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Sara Soares Vieira

SOCIAL ANXIETY AND SUBMISSIVE COMPASSION:

THE ROLE OF EARLY EMOTIONAL MEMORIES

Dissertação no âmbito do Mestrado Integrado em Psicologia, Área de 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

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“No final tudo vai acabar bem.

E se não acabar bem,

é porque ainda não é o fim”

Maria do Céu Salvador, 2019

Social Anxiety and submissive compassion: The role of early emotional memories

Sara Soares Vieira[1]
Maria do Céu Salvador[1]
Marcela Matos[1]

[1]Universidade de Coimbra, Portugal

A correspondência relativa a este artigo deverá ser enviada a:
Sara Vieira
Faculdade de Psicologia e Ciências da Educação,
Universidade de Coimbra
Rua do Colégio Novo, Apartado 6153 3001-802 Coimbra, Portugal
Email: saravieira06@hotmail.com

Abstract

Although few studies have addressed the memories of the traumatic impact of early shame experiences and the positive impact of early memories of warmth and safeness (EMWS) with parents and peers on social anxiety (SA), none addressed the relationship between SA and submissive compassion and all of these variables together. Thus, the present study aimed to investigate the differential impact of the memories of the traumatic impact of early experiences of shame in submissive compassion, exploring the mediating role of SA and the moderating role of EMWS with parents and peers in this relationship. The cross-sectional study included two community samples: university students (N= 357; Mage = 20.54 DP = 1,62) and general population (N = 158 Mage = 42,83 DP = 9.80). SA, EMWS with parents and peers, the memories of the traumatic impact of early shame experiences and submissive compassion were assessed. In both samples, the memories of the traumatic impact of early shame experiences had a positive association with SA and submissive compassion, However, EMWS with parents and peers had a negative relationship with all of the variables mentioned. SA mediated the relationship between the memories of the traumatic impact of early shame experiences and submissive compassion in both samples and the moderating effect of EMWS with parents and peers in these relationships varied according to the sample. Clinical implications emphasize the relevance of compassion-focused therapies in preventive and therapeutic approaches. Other results are discussed, as well as other clinical implications and contributions of the present study.

Key-words: Early memories of warmth and safeness with parents and peers; the memories of the traumatic impact of early shame experiences; social anxiety; submissive compassion

Resumo

Embora poucos estudos tenham abordado as memórias do impacto traumático das experiências precoces de vergonha e o impacto positivo das memórias precoces de calor e segurança (MPCS) com pais e pares na ansiedade social (AS), nenhum estudo abordou a relação entre AS e compaixão submissa e a relação entre todas estas variáveis. Assim, o presente estudo teve como objetivo, investigar o impacto diferencial das memórias do impacto traumático das experiências precoces de vergonha na compaixão submissa, explorando o papel mediador da AS e o papel moderador das MPCS com pais e pares nessa relação. O estudo transversal incluiu duas amostras não clínicas: estudantes universitários (*N* = 357; *Midade* = 20,54; *DP* = 1,62) e população geral (*N* = 158; *Midade* = 42,83; *DP* = 9,80). Foram avaliadas as seguintes vaiáveis: AS, MPCS, memórias do impacto traumático das experiências precoces de vergonha e, ainda a compaixão submissa. Em ambas as amostras, as memórias do impacto traumático das experiências precoces de vergonha tiveram uma associação positiva com a AS e com a compaixão submissa. No entanto as MPCS com pais e pares relacionaram-se negativamente com todas as variáveis previamente mencionadas. A AS mediou a relação entre as memórias do impacto traumático da experiências precoces de vergonha e a compaixão submissa em ambas as amostras, e o efeito moderador da MPCS com pais e pares nessas relações variou consoante a amostra. As implicações clínicas enfatizam a relevância das terapias focadas na compaixão em abordagens preventivas e terapêuticas. Serão abordados também outros resultados, assim como outras implicações clínicas e contribuições do presente estudo.

Palavras-chave: Memórias precoces de calor e segurança com pais e pares; memórias do impacto traumático das experiências precoces de vergonha; ansiedade social; compaixão submissa

Introduction

Social Anxiety:

Human relationships have evolved to provide an array of valued and necessary resources to individuals in the form of protection, care, support, and opportunities for reproduction. However, there are many different types of relationships that can become threats to humans (Gilbert, 2001). Therefore, social anxiety is characterised by anxiety and fear of negative evaluation in social situations and concern with being subject to scrutiny by others (Clark &Wells, 1995). SA subbtypes seems related to times when individuals have to make some kind of bid for social resources or defend their resources (Gilbert, 2001).

From an evolutionary perspective, SA seems to compromise the ability to compete for resources and, in more severe forms, develop new cooperative relationships (Gilbert, 2001). This links SA to social competition for resources and to innate mechanisms that have evolved to enable social hierarchies to form. From this perspective, SA may be a form of competitive anxiety, triggered in contexts in which individuals see themselves as relatively low in a status hierarchy of desirable attributes or at risk for losing status by being seen as having undesirable attributes (Gilbert, 2001) In attempting to compete, social phobics automatically recruit various evolved modules and mentalities for behaving in competitive arenas when one is low in the hierarchy such as social comparison and various submissive defenses. To create desired social roles in various domains, individuals need to be competent sending and decoding of social signals (Gilbert, 2001). Gilbert suggested that the enactment of social roles utilize basic mechanisms of defense and safety that respond to the assessed threat or safety in any type of encounter. Not only may mechanisms become maladaptive when they operate outside of their adaptive range but also problems in one mechanism can have effects on others. Therefore, SA can become highly maladaptive when it interferes with such biosocial goals (Gilbert, 2001).

Social Anxiety and The Emotion Regulation Sytems:

Mental health problems are commonly linked to different social motivational systems and their processing heuristics (Gilbert, 1989), sometimes referred to as ‘domain specificity’ (Buss, 2009; Nesse, 2005). They can be linked to over and/or under activity in any of these systems, the way they co-regulate each other, blend together and have matured. The threat and self-protection focused systems are designed to attract attention to, and tune in to detect and respond to, threats. There is a diversity of threat-based emotions such as anger, anxiety, and disgust and defensive

behaviors such as fight, flight, submission, and freeze. In general, threat-based defenses are also designed to be rapidly activated and to turn off positive affect and interest. Shame experiences seem to activate and strengthen this system by creating a sense of a threatened social self, where one is perceived as vulnerable, defective, and others are seen as critical, judgmental, emotionally unavailable or even dangerous (Gilbert, 2009; Matos, Duarte & Pinto-Gouveia, 2017).

The *drive-resource acquisition system* is responsible to give us positive feelings (pleasure and excitement) that guide and motivate us to seek out and secure resources that increase our chances of survival and prosperity (Depue & Moronne-Strupinsky, 2005; Gilbert, 2009). This system is particularly important in competitive behavior. The socially anxious individuals tend to overuse this system, feeling that they have to impress others to be accepted. The soothing, and affiliative focused system is designed to enable states of quiescence and peacefulness when individuals are no longer threat-focused or seeking out and competing for resources. Over time, this system has been adapted for some of the functions of affiliative behavior (Depue & Morrone-Strupinsky, 2005; Gilbert, 2009). The ability to feel socially safe without any pressure to compete or impress seems to be problematic for socially anxious people, that can get caught in the interaction between the drive and the threat systems, partly because they come to social relationships as a competitive effort as opposed to an affiliative one (Gilbert, 2001; Gilbert & Trower, 1990, 2001). In contrast, individuals who come from a primarily affiliative background are not only more socially confident but are likely to orientate themselves to others in affiliative ways (Mikulincer & Shaver, 2007).

Social Anxiety and Submissive Behavior:

From a position of relative, unwanted inferiority there is an increased tendency to behave submissively (Gilbert, 2000). Therefore, submissive behavior is a basic defensive strategy common to animals and humans (MacLean,1990; Gilbert, 2000), associated with dominant subordinate hierarchies (Allan & Gilbert, 1997). Socially anxious individuals, when in an inferior position to someone superior or threatening, they activate defensive information processing strategies that lead to a tendency towards self-blame and to the adoption of submissive and escape behaviors (Gilbert, 2000).

Submissiveness can be signaled in many ways, such as avoiding eye contact or not starting conversations, not expressing feelings of anger or not defending oneself against other's criticism (Allan & Gilbert, 1997; Gilbert, 2000). In all species, there are different forms of competition. One of the mechanisms for regulating conflict is, of course, submissive behavior.

Submissive behaviors evolved as fundamental social behaviors which facilitated control over aggression and promote social cohesion (Gilbert, 2014a).

Socially anxious individuals can find it very difficult not to operate in a competitive or hierarchical frame of mind in which they feel judged on their social performances by more dominant or confident others and at risk for put-down or rejetion. However, such a frame of mind can automatically prime submissive behaviors in socially anxious. Such behaviors appear not to stimulate the positive affects in other people: and the anxious person knows this. So various of the inhibitions of SA, such as not speaking much and not looking, are automatic efforts to control arousal and signal no threat to others. Most theories of SA do not see these behaviors as automatic arousal control efforts but rather as safety behaviors (Gilbert, 2001). The SA model highlight the role of defensive coping strategies and harm-limiting behaviors in potentially embarrassing situations. Such behaviors may include submission or efforts to go unnoticed, withdrawn, which maintains fear and does not allow modification of negative beliefs (Clark, 2001; Clark & Wells 1995).

Social Anxiety and Shame:

The fear of being unattractive takes us into the domain of shame. There are many ways in which shame can be defined but generally, it is associated with a range of different processes. The first is related to thoughts and feelings about how one exists in the minds of others, external shame (Gilbert, 1997, 1998). In this specific evaluation of how the self exists in the mind of the others, the attention is focused externally and the behavior might be orientated towards trying to positively influence how others see the self, by appeasing, submitting or displaying desirable impact (Gilbert, 1992, 1998, 2002). Secondly, shame can be internalized in a way that one may start shaming oneself, by perceiving and evaluating the self in the same way others have, as being worthless, inadequate, inferior, defective, rejectable and globally self-condemning, internal shame (Gilbert, 1998, 2002; Mikulincer and Shaver, 2005). There is, therefore, an intimate link between external and internal shame, since they are both important for social functioning, and shame experiences typically involve their interaction, fuelling one another (Matos, Pinto-Gouveia, & Duarte, 2013).

Shame and SA seem to share a considerable part of the processes that underlie them (Gilbert, 1998). Indeed, both shame and SA are self-conscious emotions (Gilbert, Allan, & Pehl, 1994; Gilbert & Trower, 2001). According to social ranking theory, emotions and mood states are significantly influenced by perceptions of social status. Therefore, it is argued that shame and SA, are related to social ranking dynamics (Gilbert, 2000). Among the characteristics shared is

the view of the self as the inferior, unattractive and undesired position of social rank, self-focused attention, concern about how one is seen by others and the tendency to adopt defensive, submissive and nonassertive behaviors (Gilbert, 1998, 2000, Gilbert & McGuire, 1998). In essence, both SA and shame research overlap considerably to the extent that they include as studies of submissive strategies in contexts where people feel vulnerable to the loss of social standing, attractiveness, rejection and/or criticism. Moreover, the adaptive functions of submissive behavior seem to have been carried over into shame (Gilbert, 1989, 1992; Keltner and Harker, 1998).

Individuals with high levels of self-criticism engage in relentless self-scrutiny and harsh self-evaluations in their attempts to avoid failure and meet their high personal ideals. These individuals have extreme fears of disapproval, criticism, and rejection in the eyes of others. Gilbert suggested that internal shame is linked to self-criticism, and distinguished between different types and functions of self-criticism. Self-criticism can arise from efforts to improve the self and maintain strict standards or, alternatively, from efforts to punish, denigrate, and destroy the self (Gilbert, Clarke, Hempel, Miles & Irons, 2004). Indeed, research provides support for the notion that people who are raised in controlling and critical environments develop a harsh, critical way of relating to themselves (Kopala-Sibley & Zuroff, 2014). Faced with painful circumstances of life, people with high levels of shame tend to self-criticize in a sense of self-correcting or punishment, and it is often difficult for them to develop feelings of reassurance, caring, and understanding (Gilbert et al., 2004; Neff, 2003, 2009).

Cox, Fleet, and Stein (2004) study´s found that self-criticism was high in SA, Therefore, some elements of negative self-evaluation, high self-monitoring in relationship to others, and tendencies to self-blame in conflict situations may be fuelled by nonconscious submissive strategies to cope with potentially hostile, rejecting others. Therefore, it is possible that subordinate strategies, once activated in individuals, will then organize attentional, emotional, cognitive, and self-processing systems to facilitate efficient subordinate strategies, which include anxious attention to others, a highly internal self-monitoring attentional orientation, social inhibition, and anger suppression.

Social Anxiety and Early experiences of shame

As a socially shaped and threatening experience, shame can occur early in life. Shame arises from our early interactions with significant others and continue throughout our lives, developing later than primary emotions (anger, fear, joy) as it depends of certain unfolding mental

abilities (Gilbert, 2002; Lewis, 1992, 1995; Tangney & Fischer, 1995) that include a form of self-awareness, a theory of mind of '*how we exist in the minds of others*' and our ability to imagine a self as thought about by others (Gilbert, 2002, 2003).

These shaming and devaluing experiences seem to have major effects on brain psychobiological maturation and have been associated not only to proneness to shame but also to vulnerability to psychopathology. (Schore, 1998, 2001; Tangney et al., 1995). According to Gilbert (2003), these early rearing experiences become the foundations for self-beliefs. In a recent study, Pinto-Gouveia and Matos (2011) suggest that early shame experiences are recorded in autobiographical memory as powerful and distressing emotional memories that can become central to a person's identity and the life story and this may be related to increased levels of psychopathology. The internalization of these experiences can result in seeing and evaluating the self in the same way others have, that it is flawed, inferior, rejectable and globally self-condemning (negative internal models of self and others) (Gilbert, 1998, 2002; Mikulincer & Shaver, 2005).

In addition, recent research has found that shame memories from childhood and adolescence were associated with shame feelings in adulthood (Matos & Pinto-Gouveia, 2010; Matos & Pinto-Gouveia, 2011; Pinto-Gouveia & Matos, 2011). A possible difference in the phenomenology of shame experiences may be related to who the *shamer* was- to who shamed the self in a particular event. The few studies that have explored this connection between shame and attachment found that insecurely attached individuals and those with fearful and preoccupied attachment styles and attachment anxiety or avoidance reported higher shame levels, while secure attachment was found to be negatively associated with shame (e.g. Gross, & Hansen, 2000; Lopez, Gover, Leskela, Sauer, Schirmer, & Wyssmann, 1997; Wei, Shaffer, Young, & Zakalik, 2005; Wells, 1996). So, its expected that shame memories involving attachment figures would differ from those involving others in their association with psychological difficulties (Matos & Pinto-Gouveia, 2014).

Research as shown that early experiences with caregivers, such as childhood maltreatment (e.g. Bandelow et al., 2004; Bruce et al., 2012; Knappe, Beesdo-Baum, Fehm, Lieb & Wittchen, 2012; Kuo et al., 2011; Simon et al., 2009), adverse experiences of subordination and threat (Cunha et al., 2015), emotional abuse (Simon et al., 2009), parental over-control (e.g. Arrindell, Emmelkamp, Monsma & Brilman, 1983; Lewis-Morrarty et al., 2012), insecure attachment (Ollendick &Benoit, 2011) not feeling valued and relaxed in early interactions with parents (Cunha et. al., 2015), lack of warmth or affection, and criticism and shame tactics in the

context of parental style (e.g. Arrindell et al., 1983; Bögels & Perotti, 2010; Roças, 2014) predicted SA. Particularly, childhood maltreatment (Shahar Shahar, Doron, & Szepsenwol, 2014) and a lack of early memories of warmth and safeness (Matos et al., 2013), has a direct effect in shame, particularly in external shame (e.g. Roças, 2014), inducing feelings of being seen negatively by others.

On the contrary, early memories of warmth and safeness are associated with more soothing affects which provide the deactivation of the threat system (e.g. Caciopo et al., 2000; Masten, 2001; Porges, 2007) buffering the effects of early shame experiences on negative affect (Matos et al., 2013) and being negative associated with psychopathology (e.g. Kelly & Dupasquier, 2016; Matos, Pinto-Gouveia & Duarte, 2013; Neff & McGeHee, 2010; Richter, Gilbert & McEwan, 2009). Thus, the experience of safeness and soothing are not just related to the absence of threat but also to the presence of specific affiliative signals and experiences that may become an important emotional regulator later in life (Baldwin & Dandeneau, 2005).

Compassion and Submissive Compassion:

According to Dalai Lama (1995), compassion is a sensitivity to suffering in self and others, with a commitment to try to alleviate and prevent it. Compassion involves raising awareness of the suffering of others, adopting an open, sensitive and understanding stance, actively seeking for its relief. Evolutionary models of compassion locate some of its origins in the evolution of attachment and nurturing behavior (Gilbert, 2009). General altruism, taking an interest in others, being helpful supports prosocial behavior (e.g. Penner, Dovidio, Piliavin, & Schroeder, 2005). Given that human status and acceptability often depend on appearing attractive and helpful to others (e.g. Barkow, 1989; Gilbert, Allan, & Price, 1997), caring behavior can be used as a means to develop a good reputation and status such as likeability and helpfulness in the minds of others (e.g. Buss, 2003; Phillips, Barnard, Ferguson, & Reader, 2008), Developing a reputation of being altruistic could have been one of the compassion's evolution drivers (Goetz, Keltner & Simon-Thomas, 2010). So, one source of caring motivation may be a form of appeasing and submissive behavior. (Catarino, Gilbert, McEwan, & Baião, 2014). Nonetheless, this form of caring and trying to be compassionate seems to be problematic in a way that genuine compassion is not. Gilbert (2009) defined submissive compassion as "caring that functions for selfadvancing or protective needs, such as wanting to please others, to be liked or thought well of and to avoid rejection," whereas genuine compassion focuses on the needs of others and on the desire to help them. While some caring behaviors may be consciously manipulated, to court the support of

others, particularly from dominant individuals, may also be a submissive tactic in individuals who feel at risk of rejection or whose learning histories have been overly focused on the needs of others to the exclusion of their own needs (Catarino et al., 2014).

In Catarino et al., (2014) study´s submissive compassion was highly positively correlated with caring shame, caring guilt, selfimage goals, submissive behavior, fear of expressing compassion to others, depression, anxiety, and stress. In contrast, no correlations between submissive compassion, and compassionate goals, compassion for others, or social comparison were found. Likewise, in Gilbert, Catarino, Sousa, Ceresatto, Moore & Basran (2017) study´s submissive compassion had a small negative correlations with the social skills subscale on the empathy quotient and was unrelated to other subscales. The competitive perspective taking was positively correlated with cognitive empathy on the emotional quotient but not emotional reactivity or social skills. In addition, these findings suggest that the higher peoples cognitive perspective taking, the more they are able to recognise their ability to use empathy for beneficial reasons.

However, the motives for caring behavior and the resources people have available to be caring are central to its impact on wellbeing. In a review, Vitaliano, Zhang, and Scanlan (2003) found that caring can be linked to detriments to health and well-being especially if people felt obligated to provide care with few resources to cope (Catarino et al., 2014).

The present study

According to the literature revision, SA and shame share the concern about how one is seen by others and the tendency to adopt submissive behaviors. Some caring behaviors may also be a submissive tactic in individuals who feel at risk of rejection. Recent research indicates that there is a direct effect of shame on SA (e.g. Caiado & Salvador, 2019). Likewise, research shows that there are individual differences in compassion motivation and competencies of compassion and that submissive compassion is highly positively correlated with caring shame, caring guilt, and submissive behavior (e.g. Catarino et al., 2014; Gilbert et al., 2017). However, there are no studies relating SA to sumissive compasssion. To the best of our knowledge, there are no studies concerning the memories of the traumatic impact of early shame experiences in childhood and adolescence, SA and submissive compassion and how these variables relate to each other. Therefore, this motivation is on the basis of this study.

This study's aim was to explore the mediating role of SA on the relationship between the memories of the traumatic impact of early shame experiences on submissive

compassion. It was also his aim to explore the moderating role of EMWS with parents and peers on the relationship between the memories of the traumatic impact of early shame experiences and submissive compassion on this relationship and on this relationship mediated by SA. Specifically, we expected that the memories of the traumatic impact of early shame experiences, submissive compassion, and SA would be negatively correlated with EMWS with parents and peers (H1), and positively correlated with each other (H2). In addition, it was predicted that the memories of the traumatic impact of early shame experiences would be a significant predictor of submissive compassion (H3) and that this effect would be mediated by social anxiety (H4). Furthermore, the effect of the memories of the traumatic impact of early shame experiences on social anxiety and submissive compassion would be moderated by EMWS with parents and peers (H5).

Method

Sample

A cross-sectional study with an adult portuguese population was carried out to achieve the aforementioned objectives. Exclusion criteria were: age below 18 years old and superior to 60 years old, foreign nationality and evidence of random answers in the questionnaires. Initially, two different samples (students and general population) were collected to obtain a representative community sample.

Student Sample

This sample consisted of 357 college students of which 206 (57.7%) were female and 151 (42.3 %) were male. The participants mean age was 20.54 (*DP* = 1.62) and the average number of years of schooling was 13,1 (*DP* = 1.49). The majority of the students were not having psychological counseling at the moment of filling (93.6%). There were statistically significant differences in age (t (354) = -3.042, $p < .05$) and in school years (t (332,580) = 2.015, $p < .05$) in relation to gender. Cohen's d revealed to be small for school years (d =.2) and for age (d =.3).

General Population Sample

This sample consisted of 158 participants, of which 92 (58.2%) were female and 66 (41.8%) male. The participants mean age was 42,83 (*DP* = 9.80). The average years of schooling were 13 *(M* = 12.66; *DP* = 3.00). The majority of the population had a medium socio-economic level (53.8%),

29.7% low and 14.6% high. The majority of the population (95.6%) participants were not having psychological counseling at the momento of filling. There were statistically diferences regarding age ($t_{(117,341)} = 2.19$, $p < 0.05$) but not in school years ($t_{(153)} = .30$, $p = .77$) or socioeconomic level ($\chi 2_{(2)} = 2.98$, $p = .23$) in relation to gender. Cohen's d revealed to be small for age ($d = .4$).

Measures

A sociodemographic data questionnaire was administered in order to obtain information regarding age, gender, number of years of schooling successfully completed, occupation city of origin and psychological counseling. In order to achieve the aforementioned objectives, the following self-reported instruments were administered in both samples:

The *Impact of Event Scale – Revised* (IES-R; Weiss & Marmar, 1997; Portuguese version by Matos, Pinto-Gouveia & Martins, 2011) is a 22-item self-report questionnaire designed to assess current distress for any 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 an acceptable test-retest reliability, convergent and divergent validity. In the present study, the IES-R showed a very good internal consistency both in the student ($\alpha = .94$) and in the non-student sample ($\alpha = .96$).

Motives for Compassion Scale (MCS: Catarino, Gilbert, Mcewan & Baiao, 2014; Portuguese Version: Gaspar & Castilho, 2014). The scale 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 5-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 behavior. 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 ($\alpha = .89$ in both studies), convergent validity and temporal reliability ($r = .93$) and revealed good adjustment indices. Therefore, this measure has shown to be a useful and reliable tool both in the assessment

and clinical research for submissive compassion. In the present study, the *MCS* presented an excellent internal consistency with a Cronbach's alpha of .90 in the student sample and .92 in the general population sample.

The *Early Memories of Warmth and Safeness Scale* (EMWS-Parents; Caiado & Salavador, 2019) is a 21-item self-report scale that assesses the adult's memories of early positive emotional experiences, (warmth and safeness) with parents, that was adapted form the otriginal version of the EMWSS (Richter et al.,2009; Portuguese version by Matos, Pinto-Gouveia & Duarte, 2014) that assessed the presence of these memories in general (e.g. *I felt secure and safe with my parents* instead of *I felt secure and safe*). Each item is rated in a 5-point Likert scale (0 = *No, never*, 4 = *Yes, most of the time*) in which higher scores indicate the presence of more childhood warmth and safeness memories with parents. Both the original version and the Portuguese version have a single-factor solution and presented very good psychometric properties, with an excellent internal consistency for the students (α = .95) and the general population (α= .97) samples, test-retest reliability indices (r = .91 and .92, respectively) and adequate convergent and divergent validity. This version, in the present study, showed an excellent internal consistency both in the student (α = .97) and in the non-student sample (α = .98).

The *Early Memories of Warmth and Safeness Scale With Peers* (EMWSS-P; Ferreira et al., 2018) is a 12-item self-report scale, based on the original EMWSS (Richter et al., 2009) in which the original content of the EMWSS's items was modified to assess the specific dimension of adult's memories of early positive peer-related experiences. Each item is rated in a 5-point Likert scale *(0 = No, never, 4 = Yes, most the time)* in which higher scores indicate the presence of more childhood warmth and safeness memories related to peer relationships. This scale has a single-factor solution and presented a very good internal reliability with an excellent internal consistency (α = .97), convergent and divergent validity. In the present study, it showed excellent internal consistency both in the student (α = .95) and in the non-student sample (α = .96).

The *Social Interaction Anxiety Scale* (SIAS; Mattick & Clarke, 1998; portuguese version by Pinto-Gouveia & Salvador, 2001) evaluates the social anxiety felt in the interaction with others. It is a measure composed of 19 items, classified in a 5-point Likert scale, ranging from 0 (*Not at all*) and 4 (*extremely*). Higher values are associated with higher levels of anxiety in situations of social interaction. The original version (Mattick & Clarke, 1998) presented a strong internal consistency, with a Cronbach's alpha of .94 in a community sample and .93 in a clinical sample. The Portuguese version (Pinto-Gouveia & Salvador, 2001) also presented good

psychometric characteristics, with a Cronbach alpha of .90 and a test-retest correlation coefficient of .77. Likewise, it presented a good concurrent validity. The cutoff point for considering the presence of social anxiety symptomatology was 35.95. In the present investigation, the alpha of the student and non-student sample was .93 and .93, respectively.

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 25 institutions of higher education in mainland Portugal, mainly in Coimbra, (47 different courses) and the sample of non-students was collected through the snowball method. In both samples, participants belonged to different districts from the North, Center, and South of the country and from the Portuguese Islands. All subjects answered a set of self-reported questionnaires and a sociodemographic data questionnaire in paper format. Prior to the application of the research protocol, informed consent was obtained from the participants, who were informed about the study's confidentiality and their voluntary participation. The research protocol, completed in an average time of 40 minutes, had two counterbalanced versions to prevent effects of response contamination and fatigue effects.

Data Analysis

Data analysis were conducted using the SPSS PROGRAM (Statistical Package for the Social Sciences version 22; Armonk, NY: IBM Corp.) for the Windows and the computation tool PROCESS Software version 3.3 for the SPSS. To assess adherence to normality the Kolmogorov-Smirnov test was used and outlier's analysis was performed by graphing the results (box diagrams). Descriptive statistics were performed to analyze demographic variables and mean scores in all variables under study as well as the deviations by asymmetry (skewness) and tailedness (kurtosis). Multicollinearity was also examined by inspecting the tolerance and variance inflation factor (VIF < 5) (Kline, 2005). Independent samples t-tests for contínuous variables and chi-square for categorical variables were used to test gender differences in sociodemographic variables (Field, 2013). The interpretation of the effect size parameter was based on Cohen's (1988) criteria, where Cohen's *d* values around .20 are considered small, .50 medium and .80 large. The socioeconomic level (low, medium and high) was distinguished based on Simões' classification (1994). For each instrument and respective factors, internal consistency

indices were calculated, considering Cronbach's values of less than .59 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 correlations coefficients were performed to explore the relationships between the variables under study and sociodemographic variables and analyzing the associations between variables, according to the hypotheses under study. The assessment of the magnitude of correlations was based on Cohen´s (1992) criteria, where a correlation coefficient of .10 reveals a small effect size .30 moderate and .50 a large effect size. To examine whether the hypothesized direct and indirect effects of the memories of the traumatic impact of early shame experiences (independent variable - IV) on submissive compassion (dependent variable - DV) through SA (mediator - M) were moderated by EMWS with parents and peers conditional process analyses were conducted with PROCESS computation tool. In the absence of significant interactions, the model was re-estimated. The significance of the direct, indirect and total effects was assessed by the Bootstrap resampling method (using 10000 re-samples). This procedure was used to create 95% bias-corrected confidence intervals. The effects were considered as significantly different from zero ($p < .05$) if zero was outside of the upper and lower bounds of the 95% bias-corrected confidence interval (Hayes & Preacher, 2010; Kline, 2005).

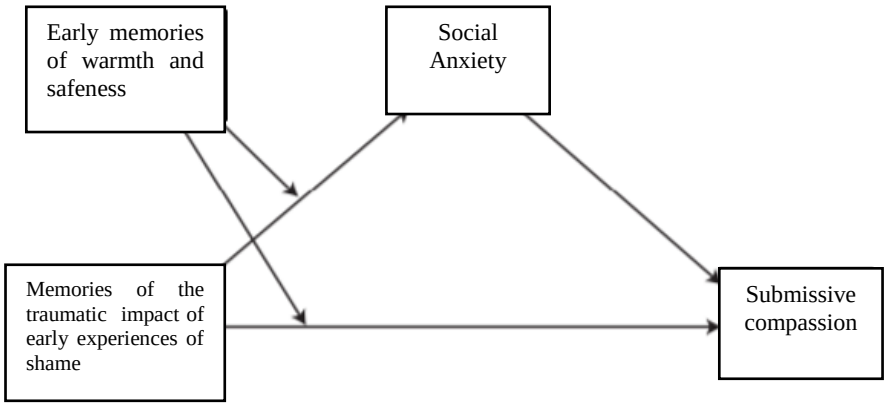


Figure 1*- Conceptual diagram of the proposed moderated mediation model (model 8 in Hayes, 2018).*

Results

Preliminary Data Analysis

No severe violations to the normal distribution of the variables were found, with values of kurtosis and skewness within normal values in the student and general population sample. The missing values were filled using SPSS PROGRAM (transform; replace missing values). There were no multicollinearity problems among variables in neither sample and although there were outliers, it was decided not to eliminate them, to insure ecological validity. However, when differences between these two samples in the study variables were investigated (t student for independent samples), significant differences in age and in several variables under study were revealed (SA and submissive compassion), with large values of Cohen's d. For this reason, we chose to treat the samples independently to explore whether the established hypotheses would be verified in both samples. The correlations of gender and age with all other variables under study were tested. These correlations, in the student and general population samples, did not reach statistical significance. Therefore, once all these correlations were low or very low, it was decided not to control the effect of these demographic variables in the subsequently tested models.

Table 1 presents the descriptive statistics and the differences between students and general population samples in the variables under study. There were statistically differences between the two samples, except in the early memories of warmth and safeness with parents and peers. In the student sample, all the variables obtained higher scores than the general population. After analyzing the differences between the populations, it was decided to separate the two samples, since they differed significantly in some variables under study (SA and submissive compassion), with large Cohen d's, .81 and .69, respectively.

Table 1.

Differences between student and general populaion samples

	Variables	Student sample (N = 357) *M (DP)*	General Population sample (N = 158) *M (DP)*	*t*	*d*
1	SIAS	33.12 (15.17)	20.38 (13.57)	8.63***	.81.
2	IES_R	33.15 (19.01)	28.45 (20,13)	2.36*	.22
3	MCS	16.76 (8.89)	9.61 (8.68)	7.29***	.69
4	EMWS_PP	101.39 (22.51)	100.03 (23.41).52		

*Note: IES_R = Impact of Event Scale-Revised; SIAS = Social Interaction Anxiety Scale; MCS = Motives for Compassion Scale; EMWS_PP = Early Memories of Warmth and Safeness Scale with Parents and Peers. * p < .05; ** p < .01; *** p < .001*

Figure 2 presents descriptive statistics and the differences between students and general population samples concerning: who was the shamer in the experiences of shame remebered by the subjects. In both samples, the Friends/Colleagues represented the majority of the shamers.

Figure 2.

Descriptive statistics and the differences between samples concerning the shamers in the experiences of shame for the student (left) and general population (right) samples

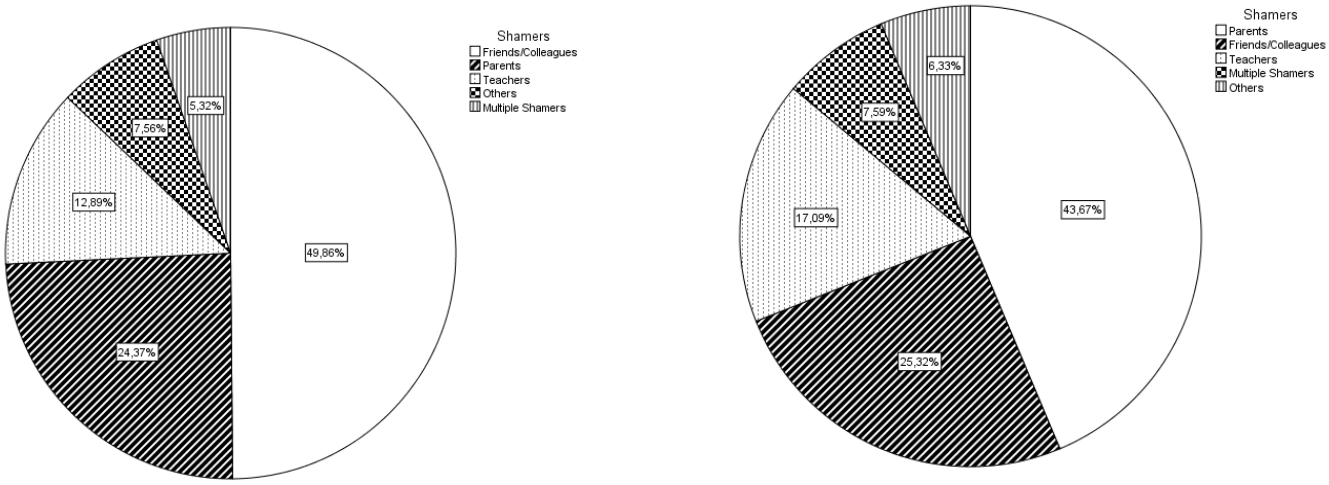
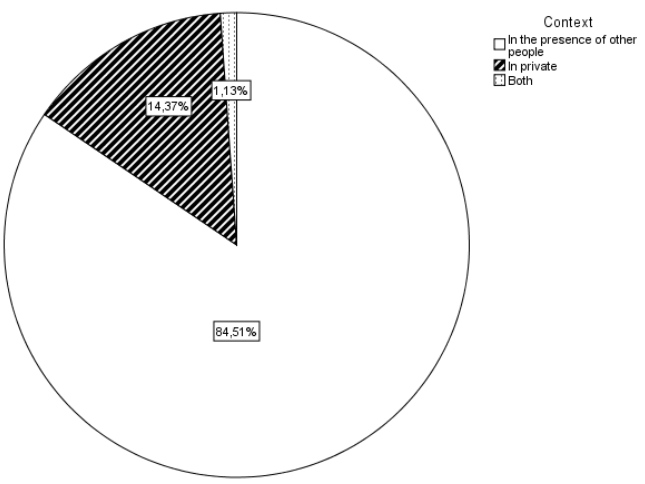
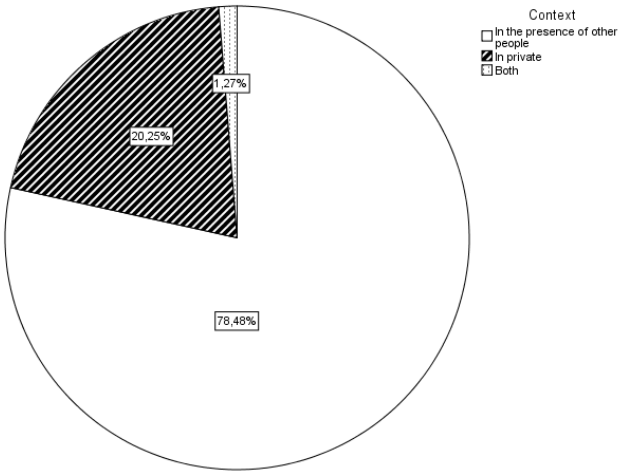


Figure 3 presents descriptive statistics and the differences between students and general population samples concerning: the context of the memory in which the experiences of shame remebered by the subjects occorred. In both samples, the majority of the experiences of shame ocorred in the presence of others.

Figure 3.

Descriptive statistics and the differences between samples concerning the context in which the experiences of shame occorred in the student (left) and general population (right) samples





Correlations

Table 2 presents the Pearson's correlations between the variables under study and the socio-demographic variables age and gender for both samples. In both samples, the analysis revealed that EMWS with parents and peers were negatively and significantly correlated with the memories of the traumatic impact of early shame experiences and SA presening moderate correlations, and submissive compassion presenting small correlations. On the other hand, SA, submissive compassion and the memories of the traumatic impact of early shame experiences were positively and significantly correlated with each other, presenting moderate and large correlations.

Table 2.

Pearson´s Correlations for the variables under study for the student and general population sample

	Student sample (N = 357)					
Variables	1	2	3	4	5	6
1 Gender	-					
2 Age	.16**	-				
3 IES_R	-.10	-.01	-			
4 EMWS_PP	-.03	-.07	-.30**	-		
5 SIAS	-.02	-.09	.45**	-.32**	-	
6 MCS	.06	-.07	.36**	-.12*	.45**	-

General Population sample (N = 158)							
Variables		1	2	3	4	5	6
1	Gender	-					
2	Age	-.18*	-				
3	IES_R	-.07	-.03	-			
4	EMWS_PP	-.02	-.02	-.34**	-		
5	SIAS	.05	-.14	.49**	-.31**	-	
6	MCS	.15	-.05	.35**	-.16*	.49**	-

*Note: IES_R = Impact of Event Scale-Revised; SIAS = Social Interaction Anxiety Scale; MCS = Motives for Compassion Scale; EMWS_PP = Early Memories of Warmth and Safeness Scale with Parents and Peers. * p < .05; ** p < .01; *** p < .001*

Moderated Mediation Analyzes for the student sample

A moderated mediation model was estimated to examine whether the memories of the traumatic impact of early shame experiences during childhood and adolescence were associated with submissive compassion through SA and whether this direct and indirect effect was moderated by EMWS with parents and peers. The conceptual diagram of the moderated mediation model (model 8, Hayes, 2018) is presented in Figure 1. The moderated mediation analysis revealed absense of a significant interaction in the path from the memories of the traumatic impact of early shame experiences to submissive compassion, therefore this path was not moderated by EMWS with parents and peers. Consequently, the effect of the moderating was removed and the model was re-estimated (model 7 in Hayes, 2018). As presented in Figure 4, the EMWS with parents and peers were negatively and significantly associated with SA. On the other hand, the memories of the traumatic impact of early shame experiences were positively and significantly associated with SA. Both explain 24.64 % of SA variance. On the other hand, the memories of the memories of the traumatic early shame experiences and SA were positively and significantly associated with submissive compassion, explaining 23.63% of its variance.

As presented in Table 3, there was a significant direct effect of the memories of the traumatic impact of early shame experiences on submissive compassion.

Table 3.

Summary of the direct effects analyzis for the model represented in Figure 4

Direct effects	***b***	***SE***	***t***	***p***	***95%IC***
IES_R → MCS	.09	.02	3.69	< .001	.04/.14

Note. b = non-standardized regression coeficiente; SE = standard error; p = statistical significance; IC = Confidence Interval; IES_R = Impact of Event Scale-Revised; SIAS = Social Interaction Anxiety Scale; MCS = Motives for Compassion Scale. p < .05; ** p < .01; *** p < .001*

Futhermore, there was a significant indirect effect of the memories of the traumatic impact of early shame experiences on submissive compassion through SA, as shown in Table 4.

Table 4.

Summary of the indirect effects analyzis for the model represented in Figure 4

Indirect effects	***b***	***SE***	***95%IC***
IES_R→ SIAS→ MCS (low levels of EMWS_PP)	.05	.01	.03/.08
IES_R→ SIAS→ MCS (medium levels of EMWS_PP)	.07	.01	.05/.10
IES_R→ SIAS→ MCS (high levels of EMWS_PP)	.08	.02	.05/.12

*Note. b = non-standardized regression coeficiente; SE = standard error; p = statistical significance; IC = Confidence Interval: IES_R = Impact of Event Scale-Revised; SIAS = Social Interaction Anxiety Scale; MCS = Motives for Compassion Scale; EMWS_PP = Early Memories of Warmth and Safeness Scale with Parents and Peers. * p < .05; ** p < .01; *** p < .001*

In adition, the interaction between the memories of the traumatic impact of early shame experiences and SA was significant, indicating a moderation by EMWS with parents and peers, as presented in Table 5. However, there was no moderated mediation (index of moderated mediation = .00, SE = .00, 95%IC = -.00/.00).

Table 5.

Summary of the interactions analyzis for the model represented in Figure 4

Interactions	*b*	*SE*	*t*	*p*	*95%IC*
IES_R x EMWS_PP (SIAS)	.00	.00	2.09	.04	-.00/-01

*Note. b = non-standardized regression coeficiente; SE = standard error; p = statistical significance; IC = Confidence Interval: IES_R = Impact of Event Scale-Revised; SIAS = Social Interaction Anxiety Scale; EMWS_PP = Early Memories of Warmth and Safeness Scale with Parents and Peers. * p < .05; ** p < .01; *** p < .001*

In sum, the results showed that the memories of the traumatic impact of early shame experiences were significantly associated with submissive compassion, with an indirect effect through SA. Futhermore, there was a direct effect of the memories of the traumatic impact of early shame experiences on submissive compassion. Ultimately, the results presented a moderating effect of the EMWS with parents and peers between the memories of the traumatic impact of early shame experiences and SA, in the student sample.

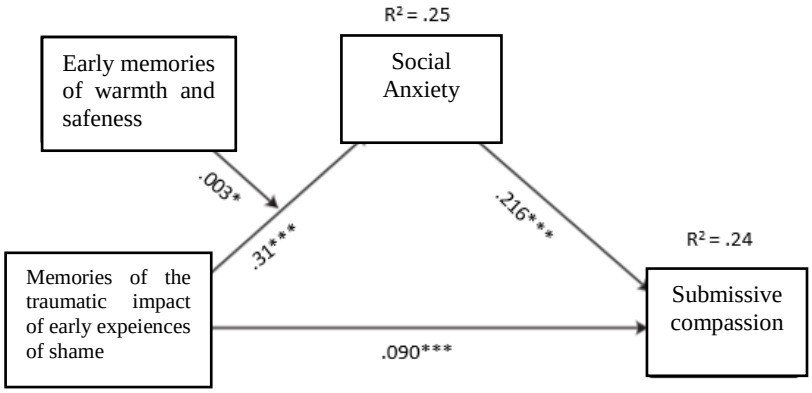


Figure 4*- Statistical diagram of the moderated mediation model for the possible influence of the early memories of warmth and safensess with parents and peers on the association between the memories of the traumatic impact of early shame experiences on submissive compassion and this association through social anxiety. Path values representt non-standard regression coefficients. * p < .05; ** p < .01; *** p < .001*

Moderated Mediation Analyzes for the general population sample

A moderated mediation model was estimated to examine whether the memories of the traumatic impact of early shame experiences during childhood and adolescence were associated with submissive compassion through SA and whether this direct and indirect effect was

moderated by EMWS with parents and peers. The conceptual diagram of the moderation mediation model is presented in Figure 1. The moderated mediation analysis revealed absense of a significant interaction in the path from the memories of the traumatic impact of early shame experiences to SA, therefore this path was not moderated by EMWS with parents and peers. Consequently, the effect of the moderating was removed and the model was re-estimated (model 5 in Hayes, 2018). As presented in Figure 5, the memories of the traumatic impact of early shame experiences were significant to explain the variance of SA, explaining 23.89 % of its variance. Futhermore, the memories of the traumatic impact early shame experiences and SA were positively and significantly associated with submissive compassion. On the contrary, the EMWS with parents and peers and non-significantly associated with submissive compassion. All the variables explained 28,96% of submissive compassion variance.

As presented in Table 6, there was a significant direct effect of the memories of the traumatic impact of early shame experiences on submissive compassion, in medium and high levels of EMWS with parents and peers but not in low levels, in which the memories of the traumatic impact of early shame experiences no longer had an impact on submissive compassion.

Table 6.

Summary of the direct effects analyzis for the model represented in Figure 5

Direct effects	**b**	**SE**	**t**	**p**	**95%IC**
IES_R→ MCS (low levels of EMWS_PP)	.00	.05	.00	.99	- .09/.09
IES_R→ MCS (medium EMWS_PP)	.09	.04	2.34	.02	.01/.17
IES_R→ MCS (high levels of EMWS_PP)	.15	.05	3.14	.00	.06/.25

Note. b = non-standardized regression coeficiente; SE = standard error; p = statistical significance; IC = Confidence Interval: IES_R = Impact of Event Scale-Revised; SIAS = Social Interaction Anxiety Scale; MCS = Motives for Compassion Scale; EMWS_PP = Early Memories of Warmth and Safeness Scale with Parents and Peers.
** p < .05; ** p < .01; *** p < .001*

In adition, there was a significant indirect effect of the memories of the traumatic impact of early shame experiences on submissive compassion through SA, as shown in Table 7.

Table 7.

Summary of the indirect effects analyzes for the model represented in Figure 5

Indirect effects	***b***	***SE***	***95%IC***
IES_R→ SIAS→ MCS	.09	.02	.05/.14

*Note. b = non-standardized regression coeficiente; SE = standard error; p = statistical significance; IC = Confidence Interval: IES_R = Impact of Event Scale-Revised; SIAS = Social Interaction Anxiety Scale; MCS = Motives for Compassion Scale; EMWS_PP = Early Memories of Warmth and Safeness Scale with Parents and Peers. * p < .05; ** p < .01; *** p < .001*

Futhermore, the interaction between the memories of the traumatic impact of early shame experiences and submissive compassion was significant, indicating a moderation by EMWS with parents and peers on the relationship between the memories of the traumatic impact of early shame experiences and submissive compassion, as presented in Table 8.

Table 8.

Summary of the interactions analyzes for the model represented in Figure 5

Interactions	***b***	***SE***	***t***	***p***	***95%IC***
IES_R x EMWS_PP (MCS)	.00	.00	2.70	.01	.00/.02

*Note. b = non-standardized regression coeficiente; SE = standard error; p = statistical significance; IC = Confidence Interval: IES_R = Impact of Event Scale-Revised; SIAS = Social Interaction Anxiety Scale; MCS = Motives for Compassion Scale; EMWS_PP = Early Memories of Warmth and Safeness Scale with Parents and Peers. * p < .05; ** p < .01; *** p < .001*

Lastly, the results presented that the memories of the traumatic impact of early shame experiences were significantly associated with submissive compassion, with an indirect effect through social anxiety. In adition, there was a direct effect of the memories of the traumatic impact of early experiences of shame on submissive compassion. Futhermore, the results showed a moderating effect of the EMWS with parents and peers on the association between the memories

of the traumatic impact of early shame experiences and submissive compassion, in the general population sample.

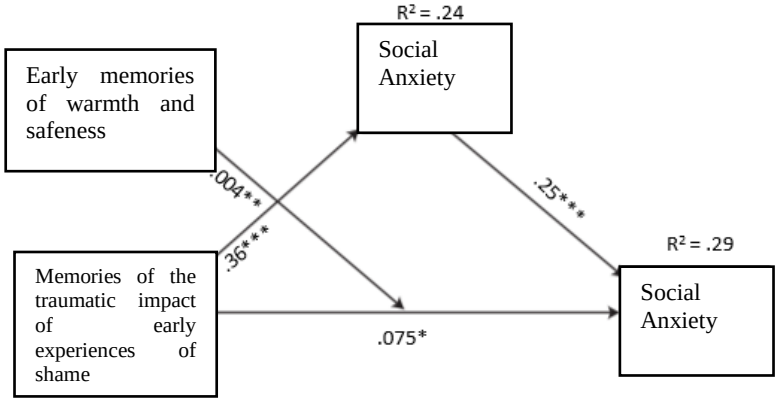


Figure 5- *Statistical diagram of the moderated mediation model for the possible influence of the early memories of warmth and safensess with parents and peers on the association between the memories of the traumatic impact of early shame experiences on submissive compassion, in the general population sample. Path values representt non-standard regression coefficients. * p < .05; ** p < .01; *** p < .001*

Discussion

Despite early traumatic shame experiences have been consistently pointed out as important factors in the development of a wide range of psychological disorders (e.g. Caldas, 2013; Cheung, Gilbert, & Irons, 2004; Gilbert, 2000; Garcia, 2013; Matos, Pinto-Gouveia, & Gilbert, 2012; Mills, 2003; Pinto-Gouveia & Matos, 2011), it is not entirely clear which mechanisms underlie this association. Given this and the fact that EMWS with parents and peers are associated with more soothing affects which provide the deactivation of the threat system (e.g. Cacioppo et al., 2000; Masten, 2001; Porges, 2007) buffering the effects of early shame experiences on negative affect (Matos et al., 2013) and being negative associated with psychopathology (e.g. Kelly & Dupasquier, 2016; Matos, Pinto-Gouveia & Duarte, 2013; Neff & McGeHee, 2010; Richter, Gilbert & McEwan, 2009) it is important to further investigate the impact of these experiences. Futhermore, socially anxious individuals can find it very difficult not to operate in a competitive or hierarchical frame of mind in which they feel judged and at risk of rejection (Gilbert, 2001). Several studies presented being socially attractive as an evolutionary strategy for gaining and maintaining social status, positive social relationships. and consequently to avoid being rejected by others (e.g. Barkow, 1989; Buss, 2004; Catarino et al.,2014; Gilbert,

Allan & Price, 1997). Nevertheless, to the best of our knowledge, there were no studies relating SA to submissive compassion. In this sense, the present study intended to contribute to the state of art by analyzing how the care and support behaviors provided to others underlie submissive compassion and its relationship with the memories of the traumatic impact of early shame experiences in childhood and adolescence, the mediating role of SA in this process and how EMWS with parents and peers could buffer this relationship.

As hypothesized (H1) the memories of the traumatic impact of early shame experiences, submissive compassion and SA were negatively correlated with EMWS with parents and peers (H1), in both samples. Therefore, the higher the levels of this variable the lower the levels of SA, submissive compassion and the memories of the traumatic impact of early shame experiences. These results are in line with previous studies that had found a negative relationship between EMWS and shame (e.g. Roças, 2014) and between EMWS and the memories of the traumatic impact of early shame experiences (e.g. Matos et al., 2015; Matos et al., 2013). Likewise, these results are in line with several authors that supported the importance of EMWS with parents and peers as a protective factor (e.g. Gilbert et al., 1996; Gross & Hansen, 2000; Richter et al., 2009; Tangney & Dearing, 2002), leading to lower leves of shame (e.g. Martin, 2006; Cacioppo et al., 2000; Cheng & Furnham, 2004; DeHart, Pelham, & Tennen, 2006; Gilbert, Baldwin, Irons, Baccus & Palmer, 2006). According to the evolutionary model, early positive social relationships operate through the safeness system, by promoting a sense of being loved, accepted, valued and chosen by others for important social roles, and thus, fostering feelings of safeness, connectedness and a sense of belonging (e.g. Baumeister & Leary, 1995; Bowlby, 1969, 1973; Gilbert, 2005, 2010; Gilbert et al., 2009). Therefore, given the over-activation of the threat system, socially anxious individuals are not available to engage in affiliative relationships with others.

On the other hand, as hypothesized, the memories of the traumatic impact of early shame experiences, submissive compassion and SA were positively correlated with each other (H2), in both samples. Previous studies have also found, the highly negative nature and impact of these experiences (e.g. Bennett et al., 2005; Gilbert, Allan, & Goss, 1996; Matos, Pinto-Gouveia, & Gilbert, 2011; Paulo, 2013), that shame has been associated with early traumatic and shameful experiences, increasing the vulnerability to a wide variety of psychological problems, including SA (e.g. Gilbert, 2000; Gilbert, 1999 ; Gilbert and Miles, 2000 , 2013; Roças, 2014), and also that the lack of early experiences of warmth and safeness directly predicted SA (e.g. Antunes, 2013; Bennett, 2005; Matos, Pinto-Gouveia, & Gilbert, 2012; Matos et al., 2013) in the context of parental style (e.g. Arrindell et al., 1983; Bögels & Perotti, 2010; Roças, 2014) and with peers,

(e.g. Blote, Miers, Heyne & Westenberg, 2015; Siegel, La Greca, & Harrison, 2009). Furthermore, research also has shown a positive association between the memories of the traumatic impact of early shame experiences and submissive behavior in adulthood (Pinto-Gouveia et al., 2012) and between submissive compassion and shame (Catarino et al., 2014). Despite the absence of research concerning how these variables are related to submissive compassion, we consider that these results are consistent with the evolutionary model. Early experiences based on the relationships established with attachment figures are central to emotional development, as is the construction of the perception of ourselves, others, and the world (e.g. Bernsten & Rubin, 2006; Matos &Pinto-Gouveia, 2009). According to Gilbert & Trower (2001), socially anxious individuals enter social situations in a competitive mode, given the over-activation of the threat system. These individuals tend to adopt submissive behaviors that have the function of preventing new experiences of shame and that possibly reduce the probability of an aversive response by others, related to the fear of not being accepted. In this sense, we hypothesize that submissive compassion arises as a submissive strategy to deal with social threats of rejection and/or humiliation of others.

As hypothesized, memories of the traumatic impact of early shame experiences revealed to be a significant predictor of submissive compassion (H3), in both samples. In the absence of studies concerning how these variables are related, we hypothesize that early shame experiences can function as traumatic memories as key to their identity and as turning points in their lives, tend to develop a sense of self as existing negatively in the eyes of the others. Therefore, resulting from early life experiences in which they felt neither cared nor safe, tend to develop the perception of the world as an insecure place, of others as not being available to give affection and care, and of the self as unwanted and defective in some way, feeling ashamed. Consequently, submissive compassion, as a strategy, seems to have the function of preventing new experiences of shame. These results also revealed that, as expected, this effect was mediated by social anxiety (H4), in both samples. Thus, it seems that part of the effect of memories of the traumatic impact of early shame experiences and submissive compassion is explained by the fear of negative evaluation, that is the core fear of social anxiety, that may have resulted from the same shame experiences Therefore, they tend to use submissive compassion as a strategy to reduce the discomfort related to the fear of not being accepted, considering the strategy of attacking the self, in the face of a potentially shame-inducing situation, the individuals recognize their action as shameful or as a personal failure, consequently they feel self-directed discontent, contempt and anger, increasing its impact (Elison et al., 2006). In addition, Gilbert, & Duarte (2011) study, presented that

sometimes individuals may present submissive compassion to others, meaning that they could be kind to others in order to be liked and avoid being rejected.

Futhermore, it was expected that the effect of the memories of the traumatic impact of early shame experiences on social anxiety and submissive compassion would be moderated by EMWS with parents and peers (H5). This hypothesis was corroborated and is supported by previous studies in which secure attachment was found to be negatively associated with shame (e.g. Gross, & Hansen, 2000; Matos & Pinto-Gouveia, 2014; Lopez, Gover, Leskela, Sauer, Schirmer, & Wyssmann, 1997; Wei, Shaffer, Young, & Zakalik, 2005; Wells, 1996) studies in which individuals who evoked more early positive memories shown to be less shame-prone (e.g. Gilbert et al., 1996; Matos, Pinto-Gouveia, & Duarte, 2012; Paulo, 2013), and studies that emphasizes the protective factor of EMWS with parents and peers, since shame was negatively predicted by these experiences (e.g. Gilbert et al., 1996; Gross & Hansen, 2000; Richter et al., 2009; Roças, 2014; Tangney & Dearing, 2002). Additionally, previous research has shown that EMWS with parents and peers can function as a promoter of emotional regulation and a more positive view of the self and others in general, thus acting as a protective factor of feelings of shame (e.g. Caiado & Salvador, 2019; Gross and Hansen, 2000; Richter et al., 2009; Roças, 2014; Tangney & Dearing, 2002). These results are also in line with recent evolutionary theories that state that early positive social relationships operate through the safeness system, by promoting a sense of being loved, accepted, valued and chosen by others for important social roles, and thus, fostering feelings of safeness, connectedness and a sense of belonging (e.g. Baumeister & Leary, 1995; Bowlby, 1969, 1973; Gilbert, 2005, 2010; Gilbert et al., 2009). However, these results were only partially corroborated. In fact, in the student sample, the EMWS with parents and peers only moderated the association between memories of the traumatic impact of early shame experiences and social anxiety. On the contrary, in the general population sample, the EMWS with parents and peers only moderated the direct association between the memories of the traumatic impact of early shame experiences and submissive compassion. Trying to make sense of this result, several hypotheses can be put forward. One possible explanation could be due to differences in samples; we hypothesize that the memories of the traumatic impact of early shame experiences could be more significant in the student sample, taking into account the temporal proximity of the memories during childhood and adolescence recalled by the individuals, and the use of submissive compassion to deal with fears of negative evaluation by peers in academic settings. Taking this into consideration, the moderating effect of EMWS with parents and peers could not have enough impact to buffer the effect of memories of the traumatic impact of early

shame experiences recalled. Furthermore, in the student sample, there was no moderated mediation and we hypothesize that this happened because, despite EMWS with parents and peers being a significant moderator in the association mentioned above, the coefficient of the interaction was small. On the other hand, in the general population sample, since the EMWS with parents and peers only moderated the direct effect of the memories of the traumatic impact of early shame experiences and submissive compassion we hypothesized that with the passage of time, the memories of the traumatic impact of early shame experiences seemed to have lost its impact, which can explain why the EMWS with parents and peers had the buffer effect on this relationship.

Clinical Implications

This present study points to several clinical implications related to the application of Compassion Focused Therapy (CFT; Gilbet, 2010) in socially anxious individuals. This training involves specific activities designed to develop compassionate attributes and competencies, to foster affect regulation. According to Gilbert and Procter (2006), compassion allows emotional resilience, since it deactivates the threat system, focused on feelings of insecurity and defense, and activates the care delivery system associated with feelings of security and attachment. Given the sensitivity to social threat, high levels of shame and the maladaptive strategies used by socially anxious individuals to deal with this feeling, a therapeutic approach based on compassion seem to be a relevant therapeutic strategy that could lead to significant changes. Particularly, therapy should articulate the importance of stimulating the soothing system that could be underdeveloped due to the lack of early experiences of warmth and safeness, while the threat system is overdeveloped. Thus, therapeutic goals with social anxious individuals should focus on the rebalancing of affection regulation systems, such as the development of the security system. The therapist's goal is to help the individual experience safety, tolerance, and feeling secure with what is explored in therapy. It also suggests that shame reduction and early traumatic shame experiences, related to feelings of threat and security should be a major focus in the therapy. Thus, the therapy will also explore early experiences that may have led the individual to develop defense strategies that have conditioned him to operate automatically in this pattern. In the therapeutic intervention, it is fundamental to help individuals understand that the pathology and symptoms are not their fault, but that they were developed as a defense strategy. Additionally, it might be useful to help socially anxious individuals to develop self-compassion and, as suggested by

Gilbert (2000), to reprocess social dynamics in a non-competitive and rank-centered way, focusing in more cooperative forms of social living.

Limitations, Future directions, and Contributions

The present study has some limitations. One of the methodological limitations of this study has to do to its cross-sectional nature. The fact that it was not a longitudinal study does not allow us to guarantee that the course referred to in the discussion as evidenced in the two samples happens in the same subjects, therefore; results can only be interpreted as associations and not as predictions, which does not allow us to withdraw strong conclusions about the developmental impact of the variables under study. Furthermore, since a measure of experiences of shame without traumatic characteristics was not used these results do not guarantee that shame experiences need to present traumatic characteristics to predict submissive compassion. Regarding sample aspects, another important limitation refers to the fact that both samples were community samples and the reduced number of participants of the general population sample, leading to unsatisfactory reliability of the results. Another limitation has to do with the use of only self-report measures, which may compromise the reliability of the reports due to social desirability and mood influences. In alternative, a clinic interview should be used instead or to complement self-report measures. Therefore, given these limitations, it would be important to replicate the present study in a longitudinal design to find more robust inferences regarding causality with less subjective assessment methods and better-fitted measures in a clinical sample of socially anxious individuals. These dimensions have a special relevance given the increasing concern with the loss of (genuine) compassion in various health settings and efforts to improve it. Therefore, future studies should continue to study this concept and its relationship to other variables such as external shame and fears of compassion, given its importance. Despite these limitations, the present study was innovative and with relevant contributions regarding the memories of the traumatic impact of early shame experiences, SA, submissive compassion and EMWS with parents and peers in different stages of life.

Conclusions

Our study highlights the mediating role of SA on submissive compassion and the moderating role of EMWS with parents and peers. The great impact of social relationships on the regulation of physiological and psychological systems makes feelings of shame a social experience with a great influence on social behavior, physical and psychological health (Gilbert

& Andrews, 1998). According to an evolutionary perspective, SA is a product of the defense/threat system and results from the fact that individuals deal with social situations in a competitive way (social rank) instead of in an affiliative way, perceiving social cues as threats (e.g. Gilbert & Trower, 2001; Trower & Gilbert, 1989). Socially anxious individuals tend to turn their attention to social cues of threat, as well as distort the evaluation of their interpersonal experiences (Beck, Emery, & Greenberg, 1985). These individuals adopt submissive behaviors, which purpose may be, not the genuine interest in the well-being of the other but the decrease of the possibility of rejection or humiliation (Catarino et.al., 2014). This may have resulted from early life experiences in which they felt neither cared nor safe, developing the perception of the world as an insecure place, of others as not being available to give affection and care, and of the self as unwanted and defective in some way, consequently feeling ashamed. On the contrary, early experiences of warmth and safeness are associated with more soothing affects which provide the deactivation of the threat system (e.g. Caciopo et al., 2000; Masten, 2001; Porges, 2007) buffering the effects of early shame experiences on negative affect (Matos et al., 2013).

References

Antunes, M. L. (2013). *The impact of traumatic shame experiences in social anxiety – the moderator role of emotional intelligence*. Unpublished Master's Degree Dissertation, Coimbra University, Portugal.

Arrindell, W. A., Emmelkamp, P. M., Monsma, A., & Brilman, E. (1983). *The role of perceived parental rearing practices in the aetiology of phobic disorders: A controlled study. The British Journal of Psychiatry*, 143, 183–187. doi:10.1192/ bjp.143.2.183

Bandelow, B., Charimo Torrente, A., Wedekind, D., Broocks, A., Hajak, G., & Rüther, E. (2004). *Early traumatic life events, parental rearing styles, family history of mental disorders, and birth risk factors in patients with social anxiety disorder. European Archives of Psychiatry and Clinical Neuroscience, 254*(6), 397–405. doi:10.1007/s00406-004-0521-2

Barkow, J. H. (1989). *Darwin, sex, and status: Biological approaches to mind and culture.* University of Toronto Press.

Barnard, L., & Curry, J. (2011). *Self-compassion: Conceptualizations, correlates and interventions. Review of General Psychology,* 15(4), 289–303

Baumeister RF & Leary MR (1995). *The need to belong: Desire for interpersonal attachments as a fundamental human motivation. Psychological Bulletin, 117*, 497-529.

Beck, A. T., Emery, G. & Greenberg, R. L. (1985). *Anxiety disorders and phobias: A cognitive perspective*. New York: Basic Books.

Berntsen, D., Rubin, D.C., (2006) *The centrality of event scale: A measure of integrating a trauma into one's identity and its relationship to post-traumatic stress disorder symptoms*. Behaviour *Research and Therapy*, Volume 44, Issue 2, 2006, Pages 219-231. https://doi.org/10.1016/j.brat.2005.01.009.

Blote, A. W., Miers, A. C., Heyne, D. A., & Westenberg, P. (2015). *Social anxiety and the school environment of adolescents.* In K. Ranta, A. M. La Greca, L.J. Garcia- Lopez, & M. Marttunen (Eds.), *Social anxiety and phobia in adolescents: Development, manifestation and intervention strategies* (pp. 151-181). Switzerland: Springer International Publishing.

Bögels, S. M., & Perotti, E. C. (2010*). Does Father Know Best? A Formal Model of the Paternal Influence on Childhood Social Anxiety. Journal of Child and Family Studies*, 20(2), 171-181. doi:10.1007/s10826-010-9441-0

Bowlby J (1969). *Attachment: Attachment and Loss, Vol. 1.* London: Hogarth Press.

Bowlby J (1973). *Separation, Anxiety and Anger: Attachment and Loss*, vol. 2. London: Hogarth Press.

Bruce, L. C., Heimberg, R. G., Blanco, C., Schneier, F. R., & Liebowitz, M. R. (2012). *Childhood maltreatment and social anxiety disorder: Implications for symptom severity and response to pharmacotherapy. Depression and Anxiety*, 29(2), 131-138. doi:10.1002/da.20909

Buss, D. A. (2009). *The great struggles of life: Darwin and the emergence of evolutionary psychology. American Psychologist*, 64, 140–148. doi:10.1037/a0013207

Buss, D. M. (2003). *Evolutionary psychology: The new science of mind* (2nd ed.). Boston: Allyn & Bacon.

Buss, D. M. (2004). *Evolutionary psychology. The new science of the mind* (2nd Ed.). Boston: Ally & Bacon.

Cacioppo, J. T., Berntson, G. G., Sheridan, J. F., & McClintock, M. K. (2000). *Multilevel integrative analyses of human behavior: Social neuroscience and the complementing nature of social and biological approaches. Psychological Bulletin*, 126(6), 829-843. doi:10.1037//0033-2909.126.6.829

Caiado, B. & Salvador M. C., (2019) *Feeling (un)safe with self and others: Early memories of warmth and safeness, external shame, self-criticism, fears of compassion and social anxiety* Unpublished Master's Degree Dissertation, University of Coimbra, Portugal.

Caldas, L. (2013). *"Shame on you" or "shame on me"? - O coping com a vergonha em adolescentes com perturbação de conduta, com fobia social e sem psicopatologia*. Unpublished Master's Degree Dissertation, University of Coimbra, Portugal.

Castilho, P., & Gouveia, J. P. (2011). *Self-criticism: validation of the Portuguese version of the Forms of Self-criticizing/attacking and Self-reassuring Scale (FSCRS) and the Functions of Self-criticizing/attacking Scale (FSCS). Psychologica,* (54), 63-86. doi:10.14195/1647-8606_54_3

Catarino, F. & Gilbert, P. & Mcewan, K. & Baião, R. (2014). *Compassion Motivations: Distinguishing Submissive Compassion From Genuine Compassion and its Association With Shame, Submissive Behavior, Depression, Anxiety and Stress. Journal of Social and Clinical Psychology*. 33. 399-412. 10.1521/jscp.2014.33.5.399.

Cheung, M. S.-P., Gilbert, P., & Irons, C. (2004). *An exploration of shame, social rank and rumination in relationship to depression. Personality and Individual Differences*, *36*(5), 1143–1153. doi:10.1016/S0191-8869(03)00206-X

Clark, D. M. (2001). *A Cognitive Perspective on Social Phobia* In W. R. Crozier & L. E. Alden (eds), *International Handbook of Social Anxiety: Concepts, Research and Interventions Relating to the Self and Shyness* (pp. 405–430). Chichester: John Wiley & Sons.

Clark, D. M., & Wells, A. (1995). *A cognitive model of social phobia.* In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & R. R. Schneier, *Social phobia: diagnosis, assessment and treatment* (pp. 69 - 93). New York: Guilford Press.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.

Cohen, J. (1992). *A power primer. Psychological Bulletin, 112,* 155- 159. doi10. 1037/0033-2909.112.1.155

Cox, B., Fleet, C., Stein, M., (2004). *Self-criticism and social phobia in the US national comorbidity survey. Journal of Affective Disorders* 82 (2), 227–234

Cunha, M., Matos, M., Faria, D., & Zagalo, S. (2012). *Shame memories and psychopathology in adolescence: The mediator effect of shame. International Journal of Psychology and Psychological Therapy,* 12(2), 203-218.

Depue, R. A., & Morrone-Strupinsky, J. V. (2005*). A neurobehavioral model of affiliative bonding. Behavioral and Brain Sciences,* 28, 313–395.

Elison, J., Lennon, R., & Pulos, S. (2006*). Investigating the Compass of Shame: the development of the Compass of Shame Scale. Social Behavior and Personality, 34*, 221-238. doi: 10.2224/sbp.2006.34.3.221

Ferreira, C., Cunha, M., Marta-Simões, J., Duarte, C., Matos, M., Pinto-Gouveia, J., (2018). *Development of a measure for the assessment of peer-related positive emotional memories. Psychology and Psychotherapy: Theory, Research and Practice*, 91, 79–94.

Ferreira, C., Moura-Ramos, M., Matos, M., & Galhardo, A. (2018). *A new measure to assess external and internal shame: Development, factor structure and psychometric properties of the External and Internal Shame Scale*. Submited manuscript.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage.

Garcia, C. D. (2013). *Fobia Social Específica e Generalizada: diferenças e semelhanças na relação com a vergonha e autocriticismo.* Unpublished Master's Degree Dissertation. Coimbra University, Portugal.

Gaspar, C. & Castilho, P. (2014). *A Compaixão Submissa: Análise factorial confirmatória e propriedades psicométricas da versão portuguesa da Escala de Motivos para a Compaixão* (*MCS*). Unpublished Master's Degree Dissertation. Coimbra University, Portugal.

Gilbert P & Irons C (2009). *Shame, self-criticism, and self-compassion in adolescence.* In N Allen (Ed.). *Psychopathology in Adolescence*. Cambridge: Cambridge University Press.

Gilbert P (2005a). *Social mentalities: A biopsychosocial and evolutionary reflection on social relationshipships*. In MW Baldwin (Ed). *Interpersonal Cognition*. (pp. 299-335). New York: Guilford Press.

Gilbert P (2010). *Compassion Focused Therapy: Distinctive Features*. London: Routledge.

Gilbert P (Ed) (2005). *Compassion: Conceptualisations, Research and Use in Psychotherapy*. London: Routledge

Gilbert P, McEwan K, Mitra R, Richter A, Franks L, Mills A, Bellew R, & Gale C (2009). *An exploration of different types of positive affect in students and patients with a bipolar disorder. Clinical Neuropsychiatry, 6,* 135-143.

Gilbert P. 1989. *Human Nature and Suffering*. Lawrence Erlbaum Associates: Hove.

Gilbert, P. & Andrews, B. (Eds.; 1998), *Shame: Interpersonal behaviour, psychopathology and culture*. New York: Oxford University Press./s40639-017-0033-3.

Gilbert, P. & Andrews, B. (Eds.; 1998), *Shame:Interpersonal behaviour, psychopathology and culture*. New York: Oxford University Press.

Gilbert, P. & Catarino, F. & Duarte, C. & Matos, M. & Kolts, R.l & Stubbs, J. & Ceresatto, L. & Duarte, J. & Pinto-Gouveia, J. & Basran, J. (2017). *The development of compassionate engagement and action scales for self and others. Journal of Compassionate Health Care. 4.* 10.1186/s40639-017-0033-3.

Gilbert, P. & Miles, J. (2000). *Sensitivity to Social Put-Down: it's relationshipship to perceptions of social rank, shame, social anxiety, depression, anger and self-other blame. Personality and Individual Differen*ces, 29, 757-774. doi:10.1016/S0191-8869(99)00230.

Gilbert, P. (1998). *What is shame? Some core issues and controversies*. In P. Gilbert, & B. Andrews (Eds.), *Shame:Interpersonal behaviour, psychopathology and culture* (pp.3–36). New York: Oxford University Press.

Gilbert, P. (2000*). The relationshipship of shame, social anxiety and depression: the role of the evaluation of social rank. Clinical Psychology & Psychotherapy*, 7(3), 174-189. doi:10.1002/1099-0879(200007)7:3<174::aid-cpp236>3.0.co;2-u

Gilbert, P. (2001). *Evolution and social anxiety: The role of social competition and social hierarchies. Psychiatric Clinics of North America*, 24, 723–751.

Gilbert, P. (2002*). Body shame: A biopsychosocial conceptualization and overview, with treatment implications.* In P. Gilbert, & J. Miles (Eds.), *Body shame: Conceptualization, research and treatment* (pp. 3–54). London: Brunner.

Gilbert, P. (2003). Evolution, social roles and the diferences in shame and guilt. *Social Research, 70,* 1205–1230.

Gilbert, P. (2007). *The evolution of shame as a marker for relationshipship security: A biopsychosocial approach.* In J. L. Tracy, R. W. Robins & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp. 283-309). New York: Guilford.

Gilbert, P. (2009). *The compassionate mind: Coping with the challenges of living.* London:Constable Robinson.

Gilbert, P. (2014a). *Evolutionary models: Practical and conceptual utility for the* treatment and study of social anxiety disorder. In Weeks, J. W. (Ed.). (2014). *The Wiley Blackwell handbook of social anxiety disorder*, 24-52. John Wiley & Sons.

Gilbert, P. (2014b). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology,* 53(1), 6-41. doi:10.1111/bjc.12043

Gilbert, P., & Allan, S. (1994). *Assertiveness, submissive behaviour and social comparison. British Journal of Clinical Psychology, 33*, 295-306. doi: 10.1111/j.2044-8260.1994.tb01125.x

Gilbert, P., & McGuire, M. (1998). *Shame, social roles and status: the psychobiological continuum from monkey to human.* In P. Gilbert, & B. Andrews (Eds.), *Shame: interpersonal behaviour, psychopathology and culture* (pp. 99-125). New York: Oxford University Press.

Gilbert, P., & Procter, S. (2006). *Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. Clinical Psychology & Psychotherapy,* 13(6), 353–379. doi:10.1002/cpp.507

Gilbert, P., & Trower, P. (1990). *Social anxiety: Evolution and manifestation.* In R. Cozier (Ed.), Shyness and embarrassment: Perspectives from social psychology (pp. 144–177). Cambridge: Cambridge University Press.

Gilbert, P., & Trower, P. (2001). *Evolution and process in social anxiety.* In W. R. Crozier & L. E. Alden (Eds.), *International handbook of social anxiety: Concepts, research and interventions relating to the self and shyness* (pp. 259–279). Chichester, UK: John Wiley & Sons, Ltd.

Gilbert, P., & Trower, P. (2001). *Evolutionary psychology and social anxiety.* In CrozierW.R., & Alden L.E. (Eds), *The self, shyness and social anxiety: A handbook of concepts, research and interventions*. Chichester: John Wiley & Sons.

Gilbert, P., Allan, S., & Goss, K. (1996). *Parental Representations, shame, interpersonal problems, and vulnerability to psychopathology. Clinical Psychotherapy*, 3(1), 23-34.

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 relationshipship with depression, social comparison and shame. Clinical Psychology & Psychotherapy,* 10, 108–115.

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(1), 31–50.*doi:10.1348/014466504772812959

Gilbert, P., Catarino, F., Sousa, J., Ceresatto, L., Moore, R., & Basran, J. (2017). *Measuring competitive self-focus perspective taking, submissive compassion and compassion goals*. *Journal of Compassionate Health Care*, *4*(1). doi:10.1186/s40639-017-0034-2

Gilbert, P., McEwan, K., Matos, M., & Rivis, A. (2011). *Fears of compassion: Development of three self-report measures. Psychology and Psychotherapy: Theory, Research and Practice*, *84*(3), 239-255. doi:10.1348/147608310x526511

Goetz, J. L., Keltner, D., & Simon-Thomas, E. (2010). *Compassion: An evolutionary analysis and empirical review. Psychological Bulletin*, *136*(3), 351-374. doi:10.1037/a0018807

Gross CA, & Hansen NE (2000). *Clarifying the experience of shame: the role of attachment style, gender, and investment in relatedness. Personality and Individual Differences, 28*, 897-907

Hayes, A. F. (2018). *Introduction to Mediation, Moderation, and Conditional Process Analysis, Second Edition: A Regression-Based Approach*. New York, NY: Guilford Publications.

Hermanto, N., Zuroff, D. C., Kopala-Sibley, D. C., Kelly, A. C., Matos, M., Gilbert, P., & Koestner, R. (2016). *Ability to receive compassion from others buffers the depressogenic effect of self-criticism: A cross-cultural multi-study analysis. Personality and Individual Differences, 98*, 324-332. doi:10.1016/j.paid.2016.04.055

Kelly, A. C., & Dupasquier, J. (2016). *Social safeness mediates the relationshipship between recalled parental warmth and the capacity for self-compassion and receiving compassion. Personality and Individual Differences*, 89, 157-161. doi:10.1016/j.paid.2015.10.017

Keltner, D., & Harker, L. (1998). *The forms and functions of the nonverbal signal of shame.* In P. Gilbert & B. Andrews (Eds.), *Series in affective science. Shame: Interpersonal behavior, psychopathology, and culture* (pp. 78-98). New York, NY, US: Oxford University Press.

Kingery, J. N., Erdley, C. A., Marshall, K. C., Whitaker, K. G., & Reuter, T. R. (2010). *Peer Experiences of Anxious and Socially Withdrawn Youth: An Integrative Review of the Developmental and Clinical Literature. Clinical Child and Family Psychology Review*, 13(1), 91-128. doi:10.1007/s10567-009-0063-2

Kline, R. B. (2005), *Principles and Practice of Structural Equation Modeling* (2nd Edition ed.). New York: The Guilford Press.

Knappe, S., Beesdo-Baum, K., Fehm, L., Lieb, R., & Wittchen, H. (2012). *Characterizing the association between parenting and adolescent social p*hobia. *Journal of Anxiety Disorders*, 26(5), 608-616. doi:10.1016/j.janxdis.2012.02.014

Kopala-Sibley, D. C., & Zuroff, D. C. (2014). *The developmental origins of personality factors from the self-definitional and relatedness domains: A review of theory and research. Review of General Psychology*, 18(3), 137–155. http://dx.doi.org/10.1037/gpr0000013.

Kuo, J. R., Goldin, P. R., Werner, K., Heimberg, R. G., & Gross, J. J. (2011). *Childhood trauma and current psychological functioning in adults with social anxiety disorder. Journal of Anxiety Disorders*, 25(4), 467-473. doi:10.1016/j. janxdis.2010.11.011

La Greca, A. M., & Harrison, H. M. (2005*). Adolescent Peer Relationships, Friendships, and Romantic Relationshipships: Do They Predict Social Anxiety and Depression? Journal of Clinical Child & Adolescent Psychology* 34(1), 49-61. doi:10.1207/s15374424jccp3401_5

Lewis, M. (1992). *Shame: The exposed self*. New York: The Free Press.

Lewis, M. (1995). *Self-conscious Emotions. American Scientist*, *83*, 68–78.

Lewis-Morrarty, E., Degnan, K. A., Chronis-Tuscano, A., Rubin, K. H., Cheah, C. S., Pine, D. S., … Fox, N. A. (2012). *Maternal Over-Control Moderates the Association Between Early Childhood Behavioral Inhibition and Adolescent Social Anxiety Symptoms. Journal of Abnormal Child Psychology*, 40(8), 1363-1373. doi:10.1007/s10802-012-9663-2

Lopez FG, Gover MR, Leskela J, Sauer EM, Schirmer L, & Wyssmann J (1997). *Attachment styles, shame, guilt, and collaborative problem-solving orientations. Personal Relationshipships, 4*, 187-199.

Lovibond, P., & Lovibond, S. (1995). *The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. Behaviour Research and Therapy*, *33*(3), 335-343. doi:10.1016/0005-7967(94)00075-u

MacLean, P**.** D. (1990). *The Triune* Brian *in Evolution.* New York: Plenum Press.

Masten, A. S. (2001). *Ordinary magic: Resilience processes in development. American Psychologist,* 56, 227-238. doi: 10.1037/0003-066X.56.3.227

Matos M, Pinto-Gouveia J, & Duarte C (2012). *Above and beyond emotional valence: The unique contribution of the central and traumatic shame memories to psychopathology vulnerability, Memory*, 20(5), 461-477, DOI: 10.1080/09658211.2012.680962.

Matos, M., Gouveia, J. P., & Martins, S. (2011). *The traumatic impact of shame experiences: study of the psychometric properties of the Portuguese version of the Impact of Event Scale-Revised (IES-R).* Psychologica, (54), 413-438. doi:10.14195/1647-8606_54_16

Matos, M., Pinto-Gouveia, J., & Duarte, C. (2014). *Psychometric properties of the Portuguese version of the Early Memories of Warmth and Safeness Scale. Manuscript submitted for publication.*

Matos, M., Pinto-Gouveia, J., & Gomes, P. (2010). *A centralidade das experiências de vergonha: Estudo de validação da versão portuguesa da Escala da Centralidade do Acontecimento (CES).* Psicologia, XXIV(1), 73–95.

Matos, M., Pinto-Gouveia, J., Duarte, J., & Simões, D. (2016). *The fears of compassion scales.* [Portuguese trans.] Unpublished manuscript.

Matos, M., & Pinto-Gouveia, J. (2010). *Shame as a traumatic memory. Clinical Psychology & Psychotherapy*, 299–312. doi:10.1002/cpp.659

Matos, M., & Pinto-Gouveia, J. (2014). *Shamed by a Parent or by Others: The Role of Attachment in Shame Memories Relationship to Depression*. *International Journal of Psychology and Psychological Therapy, 14*(2), 217-244.

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. doi:10.1080/00223980.2017.1393380

Matos, M., Pinto-Gouveia, J., & Duarte, C. (2013). *Internalizing Early Memories of Shame and Lack of Safeness and Warmth: The Mediating Role of Shame on Depression*. *Behavioural and Cognitive Psychotherapy*, *41*(4), 479-493. doi:10.1017/s1352465812001099.

Matos, M., Pinto-Gouveia, J., & Duarte, C. (2015). *Constructing a Self Protected against Shame: The Importance of Warmth and Safeness Memories and Feelings on the Association between Shame Memories and Depression. International Journal of Psychology and Psychological Therapy*, *15*(3), 317-335.

Mattick, R. P., & Clarke, J. C. (1998). *Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. Behaviour Research and Therapy, 36,* 455-470.

McEwan, K., Gilbert, P., & Duarte, J. (2011). *An exploration of competitiveness and caring in relationship to psychopathology. British Journal of Clinical Psychology*, 51(1), 19-36. doi:10.1111/j.2044-8260.2011.02010.x

Mikulincer, M. & Shaver, P. (2005). *Mental representations of attachment security: theoretical foundations for a positive social psychology*. In M. W. Baldwin (Ed.), *Interpersonal Cognition* (pp. 233–266). New York: Guilford.

Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change.* New York, NY: Guilford

Mills, R. S. (2005). *Taking stock of the developmental literature on shame*. *Developmental Review*, 25, 26-63.

Neff, K. D. (2003). Self-compassion: *An alternative conceptualization of a healthy attitude toward oneself. Self and Identity, 2,* 85-101. doi:10.1080/15298860390129863

Neff, K. D. (2009). *The role of self-compassion in development: a healthier way to relate to oneself. Human Development, 52,* 211-214. doi:10.1159/000215071.

Neff, K. D., & McGehee, P. (2010). *Self-compassion and Psychological Resilience Among Adolescents and Young Adults. Self and Identity*, 9(3), 225-240. doi:10.1080/15298860902979307

Neff, K. D., & McGehee, P. (2010). *Self-compassion and Psychological Resilience Among Adolescents and Young Adults. Self and Identity*, 9(3), 225-240. doi:10.1080/15298860902979307

Neff, K. D., Rude, S. S., & Kirkpatrick, K. (2007). *An examination of self-compassion in relationship to positive psychological functioning and personality traits. Journal of Research in Personality*, 41, 908–916.

Nesse, R. (200*5). Evolutionary psychology and mental health. In D. Buss (Ed.), The handbook of evolutionary psychology* (pp. 903–929). Hoboken, NJ: John Wiley and Sons

Ollendick T. H., & Benoit, K. E. (2011). *A Parent–Child Interactional Model of Social Anxiety Disorder in Youth. Clinical Child and Family Psychology Review*, 15(1), 81-91. doi:10.1007/s10567-011-0108-1

Pais-Ribeiro, J., Honrado, A. and Leal, I. (2004). *Contribuição para o estudo da adaptação portuguesa das Escalas de Ansiedade Depressão e Stress de Lovibond e Lovibond [Contribution for the study of the Portuguese adaptation of the Depression Anxiety and Stress Scales by Lovibond and Lovibond]*. *Psychologica*, 36, 235–246.

Paulo, M. (2013). *Experiências precoces de vergonha, coping com a vergonha e traços psicopáticos em adolescentes.* Unpublished Master's Degree Dissertation, Faculdade de Psicologia e de Ciências da Educação, Coimbra University, Portugal.

Penner, L. A., Dovidio, J. F., Piliavin, J. A., & Schroeder, D. A. (2005). Prosocial behavior: *Multilevel perspectives. Annual Review of Psychology*, 56, 1–28. doi:10.1146/annurev.psych.56.091103.070141

Perris C & Gilbert P (2000). Early experiences and subsequent psychosocial adaptation. *Clinical Psychology and Psychotherapy*, *7*, 243-342.

Perris C (1994). *Linking the experience of dysfunctional parental rearing with manifest psychopathology: A theoretical framework.* In C Perris, WA Arrindell, & M Eisemann (Eds), *Parenting and psychopathology* (pp. 3-32). Chichester: Wiley.

Perris, C. (1994). *Linking the experience of dysfunctional parental rearing with manifest psychopathology: A theoretical framework*. In C. Perris, W.A. Arrindell, & M. Eisemann (Eds.), *Parenting and psychopathology*. Chichester: Wiley.

Pestana, M. H., & Gageiro, J. N. (2008). *Análise de dados para Ciências Sociais: A complementaridade do SPSS.* (5ª ed.). Lisboa: Edições Sílabo.

Phillips, T., Barnard, C., Ferguson, E., & Reader, T. (2008). *Do humans prefer altruistic mates? Testing a link between sexual selection and altruism towards non-relatives. British Journal of Psychology*, *99*, 555–572. doi:10.1348/000712608X298467

Pinto-Gouveia & Salvador, M. C. (2001). *The social interaction anxiety scale and the social fobia scale in the Portuguese population*. Poster apresentado no 31st Congress of the European Association for Behaviour and Cognitive Therapy, Istambul

Pinto-Gouveia, J., & Matos, M. (2011). *Can shame memories become a key to identity? The centrality of shame memories predicts psychopathology*. *Applied Cognitive Psychology*, *25*(2), 281-290.

Porges, S. (2007). The polyvagal perspective. *Biological Psychology*, 74, 116-143. doi: 10.1016/j.bi-opsycho.2006.06.009

Richter, A., Gilbert, P., & McEwan, K. (2009). *Development an early memories of warmth and safeness scale and its relationshipship to psychopathology. Psychology and Psychotherapy: Theory, Research and Practice*, 82(2), 171-184. doi:10.1348/147608308x395213

Roças, J. (2014) *Experiências precoces e ansiedade social em adolescentes: O efeito mediador da vergonha e do coping com a vergonha.* Unpublished manuscript. Faculty of psychology and educational sciences of the University of Coimbra, Coimbra.

Schore, A. (1998). *Early shame experiences and infant brain development*. In P. Gilbert, & B. Andrews (Eds), *Shame: Interpersonal behavior, psychopathology and culture* (pp. 57–77). New York: Oxford University Press.

Schore, A. (2001). *The effects of relationshipal trauma on right brain development, affect regulation and infant mental health*. *Infant Mental Health Journal*, 22, 201–269.

Shahar, B., Doron, G., & Szepsenwol, O. (2014). Childhood Maltreatment, Shame-Proneness and Self-Criticism in Social Anxiety Disorder: A Sequential Mediational Model. *Clinical Psychology & Psychotherapy*, 22(6), 570-579. doi:10.1002/cpp.1918

Siegel, R. S., La Greca, A. M., & Harrison, H. M. (2009). *Peer Victimization and Social Anxiety in Adolescents: Prospective and Reciprocal Relationshipships. Journal of Youth and Adolescence*, 38(8), 1096-1109. doi:10.1007/s10964-009-9392-1

Simões, D. (2012). *Medo da Compaixão: estudo das propriedades psicométricas da Fears of Compassion Scales (FCS) e da sua relação com medidas de Vergonha, Compaixão e*

Psicopatologia. Unpublished manuscript. Faculty of psychology and educational sciences of the University of Coimbra, Coimbra.

Simões, M. (1994). *Investigações no âmbito da aferição nacional do teste das matrizes progressivas coloridas de Raven (M.P.C.R.).* Faculty of psychology and educational sciences of the University of Coimbra, Coimbra.

Simon, N. M., Herlands, N. N., Marks, E. H., Mancini, C., Letamendi, A., Li, Z., Stein, M. B. (2009). *Childhood maltreatment linked to greater severity and poorer quality of life and function in social anxiety disorder. Depression and Anxiety*, 26(11), 1027–1032. doi:10.1002/da.20604

Stuewig J & McCloskey L (2005). *The impact of maltreatment on adolescent shame and guilt: Psychological routes to depression and delinquency. Child Maltreatment, 10,* 324-336.

Tangney J., & Fischer K. (Eds). (1995). *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride*. New York: Guilford Press.

Tangney JP & Dearing RL (2002). *Shame and Guilt*. New York: Guilford Press.

Trower, P., & Gilbert, P. (1989). *New theoretical conceptions of social anxiety and social phobia. Clinical Psychology Review*, 9(1), 19-35. doi:10.1016/0272-7358(89)90044-5

Webb M, Heisler D, Call S, Chickering SA, & Colburn TA (2007). *Psychological maltreatment: Its relationshipship to shame, guilt, and depression. Child Abuse & Neglect: The International Journal, 31,* 1143-1153.

Webb, M., Heisler, D., Call, S., Chickering, S. A., & Colburn, T. A. (2007). *Shame, guilt, symptoms of depression, and reported history of psychological maltreatment.* Child Abuse & Neglect, 31, 1143–1153

Wei M, Shaffer PA, Young SK, & Zakalik RA (2005). *Adult Attachment, Shame, Depression, and Loneliness: The Mediation Role of Basic Psychological Needs Satisfaction. Journal of Counseling Psychology 52,* 591-601. doi: 10.1037/0022-0167.52.4.591.

Weiss, D. S., & Marmar, C. R. (1997). *The Impact of Event Scale-Revised*. In J. P. Wilson and T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 399-411). New York: The Guilford Press.

Wells GB (1996). *Adult attachment styles and internalized shame.* Paper presented at the annual meeting of the Society for Research in Adult Development, Boston, MA