") to 4 ("I'm extremely like that"). The higher the scores the greater the feelings of inadequacy, self-repugnance or reassuring attitudes. In the original version, the internal consistency values obtained ranged from .86 to .90. In the Portuguese version, the Cronbach's alphas were $\alpha = .89$ for the Inadequate Self subscale, $\alpha = .87$ for the Reassuring Self subscale and $\alpha = .62$ for the Hated Self subscale. This instrument presented a good fidelity test-retest indexes and satisfactory convergent validity. In the present study, only the measure of self-criticism was used, presenting a Cronbach's alfa value of .94, for both the student and general adult population samples and .95 for the total sample.

The **Social Interaction Anxiety Scale** (SIAS: Mattick & Clarke, 1998; Portuguese Version: Pinto-Gouveia & Salvador, 2001) evaluates the social anxiety felt in the interaction with others. It is comprised of 19 items, answered with a five-point Likert scale ranging from 0 ("Not at all") to 4 ("Extremely"). A higher overall score represents higher levels of anxiety in situations of social interaction. The original version presented an excellent internal consistency, with a Cronbach's alpha of .94 for a community sample and .93 for a clinical sample. The Portuguese version also presented good psychometric characteristics, with a Cronbach's alpha of .90 and a test-retest correlation coefficient of .77. In this study, the scale also revealed an excellent internal consistency, with a Cronbach's alpha of .93 for both the student and general adult population samples and of .94 for the total sample.

The **Motives for Compassion Scale** (MCS: Catarino, Gilbert, Mcewan & Baiao, 2014; Portuguese Version: Gaspar & Castilho, 2014) is comprised of 10 items that measure several defensive and submissive reasons for being caring, such as the fear of being rejected. It is answered with a five-point Likert scale ranging from 0 ("Not at all like me") to 4 ("Extremely like me") in which a higher overall score means more defensive and submissive reasons for compassionate behaviour. The factorial structure of the Portuguese study replicated the structure of the original study, originating a single

factor called Submissive Compassion that explains 45.37% of the variance. Results showed that MCS holds a good internal consistency (α = .89 in both the original and Portuguese studies), convergent validity and temporal reliability (r = .93) and revealed good adjustment indices, revealing its usefulness and reliability both in the assessment and clinical research of submissive compassion. In the present study the MCS presented an excellent internal consistency with a Cronbach's alpha of .90 in the student sample, .92 in the general population sample and .91 in the total sample.

***Procedure***

The present study was previously approved by the Ethics Committee of the Faculty of Psychology and Educational Sciences of the University of Coimbra. The student sample was collected in 47 different courses across 25 institutions of higher education in the central and north regions of the country, particularly Coimbra, after proper consent was given by the faculties and respective teachers. The non-student sample was collected through the snowball method. Participants of both samples belonged to different districts from the North, Centre, South and Islands of the country and answered the aforementioned sociodemographic data questionnaire and a set of self-report questionnaires in paper format. Prior to the application of the research protocol participants' informed consent was obtained after a brief explanation of the research's purposes, its confidentiality and their voluntary participation. Data confidentiality and anonymity were assured, as well as the use of the data exclusively for research purposes. The research protocol had an average time of filling of 40 minutes and two counterbalanced versions in order to prevent effects of response contamination and fatigue.

***Data analysis***

Statistical analyses were carried out using the SPSS program (Statistical Package for the Social Sciences version 22; Armonk, NY: IBM Corp.) and the PROCESS computation tool (version 3.3) for SPSS (Hayes, 2018). We used Simões' classification (1994) to distinguish socioeconomic level (low, medium and high).

Differences between samples and gender differences for variables under study were tested using independent samples t-test for continuous variables and qui-square for categorical variables (Field, 2013). The interpretation of the effect size parameter was

based on Cohen's criteria (1988), in which Cohen's *d* values around .2 are considered small, .5 medium and .8 large. Adherence to normality was assessed through the examination of skewness and kurtosis of each variable, where skewness and kurtosis values between -2 and 2 were considered reasonably normally distributed (George & Mallery, 2010). Outlier's analysis was performed by graphing the results (box diagrams). Descriptive statistics were performed to analyse demographic variables and variables under study. Internal consistency indices were calculated for each instrument and respective factors, considering Cronbach's values of less than .60 as inadmissible, between .60 and .69 weak, between .70 and .79 acceptable, between .80 and .89 high, and between .90 and 1 excellent (Pestana & Gageiro, 2008). Pearson correlation coefficients were conducted to explore the relationships between variables under study and sociodemographic variables, identifying possible covariates and analysing the associations between variables, according to the proposed hypotheses. For the assessment of the magnitude of correlations we considered a correlation coefficient lower than .20 to reveal a very low association, between .21 and .29 a low association, between .30 and .69 moderate, between .70 and .89 high and between .90 and 1 an excellent association (Pestana & Gageiro, 2008). To detect multicollinearity we examined the variance inflation factor ($VIF < 5$) and the correlation matrix for all constructs (Kline, 2005).

To examine whether the traumatic impact of early shame experiences would be associated with submissive compassion through external shame, internal shame, self-criticism and social anxiety a mediation model was estimated with PROCESS (model 6 in Hayes, 2018; Fig. 1). The traumatic impact of early shame experiences was used as an independent variable; external shame, internal shame, self-criticism and social anxiety were entered as mediators; and submissive compassion was tested as a dependent variable. The indirect or mediation effect was assessed using a bootstrapping procedure with 10.000 resamples which creates a 95% bias-corrected and accelerated confidence intervals of the indirect effects. These effects are considered significant ($p < .05$) if zero is not contained within the lower and upper bounds of the confidence intervals.

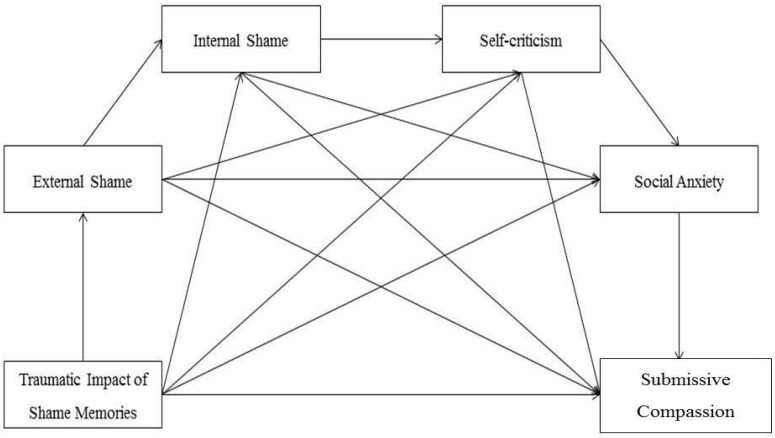


**Fig 1.** *Conceptual diagrams of the proposed mediation model.*

## Results

### *Preliminary Data Analysis*

Missing values for the variables under study were filled using the SPSS program (Transform - Replace missing values). When differences between samples and gender differences for variables under study were investigated (t-test for independent samples), significant differences between samples regarding age (cohen's $d$ = 3.2) and some variables under study (social anxiety, self-criticism and submissive compassion) were revealed, with large values of Cohen's $d$ (.81, .80 and .69, respectively). The student population scored significantly higher for all variables under study. Some gender differences were found (traumatic impact of early shame experiences and submissive compassion) but with small values of Cohen's $d$ (.18 and .17, respectively). For these reasons, we decided to control the effect of the population in the subsequent model, for both the correlations and the mediation model, using it as a covariate.

No severe violations to the normal distribution of the variables were found, with values of kurtosis and skewness within normal values. Although there were moderate outliers for some variables under study, after assessing that there were no significant differences in results with and without outliers, we opted to keep them and insure ecological validity.

Correlations between study variables and sociodemographic variables revealed significant and moderate associations between some variables under study and age and gender. Although, when population was controlled all sociodemographic associations

with study variables lost significance or correlation magnitude. This further supported our decision to control for population but not for gender or age. Even though there were no multicollinearity problems among study variables when inspecting the variance inflation factor (*VIF* < 5), after examining the correlation matrix there were significant and moderate to high correlations between several variables under study (external shame, internal shame, self-criticism and social anxiety). For this reason we changed the original model into four simple mediation models estimated with PROCESS (model 4 in Hayes, 2018; Fig. 2) and with the population as a covariate to examine whether the traumatic impact of early shame experiences would be associated with submissive compassion through external shame, internal shame, self-criticism or social anxiety.

***Descriptive Statistics***

We saw pertinent to describe the qualitative variables of the recalled shame experiences, specifically, the shamer (Fig. 3), the context (in the presence or absence of other people; Fig. 4) and whether they occurred in infancy or adolescence (Fig. 5). The mean age for when the shame experience occurred was 13 years old for both the student (*M* = 13.13; *SD* = 3.83) and general adult population samples (*M* = 12.66; *SD* = 4.30).

***Correlations***

Table 1 presents descriptive statistics and correlations between variables under study and their correlation with age and gender, with and without controlling for population. The correlation analysis revealed that all associations between study variables were positive, significant and moderate. Considering that, to the best of our knowledge, no study had investigated some associations between our study variables, we saw particularly important to point out the positive, significant and moderate correlations of the traumatic impact of early shame experiences and submissive compassion with external shame, internal shame, self-criticism and social anxiety.

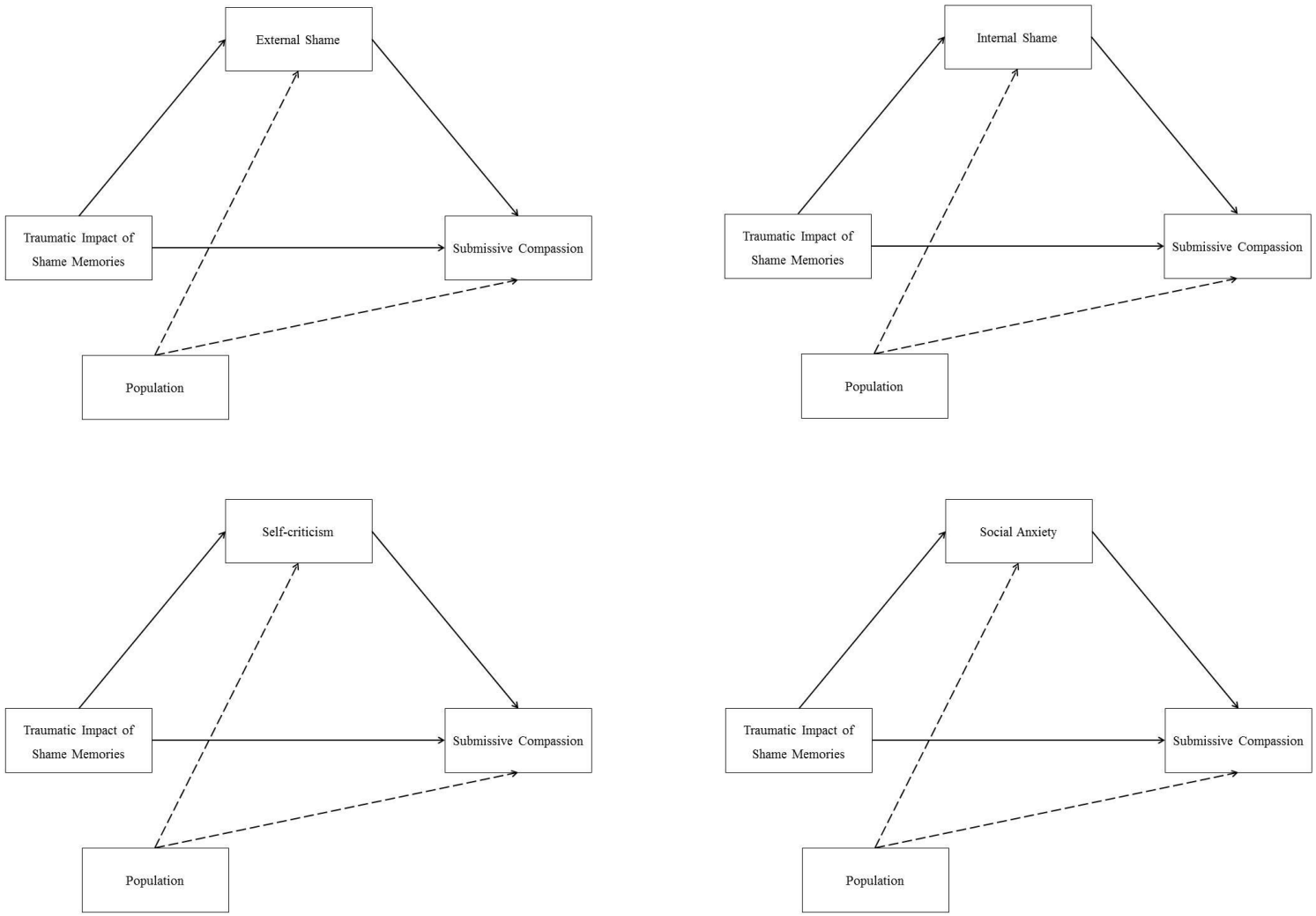


**Fig 2.** *Conceptual diagrams of the proposed mediation models.*

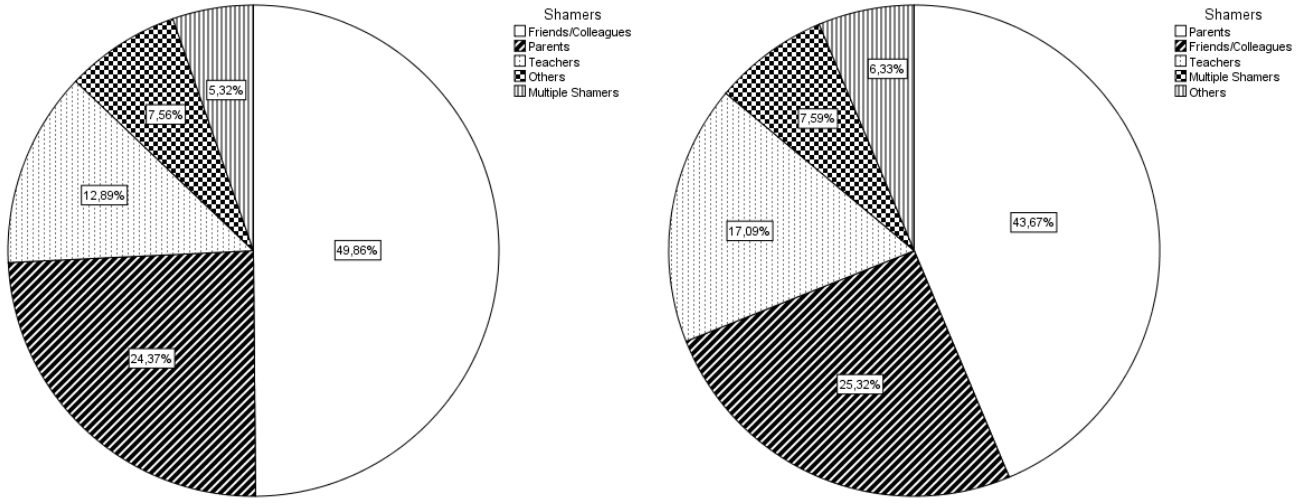


**Fig. 3.** *Pie charts of who the shamer was in the shame memory for the student sample (left) and general adult population sample (right).*

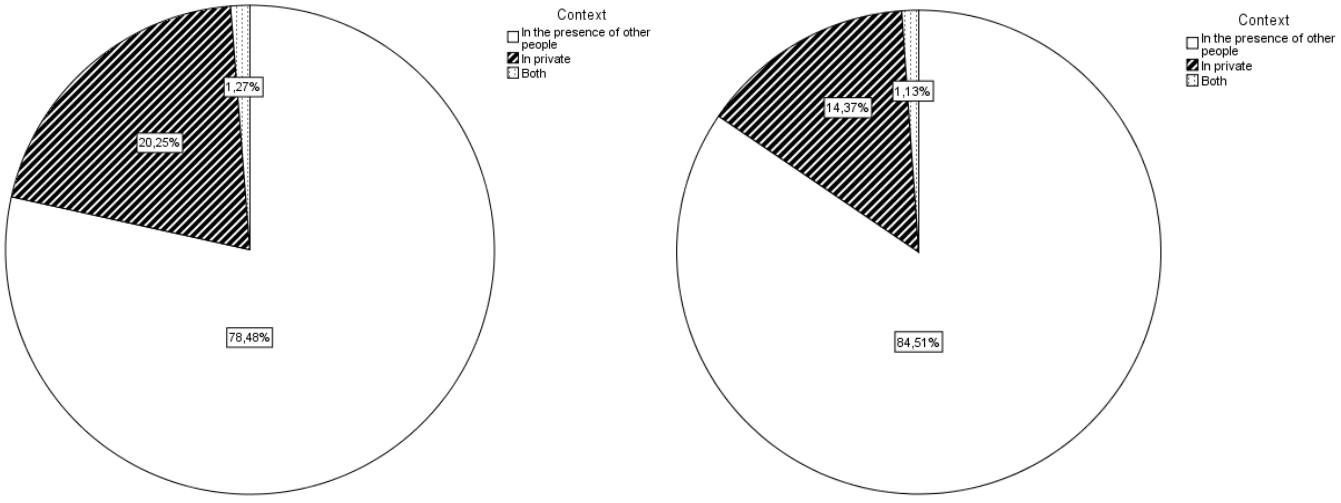


**Fig. 4.** *Pie charts of the context of the shame memory for the student sample (left) and general adult population sample (right).*

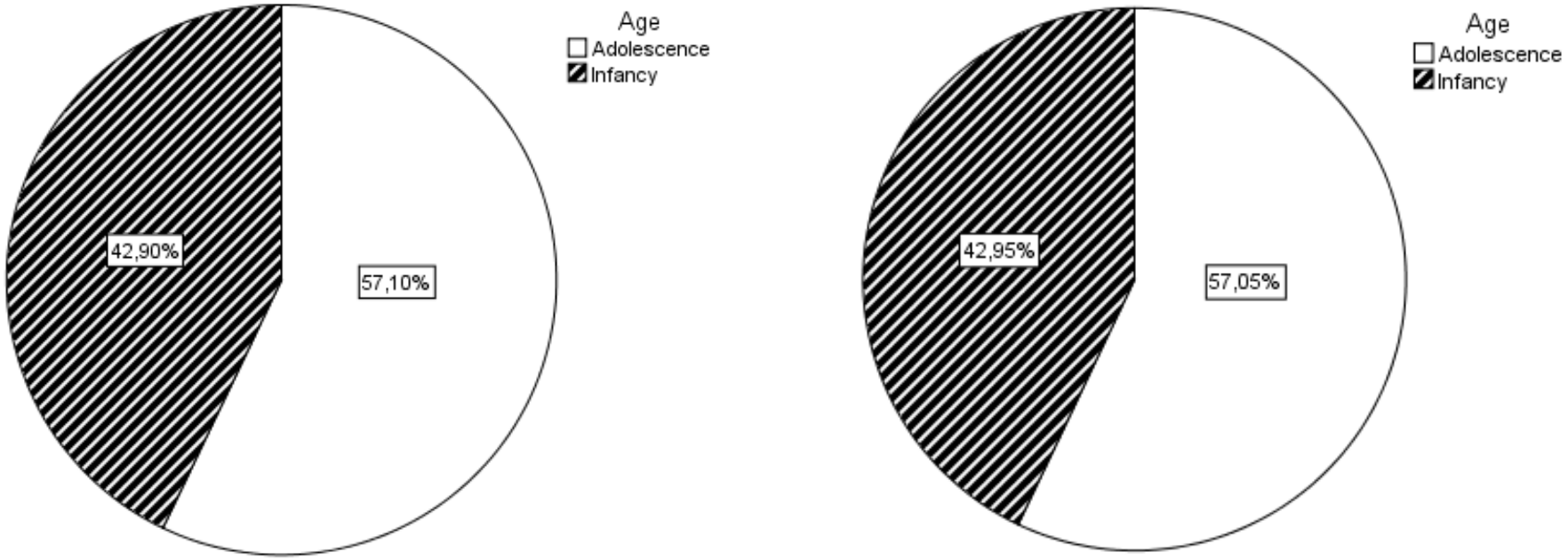


**Fig. 5.** *Pie charts of whether the shame experience remembered occurred in infancy or adolescence for the student sample (left) and general adult population sample (right).*

**Table 1.** *Means, standard deviation and matrix of inter-correlations among study variables*

| | | ***Total Sample (N = 515)*** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Variables*** | | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | ***M (SD)*** |
| **1** | Age | - | | | | | | | | 27.36 (11.70) |
| **2** | Gender | -.04 (-.06) | - | | | | | | | - |
| **3** | IES-R | -.10*(-.02) | -.10*(-.10*) | - | | | | | | 30.23 (19.02) |
| **4** | ES | -.10*(.004) | -.01(-.01) | .40**(.39**) | - | | | | | 6.00 (3.17) |
| **5** | IS | -.20**(-.05) | .01(.004) | .43**(.42**) | .70**(.70**) | - | | | | 4.66 (3.46) |
| **6** | SC | -.33**(-.09*) | -.03(-.03) | .50**(.50**) | .61**(.61**) | .78**(.77**) | - | | | 16.22 (12.10) |
| **7** | SIAS | -.34**(-.09*) | .01(.01) | .46**(.45**) | .60**(.60**) | .66**(.64**) | .69**(.65**) | - | | 29.54 (14.90) |
| **8** | MCS | -.28**(-.04) | .08(.09) | .36**(.35**) | .38**(.37**) | .42**(.39**) | .49**(.44**) | .51**(.46**) | - | 14.90 (9.25) |

*Note. Values outside parenthesis represent pearson's correlations without controlling for population. Values inside parenthesis represent parcial correlations after controlling for population. IES-R = Impact of Event Scale-Revised; ES = External Shame subscale of the External and Internal Shame Scale; IS = Internal Shame subscale of the External and Internal Shame Scale; SC = Self-criticism subscale of the Forms of Self-Criticizing and Self-Reassuring Scale; SIAS = Social Interaction Anxiety Scale; MCS = Motives for Compassion Scale; M = Mean; SD = standard deviation; *p < .05; **p < .01.*

***The Mediating Role of External Shame in the Relationship between the Traumatic Impact of Early Shame Experiences and Submissive Compassion***

As presented in Fig. 6, the traumatic impact of early shame experiences was positively and significantly associated with external shame, while population showed a negative and significantly association, both explaining 16.22 % of external shame's variance. Traumatic impact of early shame experiences was positively and significantly associated with submissive compassion, while population revealed a negative and significant association, all explaining 25.78 % of submissive compassion's variance. Both total effects of the traumatic impact of early shame experiences and population on submissive compassion were significant, explaining 20 % of its variance. Direct, indirect and total effects are presented in table 2.

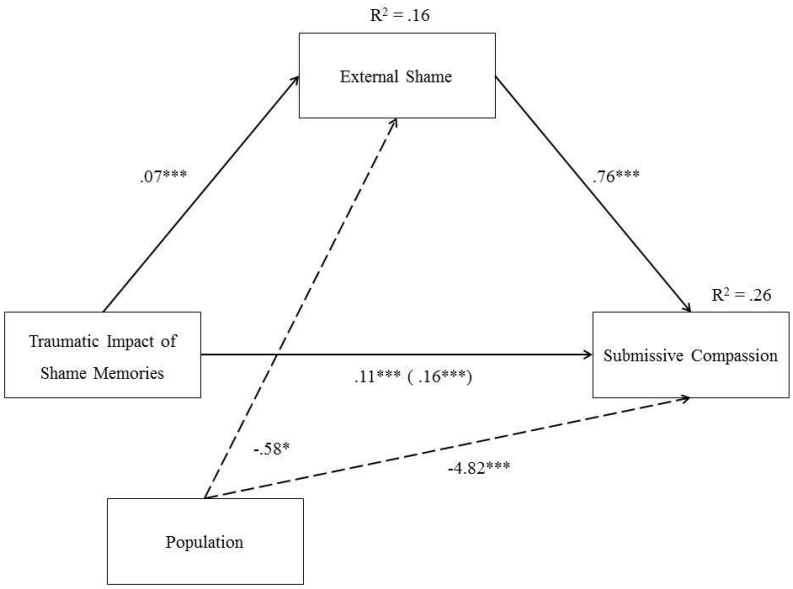


**Fig. 6**. Mediation model diagram (Model 4).

*Note.* Population was entered as a covariate. Path values represent unstandardized regression coefficients. Values inside parenthesis represent the total effect of X on Y. * $p < .05$; *** $p < .001$.

While external shame mediated the relationship between the traumatic impact of early shame experiences and submissive compassion, the results showed that the traumatic impact of early shame experiences maintained some of its direct effect on submissive compassion. For this reason, external shame partially mediated the effect of

the traumatic impact of early shame experiences on submissive compassion. Population was significantly and negatively associated with external shame and submissive compassion, meaning the student population is associated with higher levels of external shame and submissive compassion.

**Table 2.** *Summary of the direct, indirect and total effects*

| **Direct Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
|---|---|---|---|---|---|
| Traumatic Impact of Early Shame Experiences → External Shame | .07 | .01 | 9.44 | < .001 | .05/.08 |
| Population → External Shame | -.58 | .28 | -2.07 | .039 | -1.13/-.03 |
| Traumatic Impact of Early Shame Experiences → Submissive Compassion | .11 | .02 | 5.63 | < .001 | .07/.15 |
| External Shame → Submissive Compassion | .76 | .12 | 6.28 | < .001 | .53/1.00 |
| Population → Submissive Compassion | -4.82 | .77 | -6.26 | < .001 | -6.34/-3.31 |
| **Indirect Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
| Traumatic Impact of Early Shame Experiences → External Shame → Submissive Compassion | .05 | .01 | - | - | .03/.07 |
| **Total Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
| Traumatic Impact of Early Shame Experiences → Submissive Compassion | .16 | .02 | 8.41 | < .001 | .12/.20 |
| Population → Submissive Compassion | -5.27 | .80 | -6.62 | < .001 | -6.83/-3.70 |

*Note. b* = unstandardized regression coefficient; SE = standard error; *p* = statistical significance; *CI* = confidence interval

***The Mediating Role of Internal Shame in the Relationship between the Traumatic Impact of Early Shame Experiences and Submissive Compassion***

As presented in Fig. 7, the traumatic impact of early shame experiences was positively and significantly associated, with internal shame, while population showed a negative and significantly association, both explaining 21.03 % of internal shame's variance. Traumatic impact of early shame experiences and internal shame were positively and significantly associated with submissive compassion, while population showed a negative and significant association, all explaining 26.49 % of its variance.

Both total effects of the traumatic impact of early shame experiences and population on submissive compassion were significant, explaining 20 % of its variance. Direct, indirect and total effects are presented in table 3.

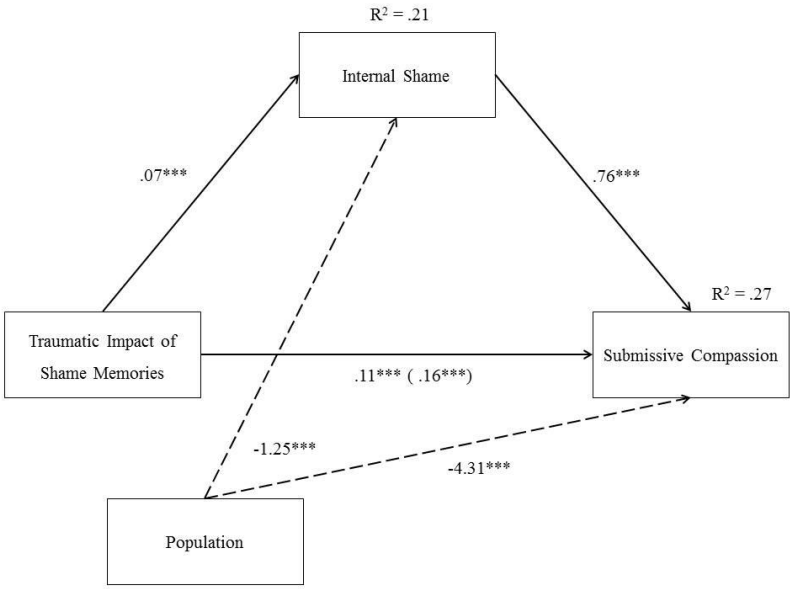


**Fig. 7.** Mediation model diagram (Model 4).
*Note.* Population was entered as a covariate. Path values represent unstandardized regression coefficients. Values inside parenthesis represent the total effect of X on Y. * $p < .05$; *** $p < .001$.

Similarly as the results above, internal shame partially mediated the effect of the traumatic impact of early shame experiences on submissive compassion. Population was significantly and negatively associated with internal shame and submissive compassion, meaning the student population is associated with higher levels of internal shame and submissive compassion.

**Table 3.** *Summary of the direct, indirect and total effects*

| **Direct Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
|---|---|---|---|---|---|
| Traumatic Impact of Early Shame Experiences → Internal Shame | .07 | .01 | 10.36 | < .001 | .06/.09 |
| Population → Internal Shame | -1.25 | .30 | -4.22 | < .001 | -1.84/-.67 |
| Traumatic Impact of Early Shame Experiences → Submissive Compassion | .11 | .02 | 5.17 | < .001 | .07/.15 |
| Internal Shame → Submissive Compassion | .76 | .11 | 6.68 | < .001 | .54/.99 |
| Population → Submissive Compassion | -4.31 | .78 | -5.55 | < .001 | -5.84/-2.78 |
| **Indirect Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
| Traumatic Impact of Early Shame Experiences → Internal Shame → Submissive Compassion | .06 | .01 | - | - | .04/.08 |
| **Total Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
| Traumatic Impact of Early Shame Experiences → Submissive Compassion | .16 | .02 | 8.41 | < .001 | .12/.20 |
| Population → Submissive Compassion | -5.27 | .80 | -6.62 | < .001 | -6.83/-3.70 |

*Note. b* = unstandardized regression coefficient; SE = standard error; *p* = statistical significance; *CI* = confidence interval

***The Mediating Role of Self-criticism in the Relationship the Traumatic Impact of Early Shame Experiences and Submissive Compassion***

As presented in Fig. 8, the traumatic impact of early shame experiences was positively and significantly associated, while population showed a negative and significantly association, with self-criticism, both explaining 33.23 % of self-criticism's variance. Traumatic impact of early shame experiences and self-criticism were positively and significantly associated with submissive compassion, while population showed a negative and significant association, both explaining 28.77 % of submissive compassion's variance. Both total effects of the traumatic impact of early shame experiences and population on submissive compassion were significant, explaining 20.31 % of its variance. Direct, indirect and total effects are presented in table 4

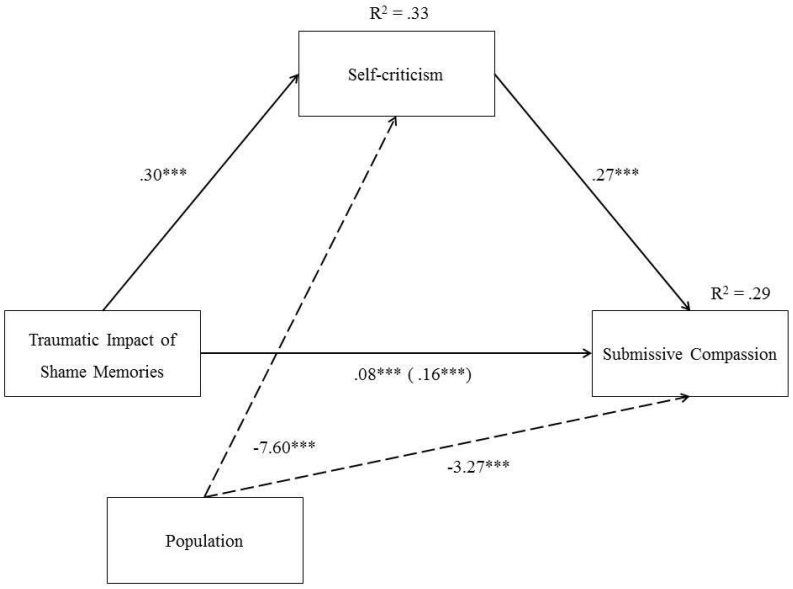


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**Fig. 8**. Mediation model diagram (Model 4).

*Note.* Population was entered as a covariate. Path values represent unstandardized regression coefficients. Values inside parenthesis represent the total effect of X on Y. * $p < .05$; *** $p < .001$.

Self-criticism also partially mediated the effect of the traumatic impact of early shame experiences on submissive compassion. Population was significantly and negatively associated with self-criticism and submissive compassion, meaning the student population is associated with higher levels of self-criticism and submissive compassion.

**Table 4.** *Summary of the direct, indirect and total effects*

| **Direct Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
|---|---|---|---|---|---|
| Traumatic Impact of Early Shame Experiences → Self-criticism | .30 | .02 | 12.90 | < .001 | .25/.35 |
| Population → Self-criticism | -7.60 | .96 | -7.93 | < .001 | -9.48/-5.72 |
| Traumatic Impact of Early Shame Experiences → Submissive Compassion | .08 | .02 | 3.93 | < .001 | .04/.12 |
| Self-criticism → Submissive Compassion | .27 | .04 | 7.75 | < .001 | .20/.34 |
| Population → Submissive Compassion | -3.27 | .80 | -4.08 | < .001 | -4.84/-1.69 |
| **Indirect Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
| Traumatic Impact of Early Shame Experiences → Self-criticism → Submissive Compassion | .08 | .01 | - | - | .06/.11 |
| **Total Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
| Traumatic Impact of Early Shame Experiences → Submissive Compassion | .16 | .02 | 8.49 | < .001 | .13/.20 |
| Population → Submissive Compassion | -5.33 | .80 | -6.68 | < .001 | -6.90/-3.76 |

*Note. b* = unstandardized regression coefficient; SE = standard error; *p* = statistical significance; *CI* = confidence interval.

***The Mediating Role of Social Anxiety in the Relationship the Traumatic Impact of Early Shame Experiences and Submissive Compassion***

As presented in Fig. 9, the traumatic impact of early shame experiences was positively and significantly associated with social anxiety, while population showed a negative and significantly association, both explaining 30.30 % of social anxiety's variance. Traumatic impact of early shame experiences and social anxiety were positively and significantly associated with submissive compassion, while population showed a negative and significant association, explaining 30.89 % of submissive compassion's variance. Both total effects of the traumatic impact of early shame experiences and population on submissive compassion were significant, explaining 20.31 % of its variance. Direct, indirect and total effects are presented in table 6.

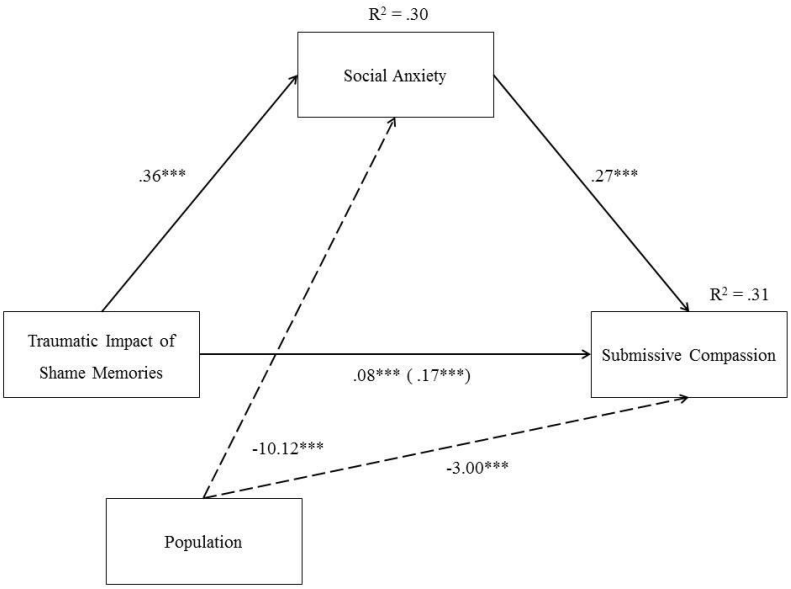


**Fig. 9**. Mediation model diagram (Model 4).

*Note.* Population was entered as a covariate. Path values represent unstandardized regression coefficients. Values inside parenthesis represent the total effect of X on Y. * $p < .05$; *** $p < .001$.

Like all mediators of the previous models, social anxiety also partially mediated the effect of the traumatic impact of early shame experiences on submissive compassion. Population was significantly and negatively associated with social anxiety and submissive compassion, meaning the student population is associated with higher levels of social anxiety and submissive compassion.

**Table 6.** *Summary of the direct, indirect and total effects*

| **Direct Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
|---|---|---|---|---|---|
| Traumatic Impact of Early Shame Experiences → Social Anxiety | .36 | .03 | 11.60 | < .001 | .30/.42 |
| Population → Social Anxiety | -10.12 | 1.27 | -7.98 | < .001 | -12.61/-7.63 |
| Traumatic Impact of Early Shame Experiences → Submissive Compassion | .08 | .02 | 4.12 | < .001 | .04/.12 |
| Social Anxiety → Submissive Compassion | .23 | .03 | 8.75 | < .001 | .18/.28 |
| Population → Submissive Compassion | -3.00 | .79 | -3.79 | < .001 | -4.55/-1.44 |
| **Indirect Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
| Traumatic Impact of Early Shame Experiences → Social Anxiety → Submissive Compassion | .08 | .01 | - | - | .06/.10 |
| **Total Effects** | ***b*** | ***SE*** | ***t*** | ***p*** | ***95 % CIs*** |
| Traumatic Impact of Early Shame Experiences → Submissive Compassion | .17 | .02 | 8.53 | < .001 | .13/20 |
| Population → Submissive Compassion | -5.31 | .79 | -6.64 | < .001 | -6.88/-3.74 |

*Note. b* = unstandardized regression coefficient; SE = standard error; *p* = statistical significance; *CI* = confidence interval

## Discussion

While several studies have provided good evidence of the positive effects of compassion on well-being (e.g., Gilbert, 2005, 2010; Goetz, Keltner, & Simon-Thomas, 2010; Neff, 2003) people can behave in prosocial ways for different reasons, not all of which are genuinely compassionate. In line with this, some studies have encountered a type of compassion (submissive compassion) that is linked to shame, submissive behaviour, negative self-evaluations and symptoms of depression, anxiety and stress (Gilbert et al., 2017; Catarino et al., 2014). Furthermore, there is increasing evidence that early exposures to shame, neglect or abuse are associated with increased vulnerabilities to mental health problems (e.g., Castilho, Pinto-Gouveia, Amaral &

Duarte, 2014; Gilbert, Cheung, Wright, Campey & Irons, 2003; Matos & Pinto Gouveia, 2010), particularly shame (Andrews, 2002; Gilbert et al., 2003; Matos & Pinto-Gouveia, 2010; Matos, Pinto-Gouveia, & Gilbert, 2013) and social anxiety (Calvete, 2014; Gilbert & Miles, 2000; Matos, Pinto-Gouveia & Gilbert, 2013). Given the increase in research regarding compassion and the consequent implementation of compassionate focused therapy in clinical settings, understanding the motives behind compassionate behaviour is paramount to better understand the concept, the personal differences in caring behaviour and how to better promote genuine compassion. Hence, this study's general aim was to understand the origins of submissive compassion (compassion with the underlying motives of being liked or avoid rejection) and its hypothesized intricate relationship with social anxiety and with processes frequently associated with submissive behaviour and human suffering (external shame, internal shame and self-criticism).

Regarding our study aims, and as hypothesized (H1), the traumatic impact of early shame experiences, external shame, internal shame, self-criticism, social anxiety and submissive compassion were positively and significantly associated with each other. These results are in line with previous studies that link early negative experiences and shame memories with higher levels of shame (Andrews, 2002; Gilbert et al., 2003) and higher levels of social anxiety (Calvete, 2014; Gilbert & Miles, 2000). Regarding the traumatic impact of early shame experiences specifically, and in line with our results, other studies also found associations with higher levels of external and internal shame (Matos & Pinto-Gouveia, 2010; Matos, Pinto-Gouveia & Duarte, 2013; Pinto-Gouveia & Matos, 2011) and social anxiety (Matos, Pinto-Gouveia & Gilbert, 2013). These findings extend previous work on the association between the traumatic impact of early shame experiences and psychopathology (Matos & Pinto-Gouveia, 2010; Pinto-Gouveia & Matos, 2011) and are in accordance with literature suggesting that early negative interactions in form of devaluation, abuse, rejection, neglect or abandonment increase vulnerability to psychopathology, specifically to social anxiety (Calvete, 2014; Gilbert & Miles, 2000).

Furthermore, the association of the traumatic impact of early shame experiences with self-criticism had not been studied but, their relationship also goes in line with studies that reveal that negative early experiences characterized by parental criticism,

rejection and submissiveness have been associated with self-criticism (e.g., Castilho, Pinto-Gouveia, Amaral, & Duarte, 2014; Irons, Gilbert, Baldwin, Baccus & Palmer, 2006; Muralidharan, Kotwicki, Cowperthwait, & Craighead, 2015; Pinto-Gouveia, Castilho, Matos & Xavier, 2013).

Similarly, associations between social anxiety and external shame, internal shame and self-criticism are also in line with previous research. Shame, and particularly internal shame, have been positively associated with social anxiety (Clark & Wells, 1995; Gilbert, 2000; Gilbert, 2001; Gilbert & McGuire, 1998; Gilbert & Miles, 2000; Gilbert & Trower, 2001; Matos, Pinto-Gouveia, & Gilbert, 2013; Weeks et al., 2011). Furthermore, studies have reported positive associations between social anxiety and self-criticism (Gilbert, 2010; Iancu, Bodner, & Ben-Zion, 2015; Muralidharan et al., 2015; Palmeira, Pinto-Gouveia, Cunha, & Carvalho, 2017; Shahar, Doron, & Szepsenwol, 2015).

The high correlations between external shame, internal shame and self-criticism are all in line with the vast literature on the topic and the biopsychosocial model of shame (e.g. Gilbert, 1998, 2007).

Furthermore, and to the best of our knowledge no study had investigated the association between the traumatic impact of early shame experiences and submissive compassion (H1), and whether or not the traumatic impact of early shame experiences would have a direct effect on submissive compassion (H2). Results revealed that the traumatic impact of early shame experiences was directly associated with submissive compassion, with significant and positive direct effects on all mediation models and that the other independent variables were positive, partial and significant mediators of this relationship.

One hypothesis for the direct association of the traumatic impact of early shame experiences with submissive compassion, consistent with the evolutionary perspective and literature on traumatic shame memories (e.g., Matos, Duarte & Pinto-Gouveia, 2017; Matos & Pinto-Gouveia, 2010, 2014; Pinto-Gouveia & Matos, 2011) is that experiencing shame events, especially with traumatic characteristics, might contribute to the maintenance of a permanent sense of threat to the (social) self, who is left to feel vulnerable, inferior, subordinate, powerless or undesired, and a view of others as dominant, hostile and threatening, who may harm, reject, exclude or persecute the self.

Thus, this might result in (or reinforce) a hyperactivation of the threat and self-protection system in face of (perceived) threats to the self as a social agent as well as compromise the access to feelings of safeness and security (Matos, Pinto-Gouveia, & Gilbert, 2013). Then, the goal of the threat system is to give us surges of feelings, such as anxiety, to alert and motivate us to take action (e.g., through submissive compassion; Gilbert, 2001) to appear attractive and helpful, with the goal of developing a good reputation and status in the minds of others (Buss, 2003) and ultimately avoid rejection or exclusion.

Another hypothesis for their direct association, given that our measure of the traumatic impact of early shame experiences regards the difficulties people feel throughout life after stressful events, is that trauma-like symptoms, such as intrusions and hyperarousal regarding the shame experience, could have the function of alerting the individual of possible reoccurrences and thus activate the threat system, to avoid the possible and expected negative consequences. Since shame experiences with traumatic impact present threats to the social self (Gilbert, 1998, 2003) and self-identity (Andrews, 2002; Andrews & Hunter, 1997), the consequentially loss of inclusionary status would also represent threats to protection, care and support needed for survival. From an evolutionary perspective on trauma-related disorders (Baldwin, 2013) the psychophysical reactions to traumatizing events evolved to ensure survival. Therefore, in the case of a shame experience with traumatic impact that could represent a threat to protection, care and support, the psychophysical reactions (intrusions, avoidance and hyperarousal) would have the goal of avoiding possible reoccurrence of the experience. To avoid possible repetitions, trauma-like symptoms could contribute to a sense of constant threat to one's social self which in turn could trigger the threat system. Expecting being shamed or perceiving criticism or humiliation, similarly to the shame experience with traumatic impact, individuals could then use compassionate behaviour as a submission and appeasement strategy to develop, or influence towards, a good reputation and status in the minds of others and thus avoid rejection, exclusion or put-down, and consequentially ensure group resources and survival. Further studies could explore these possibilities.

Moreover, few studies have investigated the association between submissive compassion and external shame, internal shame and self-criticism. In line with our

hypothesis, results showed an association between all abovementioned variables (H1) and that the effect of the traumatic impact of early shame experiences on submissive compassion was partially mediated by external shame, internal shame and self-criticism (H3). In line with our results, Catarino et al., (2014) found that submissive compassion was significantly linked with caring shame (i.e. fear of not being good enough as a carer or fear of being criticized for not being caring enough) and self-image goals (i.e. wanting to be seen as in the right and avoid making mistakes or being ashamed). Moreover, and also in line with our results, Gilbert et al. (2017) found submissive compassion to be associated with shame and self-criticism, arguing that it is possible that it is the sense of social fragility and negative self-evaluation that partly drives the need to be submissively compassionate. Furthermore, in our view, results are in line with the evolutionary approach, in that shame functions as a defensive strategy which can be triggered in the presence of interpersonal threat (Gilbert, 2007). Shame experiences with traumatic impact may cause one to perceive the self as living negatively in the minds of others (external shame; e.g., as inferior or undesirable), influencing the formation of dominant-submissive self-other schemas. (e.g., as dominant and hostile), thus presenting a threat to the social self (Gilbert, 1998, 2003) and self-identity (Andrews, 2002; Andrews & Hunter, 1997). Since such experiences can also be internalized (Gilbert, 1998, 2007), shame can also be focused on the self (internal shame), with negative self-evaluations and self-critical attitudes (Gilbert, 1998), leading individuals to perceive themselves as inferior or socially undesirable and as lacking the ability to compete with dominant others. Concurrently, the dominant-submissive interpersonal schemas can be recruited into self-to-self relationships (Gilbert & Irons, 2005), originating an internal process (self-criticism) that activates the same subordinated-defeat strategies used to respond to external threat signals, reinforcing feelings of inferiority and submissiveness (Castilho et al., 2014; Gilbert et al., 2007). These self-devaluation and self-persecutory attitudes, although aiming at defending the self against negative evaluations and possible rejection from others, may render one more prone to enter defeat states and activate involuntary defeat strategies when facing aversive life events (Matos, 2012). Subsequently, and given that human status and acceptability often depend on appearing attractive and helpful to others (Gilbert, Allan, & Price, 1997), being helpful and supportive underpins prosocial behaviour (Penner,

Dovidio, Piliavin, & Schroeder, 2005), and can create positive emotions in the minds of others towards the care provider (Catarino, Gilbert, McEwan, & Baião, 2014). Therefore, feelings of shame reinforced by self-criticism can lead individuals to adopt submissive but compassionate behaviours with the goal of influencing the self as perceived by others, to develop a good reputation and status in the minds of others (Buss, 2003), and consequentially assure access to group resources and survival.

While submissive compassion has been associated with symptoms of anxiety (Gilbert et al., 2017; Catarino et al., 2014) no study had investigated the relationship between submissive compassion and social anxiety. Nonetheless, the association between social anxiety and submissive behaviour has been well documented (e.g., Gilbert & McGuire, 1998; Weeks et al., 2011). Our results showed a positive and significant association between social anxiety and submissive compassion (H1) and that social anxiety partially mediated the relationship between the traumatic impact of early shame experiences and submissive compassion (H3). Shame memories with traumatic impact may cause one to feel inferior, defective and unattractive, and to perceive others as critical, rejecting or abusive, thus influencing the formation of negative self-other schemas (Matos & Pinto Gouveia, 2014; Matos et al., 2013). As previously said, this may originate a sense of constant threat to one's social self, explaining the overutilization of the social rank system and oversensitivity to signals of social threat by social anxious individuals. Social anxious individuals are concerned with the (dis)approval of others (eg. Leary & Kowalski, 1995) and the need to be approved and valued by others impels humans to take care of each other (Gilbert, 2007, 2009). Given that human status, inclusion and acceptability can depend on appearing attractive and helpful to others (Gilbert, Allan, & Price, 1997), compassionate behaviour can be used as a submissive tactic by social anxious individuals, with the goal of developing a good reputation and status in the minds of others or to limit possible attacks, since social anxious individuals could more easily feel at risk of rejection and exclusion because of the overutilization of the social rank system (Trower & Gilbert, 1989) and the oversensitivity to signals of social threat (Joormann & Gotlib, 2006).

After assessing the impact of all independent variables on submissive compassion a pertinent question still remains - Which of the abovementioned processes is more linked with submissive compassion? Assessing correlations between study

variables reveals that submissive compassion's highest correlation is with social anxiety. This result is further confirmed by the mediation model, where the population, the traumatic impact of shame memories and social anxiety explained 31 % of its variance. Even though the variances explained by the different mediators are all around 30 %, and this could be due to the high correlations between mediator variables and some overlaps between measures, social anxiety does seem to have a bigger impact on submissive compassion than external shame, internal shame and self-criticism. This goes in line with evolutionary theory on social anxiety and submissive behaviour (Gilbert, 2001; Gilbert & Trower, 2001), in that it seems to be that it is the overutilization of the social rank system and the oversensitivity to social threats - which could be due to the traumatic impact of early shame experiences - that could cause social anxious individuals to view themselves as inferior, social undesirable and as lacking the ability to successfully compete with dominant others. Thus, such perceptions could lead to the adoption of compassionate behaviour, as a submissive and appeasement strategy, to appear attractive and as having desired and valued characteristics, to create positive emotions in the minds of others and to try and influence or change the negative way the self is perceived as living in the mind of others, to consequentially avoid possible punishments from dominant individuals (e.g., conflict or rejection) and ultimately the loss of resources.

Moreover, Caiado and Salvador (2017) found that social anxiety was linked to fears of receiving compassion but not of giving compassion. The authors argue that, when social anxious individuals receive compassion, they may feel that the other is dominant, feeling threatened and operating in a competitive mode. However, when social anxious individuals are the ones giving compassion, the roles are reversed and it is the other who is in a position of vulnerability and fragility. Therefore, it could mean that social anxious individuals do not feel threatened in these situations, deactivating the competitive mode and entering in an affiliative mode, activating the social mentality of care giving. On the other hand, in line with our results and as we've previously seen, social anxious individuals can indeed be kind to others in order to avoid exclusion and rejection. Since the compassionate behaviour can be seen as a submissive strategy to avoid possible attacks and exclusion, social anxious individuals could still be operating in a competitive mode (i.e. social rank) even while being compassionate towards others.

### *Clinical implications*

The use of a non-clinical sample impairs the generalization of the findings to clinical populations. Nonetheless, shame memories, shame, self-criticism and social anxiety are transversal processes and mechanisms that operate at a clinical or nonclinical level.

The present study points to several clinical implications related to the application of Compassion Focused Therapy (CFT; Gilbert, 2010) with patients presenting shame experiences with traumatic impact and high levels of shame, self-criticism, submissiveness and social anxiety. First, our results imply the relevance of using specific strategies to evaluate these memories (e.g. through structured clinical interviews such as the Shame Experiences Interview, Matos and Pinto-Gouveia, 2006) and that working with these individuals' shame memories, addressing and reconstructing the meaning associated with the experience, may help decrease current levels of shame, self-criticism and social anxiety. Treatment interventions should also be tailored to help patients develop compassionate attributes and skills, i.e., promoting a self-to-self relationship based on feelings of compassion, warmth and kindness, which enables the individual to tone down distress and negative affect via self-soothing. These are all key points and focuses of CFT (Gilbert, 2005, 2009, 2010). So, building up and experiencing these compassionate feelings, both from the self and from others (e.g., within a supportive therapeutic relationship), and helping patients to recognize the evolved defensive function of their symptoms, may be fundamental when early shame experiences reveal traumatic characteristics. However, clinicians should be aware that, as argued elsewhere (e.g., Gilbert, 2010; Matos & Pinto Gouveia, 2014), some patients, especially those for whom early shame experiences function as conditioned traumatic memories, might feel frightened and uncomfortable when experiencing self-compassion and receiving compassion from others. So, dealing with these patients early shame experiences and developing their self-warmth and soothing abilities should be a key goal in therapy. Furthermore, working with the early shame experiences, shame feelings, self-criticism and social anxiety could decrease the use of submissive strategies such as submissive compassion and better promote genuine compassion.

In regards to Cognitive-Behavioural interventions, and in line with CFT, interventions could be conceptualized as "re-tuning" the functioning of the social rank

system (Gilboa-Schechtman et al., 2014). Specifically, these interventions can be seen as geared to decrease the oversensitivity to matters of social rank and social threats (by such mechanisms as attentional retraining and cognitive restructuring) and to practice the high-profile rather than low-profile behaviours while dealing with social rank challenges (Clark, Ehlers et al., 2006). Interpersonal interventions can be thought of as enhancing the functioning of the affiliative system and possibly contributing to the decoupling between the affiliation and the social rank systems by focusing on friendly interpersonal exchanges (e.g., Alden & Taylor, 2011). More generally, creating a personalized profile of the functioning of social rank and affiliative system may lead to more effective treatment interventions (Gilboa-Schechtman et al., 2014). From the perspective of the present conceptualization, reviewing events related to loss of social or inclusionary statuses in treatment may help to articulate the coping strategies individuals use to deal with such challenges, and, when needed, to develop more flexible and pro-social strategies of this type. If especially painful events involving loss of status are part of a person's history, status enhancing interventions (e.g., Bergner, 1999) or trauma-focused exposure techniques might prove useful in their therapy (Wild, Hackmann, & Clark, 2008). Acknowledging the importance of social rank, respect, and prestige for well-being may also be helpful in adopting a more self-accepting and self-compassionate approach to distress experienced by socially anxious individuals (Gilbert & Procter, 2006). Finally, an emphasis on the misinterpretation of affiliative signals, and down-regulation of events connoting social ascendance or acceptance, suggests an enhanced focus on helping socially anxious individuals to bolster affiliative gestures, savour popularity and acceptance, and extract the potential benefits from power-loaded events (Gilboa-Schechtman et al., 2014).

Finally, since submissive interpersonal strategies related to higher levels of shame experiences with traumatic impact, shame, self-criticism and social anxiety may elicit negative evaluations from others, and thus reinforcing external and internal shame in a circular and mutually interactive way (Castilho et al., 2016), a CFT approach focused on early shame experiences and shame could in turn diminish the adoption of submissive behaviours by social anxious individuals and contribute to decrease shame feelings and disconfirmation of the self as inadequate and undesirable and of the dominant-submissive other-self schemas that give rise to social anxiety. So, and in line

with our results, clinicians should be aware of the motives behind compassionate behaviour, evaluate and address them in order to better promote genuine compassion.

***Limitations, contributions and future studies***

The present study holds some limitations. Due to the fact that it is a cross-sectional study, results can only be interpreted as associations and not as predictions. At the same time, the fact that it was not a longitudinal study evaluating the same subjects, as students and in the future as adults (instead of two different samples), does not allow us to guarantee that the course of the study variables happens in the same subjects. Given these two limitations, it would be important to replicate the present study in a longitudinal design. Another important limitation refers to the fact that both samples were community samples, thus pointing to the relevance of replicating the study in a clinical sample of socially anxious individuals. Although the processes involved in shame and shame experiences may apply at a clinical or nonclinical level, the replication of the present study in clinical samples would add additional robustness to our findings. This study could also be more complete if we had assessed early shame experiences without traumatic impact and used them as a control variable, to investigate whether shame experiences without traumatic features would have the same effect. Future studies could investigate this possibility. Furthermore, since the traumatic impact of early shame experiences and shame memories with central characteristics have been linked consistently, future studies could also investigate whether the central characteristics of shame memories have the same effect on submissive compassion and social anxiety as the traumatic characteristics. Also, we believe that due to the nature of some of the questions in our measures and since a questionnaire assesses social anxiety, responses might have been biased by conformity to social desirability. Further studies might wish to add measures that allow researchers to control for the effect of social desirability in responses. Furthermore, the high correlations between internal shame, external shame, self-criticism and social anxiety could be due to the fact that these processes are relatively dependent and the measures that access them appear to comprise a few items that might be related to the other concepts. Future studies could use other measures of shame, such as the Internalized Shame Scale (Cook, 1996), the Other as Shamer (Allan, Gilbert, & Goss, 1994; Goss, Gilbert, & Allan, 1994; Portuguese version by Matos, Pinto-Gouveia, & Duarte, 2011a) and the Experience of

shame Scale (Andrews, Qian & Valentine, 2002; Portuguese version by Matos, Pinto-Gouveia & Duarte, 2011b) and try to investigate the associations with our original multiple mediation model. Despite the plausibility of the models tested here, there may be other concurrent explanatory models for these relations using other variables or considering other types or directions of association. These concurrent models could be tested in future studies.

As the data shows, most of the remembered shame experiences with traumatic impact were in the presence of others. Although we could not test it here, the context could be a deciding factor in whether shame experiences have a traumatic impact or not. The presence of other people could represent exclusion and humiliation by the group and not just by one person, enhancing perceptions of being criticised and diminished for actions or attributes of the self that others find undesirable or unattractive (Gilbert, 1998), consequentially enhancing shame feelings and presenting a more severe threat to the social self (Gilbert, 2003), self-identity (Andrews, 2002) and access to group resources. From an evolutionary approach, such threats to inclusionary status would represent threats to protection, care, support and thus, survival. An evolutionary approach on trauma (Baldwin, 2013) presumes that psychophysical reactions to traumatizing events evolved to ensure survival. Following this conceptualization, shame experiences in the presence of other people could present a bigger threat to social inclusion and access to group resources. After such threat to survival, psychophysical reactions could occur to guarantee that the experience doesn't happen again and thus ensure survival. Future studies could investigate this possibility.

Moreover, since feeling safe, connected and supported in attachment and social relationships is linked to affiliative positive affects and well-being, and promotes resilience against adverse life events (Cacciopo et al., 2000), future studies could also investigate the protective effects of recalls and current experiences of feeling soothed, safe and connected with others on the associations between our study variables.

There is also the possibility that submissive compassion (submissive compassionate behaviour) could affect and reinforce current shame feelings, self-criticism and social anxiety, since submissive interpersonal strategies may elicit negative evaluations from others, reinforcing external and internal shame in a circular

and mutually interactive way (Castilho et al., 2016). Therefore, future longitudinal studies could be conducted to assess this hypothesis.

Finally, we assessed the type of shame experiences and guaranteed confidentiality, but our study is mostly limited to self-report measures to evaluate early experiences. Although this may raise some concerns regarding the influence of current emotional states on these recollections, retrospective recall data was found to be generally reliable, accurate, and stable over time (e.g., Matos and Pinto-Gouveia, 2010, 2011a). Nevertheless, since studies suggest that the emotional content of an experience can influence the way the event is remembered and that the appraisals and emotions can influence the information recalled (for a review, Holland & Kesinger, 2010), it is also conceivable that people who currently experience traumatic-like symptoms regarding the shame experience, higher levels of shame and social anxiety may be more inclined to judge a shame-related childhood experience as traumatic, or even distort memories in order to confirm that the self is inferior and submissive and that others are hostile and dominant.

Nonetheless, this is the first study to show that the traumatic impact of early shame experiences is associated with submissive compassion and that this relationship is mediated by external shame, internal shame, self-criticism and social anxiety, extending previous findings on the traumatic nature of early shame experiences (e.g., Matos, Pinto-Gouveia & Gilbert, 2013) and submissive compassion (Catarino et al., 2014; Gilbert et al., 2017). Our results support the idea that the traumatic impact of early shame experiences can lead to submissive compassionate behaviour, directly or through external shame, internal shame, self-criticism and social anxiety. Furthermore, it is the first study to associate submissive compassion with social anxiety. Further studies should follow.

### *Conclusion*

Early shame memories with traumatic impact may cause one to experience the self as living negatively in the minds of others (external shame) and contribute for the development of negative self-other schemas and the internalization of shame (internal shame). This may originate a sense of constant threat to one's social self which triggers the threat system, explaining the over-utilization the social rank system and the over-sensitivity to signals of social threat of social anxious individuals. Furthermore, this

innate role forming system based on dominant-submissive interpersonal schemas (social rank) can be recruited into self-to-self relationships (self-criticism), activating the same subordinate strategies used to respond to external threat signals, involving a self-critical attitude associated with self-monitoring and self-blaming, and the implementation of submissive and appeasement strategies towards others, to limit possible attacks. Given that human status and acceptability often depend on appearing attractive and having desired qualities, caring behaviour can also be used as a submissive strategy with the goal of developing a good reputation and status in the minds of others (submissive compassion), particularly by social anxious individuals who easily feel at risk of rejection and exclusion because of the overutilization of the social rank system and the oversensitivity to signals of social threat.

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