



Universidade de Coimbra  
Faculdade de Psicologia e de Ciências da Educação

UC/EPCE—2016

**Be compassionate with your socially anxious mind:  
shame, self-criticism and self-compassion in the  
relationship between self-focused attention and social  
anxiety in adolescents**

Natacha Sousa Cabete (e-mail: [natacha.cabete92@gmail.com](mailto:natacha.cabete92@gmail.com))

Dissertação de Mestrado em Psicologia - Intervenções Cognitivo-  
Comportamentais nas Perturbações Psicológicas e Saúde sob a  
orientação da Professora Doutora Maria do Céu Salvador

**Be compassionate with your socially anxious mind: shame, self-criticism and self-compassion in the relationship between self-focused attention and social anxiety in adolescents**

Natacha Sousa Cabete

Dissertação de Mestrado Integrado em Psicologia, área de especialização em Intervenções Cognitivo-Comportamentais nas Perturbações Psicológicas e da Saúde, sob orientação da Professora

Doutora Maria do Céu Salvador



**FPCEUC** FACULDADE DE PSICOLOGIA  
E DE CIÊNCIAS DA EDUCAÇÃO  
UNIVERSIDADE DE COIMBRA

## **Acknowledgments**

First and foremost, I would like to express my special appreciation to my supervisor Professor Maria do Céu Salvador, a talented teacher and passionate investigator. Thank you for the guidance and support throughout this study, for consistently allowing this paper to be my own work, while steering me in the right direction. Thank you for providing me with your immense knowledge.

To my colleagues, thank you for the stimulating discussions, for the sleepless nights we were working together, and for all the fun we have had.

To all the schools and adolescents that helped this study, because without you this work would not be possible.

To my ladies. Thank you for your understanding and encouragement in many moments of crisis. Your friendship made these last years a wonderful experience.

To the love of my life, thank you for supporting me emotionally, for giving me strength when I most needed and urging me to do my best. Thank you for being so caring and so kind. Thank you for always being my best friend and companion, and for your ever endless love.

Thank you to my sister, for helping me along this process and encouraging me throughout this endeavor. Nothing compares to the joy of having a little sister like you.

Finally, I must express my very profound gratitude to my family for providing me with unfailing support and continuous encouragement throughout my years of study and through this venture. This accomplishment would not have been possible without them. Thank you. A special thank you to my mom, my soulmate, for being my rock, for encouraging me in all of my pursuits and inspiring me to follow my dreams.

**Be compassionate with your socially anxious mind: shame, self-criticism and self-compassion in the relationship between self-focused attention and social anxiety in adolescents**

Natacha Cabete <sup>1</sup>

Maria do Céu Salvador <sup>1</sup>

<sup>1</sup>University of Coimbra

The correspondence regarding this article should be sent to:

Natacha Cabete

Faculty of Psychology and Sciences of Education

University of Coimbra

Rua do Colégio Novo, Apartado 6153

3001-802 Coimbra, Portugal

Email: [natacha.cabete92@gmail.com](mailto:natacha.cabete92@gmail.com)

## Abstract

Self-focused attention is an awareness of self-referent information (Ingram, 1990) that is considered a central factor in the maintenance of social anxiety since it increases access to negative thoughts and feelings, preventing individuals from observing external information that might disconfirm their beliefs and fears (Clark, & Wells, 1995). The focus on the self may explain the levels of shame and self-criticism arising after social situations. Being self-compassionate, that is, having a more adaptive and accepting attitude, may contribute to reduce anxiety and improve performance in social situations (Neff, 2003a; Werner et al., 2012). However, the literature that corroborates this relationship is scarce. Therefore, this study aimed to explore, in a sample consisted of 407 Portuguese adolescents, the relationship between self-focused attention and social anxiety, internal/external shame, self-criticism and self-compassion.

Positive, significant and moderate to high associations between social anxiety, self-focused attention, shame, and self-criticism were found. Only the negative factors of self-compassion presented negative, significant and moderate to high associations with all other variables. Results also revealed that both internal and external shame, self-criticism and the isolation factor of self-compassion had a mediating effect in the relationship between self-focused attention and social anxiety. These results suggest that targeting shame, self-criticism and developing self-compassion may be effective strategies in decreasing the impact of self-focused attention on social anxiety.

Limitations and future directions are discussed.

*Key words:* social anxiety; adolescence; self-focused attention; internal shame; external shame; self-criticism; self-compassion.

## Resumo

A atenção autofocada refere-se à consciência de informação auto-referente (Ingram, 1990) , e é considerada como um fator central na manutenção da ansiedade social, uma vez que aumenta o acesso a pensamentos e sentimentos negativos, impedindo os indivíduos de realizar observações externas que possam desconfirmar as suas crenças e medos (Clark, & Wells, 1995). O focus no eu poderá explicar os níveis de vergonha e autocrítico decorrentes de situações sociais. Ser auto-compassivo, isto é, ser mais adaptável e ter uma atitude de aceitação, pode contribuir para reduzir a ansiedade e melhorar o desempenho em situações sociais (Neff, 2003a; Werner et al., 2012). No entanto, a literatura que corrobora essa relação é escassa. Deste modo, este estudo teve como objetivo explorar, numa amostra composta por 407 adolescentes portugueses, a relação entre atenção autofocada e ansiedade social, vergonha interna/externa , autocrítico e autocompaixão.

Associações positivas, significativas, moderadas a elevadas foram encontradas entre ansiedade social, atenção autofocada, vergonha e autocrítico. Apenas os fatores negativos da autocompaixão apresentaram associações negativas, significativas, moderadas a elevadas com todas as variáveis em estudo. Os resultados também revelaram que tanto a vergonha interna e externa, o autocrítico e o fator de isolamento tiveram um efeito mediador na relação entre atenção autofocada e ansiedade social. Estes resultados sugerem que intervir na vergonha e no autocrítico, e desenvolver competências de autocompaixão, poderão ser estratégias eficazes para diminuir o impacto da atenção autofocada na ansiedade social.

Limitações e direções futuras foram discutidas.

*Palavras-chave:* ansiedade social; adolescentes; atenção autofocada; vergonha interna; vergonha externa; autocrítico; autocompaixão.

## **Social Anxiety and Self-focused Attention**

Although it is natural for adolescents to feel self-conscious, fearful, nervous or shy in front of others (Albano, DiBartolo, Heimberg, & Barlow, 1995), sometimes this response of social anxiety becomes exaggerated and unhealthy, frequently leading to the avoidance of social situations, interfering with the adolescents developmental tasks, by hindering mastery and growth of their independence and individuality (Albano, DiBartolo, Heimberg, & Barlow, 1995). In this case, the adolescent may be facing Social Anxiety Disorder (SAD) (APA, 2013).

SAD is characterized by a marked fear or anxiety about one or more social or performance situations in which there is a prospect of being negatively evaluated, that is, the individual fears being scrutinized and judged by others (APA, 2013). The social situations almost always provoke out of proportion fear or anxiety and are avoided or endured with great difficulty, which accounts for distress or impairment in important areas of the individual's functioning (APA, 2013; Rapee, & Sanderson, 1998). In adolescents, common fears include eating in a school cafeteria or in front of others, doing an oral presentation, going to public events, such as parties and school events, and having romantic or social encounters with friends or family (Essau et al, 1999; Salvador, 2009).

Cognitive models of Social Anxiety Disorder (Clark & Wells, 1995; Rapee & Heimberg, 1997; Wells, 1997) suggest several maintenance mechanisms which prevent socially anxious individuals from benefiting from exposure and from disconfirming their dysfunctional beliefs about feared catastrophes (Clark & Wells, 1995). Among these factors, self-focused attention is considered a central factor in the exacerbation and maintenance of social anxiety (Bögels & Mansell, 2004; Clark & Wells, 1995; Hoffman, 2000; Kocovski, Endler, Rector, & Flett, 2005; McManus, Sacadura, & Clark, 2008; Rapee & Heimberg, 1997; Spurr & Stopa, 2012), since it exacerbates the bodily sensations and appears to use

interoceptive information to build an impression of themselves that they then assume reflects what others notice and think about them (Clark & Wells, 1995).

Self-focused attention has been defined as “an awareness of self-referent internally generated information that stands in contrast to an awareness of externally generated information derived through sensory receptors” (Ingram, 1990, pp.156). In other words, it is considered a process of directing attention to detailed monitoring and observation of internal self-relevant stimuli, such as physiological arousal, behaviour, emotions or appearance during social situations (Bögels & Mansell, 2004; Clark & Wells, 1995). Such attentional shift produces an enhanced awareness of feared anxiety responses, enhancing the tendency to interpret information in a threatening manner, interpret performance in a critical way and overestimate the probability of experiencing a negative social event (Higa & Daleiden, 2008), consequently interfering with an adequate processing of the situation and others behaviours (Clark & Wells, 1995). This process leads to an individual’s perception of being an object subject to criticism (Bögels & Mansell, 2004).

Fontinho & Salvador (2011), in a sample of adolescents, found a positive and significant relationship between measures of social anxiety and self-focused attention, with self-focused attention as a significant predictor of social anxiety. Also, children with social anxiety disorder report significantly greater self-focus as well as external focus of attention during a social performance task, compared to non-anxious children (Kley, Tuschen-Caffier & Heinrichs, 2012).

### **Shame, Self-Criticism and Social Anxiety**

Shame experience is one of the most private and intimate experiences of the human life since it plays an adaptive function and serves to increase the chances of survival, through the avoidance of rejection and social exclusion (Gilbert & Miles, 2000; Mills, 2005), by guiding human behaviour and influencing the way individuals perceive themselves (Gilbert, 1998;



Tangney & Dearing, 2002). It is considered a self-conscious emotion that results from an overall negative reflection of the individuals' personal attributes, characteristics and behaviours, having a regulatory role in interpersonal and intrapersonal relationships (Gilbert, 2000, 2002 ;Tangney & Dearing, 2002).

According to Gilbert (2000; Gilbert & Procter, 2006), shame has two distinct dimensions: internal shame and external shame. External shame is related to thoughts and feelings about how the self exists in the mind of others, which is typically associated with the perception of negative and unattractive characteristics (Gilbert, 2002, 2007; Gilbert & Procter, 2006). This serves as an alert to the possibility or imminent devaluation and loss of value or status, which may culminate in rejection and social exclusion (Gilbert, 1997, 2002). From the internal shame emerges a private feeling related to a “negative self-evaluations and self-directed affects” (Gilbert, 2000, pp. 176), being the key element of self-deprecation and self-criticism (Gilbert & Procter, 2006).

Adolescence is a developmental period in which we assist to a rapid magnification of shame since individuals' tend to focus attention on prosocial behaviour in order to increase the sense of belonging, acceptance by others and preserve self-esteem (Barret, 1995; Gilbert & Iron, 2008; Mills, 2005). In this sense, early shame episodes entail major threat to the formation of one's sense of self and self-identity as a social agent (Gilbert, 1998, 2007; Tangney & Dearing, 2002), resulting in a significant impact on poor psychological adjustment indicators in this developmental period.

Several authors suggest similarities between shame and social anxiety (Tangney, 1995; Tangney, Wagner, & Gramzow, 1992), since both imply avoidant and withdrawal behaviours in social contexts, are more susceptible to negative feelings such as anxiety, fear and depression, and tend to perceive things more negatively. Successively, self-focused attention has been found to be strongly correlated with shame since the attention focused on shame is

seen as a kind of self-focus where the individuals capture their mistakes, deficits and failures (Gilbert, Pehl & Allan, 1994). With regard to adolescents, several studies in the Portuguese population (Carvalho, & Salvador, 2012; Januário & Salvador, 2011; Rebelo & Salvador, 2012; Rodrigues & Salvador, 2013) found a significant relationship between shame and social anxiety, where external and internal shame were statistically significant predictors of social anxiety.

Self-criticism is defined as a self-to-self relationship in which a part of the self discovers the flaws and condemns, and the other part submits itself. Therefore, it refers to negative internal signs that come from failure situations, leading to feelings of shame, defeat and submission to its own internal attacks (Gilbert & Irons, 2005). Vulnerability to shame-based self-criticism is commonly rooted in feelings about the self being rejected, criticised and shamed (Gilbert, 2002).

Gilbert et al., (2004) recognize that self-criticism is a multidimensional construct that can emanate from individual efforts to improve and prevent errors and frustrations: the *inadequate self*, which is associated with feelings of inadequacy; and the *hated self*, that is associated with feelings of disgust and self-loathing and destructive response towards failure situations. These constructs appear to be a reflection of the skills developed to regulate external relationships.

Taking into account that self-criticism is considered a predicting factor in social anxiety (Shahar & Gilboa-Shechtman, 2007), there are studies that confirm that the level of self-criticism is higher in SAD than in other anxiety disorders (Cox, Fleet, & Stein, 2004). Portuguese studies (e.g. Garcia & Salvador, 2013; Rebelo & Salvador, 2012) found, in a group of adolescents, a significant relationship between social anxiety and self-criticism. There are also studies that relate self-criticism and shame with SAD (Seabra & Salvador, 2014; Shahar, Doron, & Szepeswol, 2015; Xavier & Salvador, 2011).

To our knowledge, only one study addressed the relationship between self-focused attention, self-criticism and shame in social anxiety (Fernandes & Salvador, 2014), confirming positive and significant associations between self-focused attention, self-criticism and shame in a sample of adults with SAD. Results revealed that only internal shame had a mediator effect in the relationship between social anxiety and self-focused attention on behaviour. Nevertheless, these variables have not been studied in a population of adolescents.

### **Self-Compassion and Social Anxiety**

Self-compassion stands for a kind, accepting and more adaptive attitude towards the aspects of oneself that are disliked or painful (Neff, 2003b; Werner et al., 2012). It implies suppressing aggression towards oneself and being responsive to meeting the self's needs, by being opened to suffering, experiencing feelings of soothing, care-giving and understanding towards the self (Gilbert, 2005). It seems, then, that self-compassion is an emotionally positive attitude towards the self, working as a protective factor of the negative consequences of self-criticism, negative social comparison and rumination (Gilbert, 2005).

Neff (2003a) operationalized self-compassion as consisting of three main elements: *self-kindness* versus *self-judgment*, *common humanity* versus *isolation*, and *mindfulness* versus *over-identification*. Self-kindness entails being warm and understanding toward ourselves when we suffer, fail, or feel inadequate, rather than flagellating ourselves with harsh judgment and self-criticism. Common humanity involves recognizing that the human condition is imperfect, that is, one's experiences is a part of the larger human experience and we are not alone in our suffering. Mindfulness entails turning towards our painful thoughts and emotions and seeing them in a mindful awareness, rather than over-identifying with and ruminating about them, thus being negatively influenced by them (Neff, 2003a). In sum, individuals with self-compassion have an alternative way of thinking about themselves and others, reacting with kindness and compassion rather than with self-criticism.

Therefore, self-compassion might be particularly useful for individuals with social anxiety, since it helps individuals rise to a more caring attitude as well as acknowledge that social failure, uncontrollable negative self-critical thinking and high physiological arousal are part of the human condition (Neff, 2003a; Werner, et al., 2012) entailing that greater self-compassion is associated with many adaptive traits and characteristics (Werner et al., 2012), providing emotional resilience through the deactivation of the threat system (the emotion regulation system that provides abilities to detect and respond to threat) and the activation of the soothing system (Gilbert, 2014; Gilbert & Proctor, 2006).

It has been found that individuals with higher social anxiety report less self-compassion, which associated with greater fear of negative and positive evaluations (Werner et al., 2012).

To our knowledge, there is no study bridging the gap between the cognitive variable of self-focused attention and the constructs of shame, self-criticism and self-compassion in a sample of adolescents with social anxiety. With the previous literature review in mind, the exploration of significant associations between the impact of self-focused attention, shame, self-criticism and self-compassion in social anxiety in adolescents becomes an important goal, therefore, constituting the aim of the present study.

Considering the main objective, and taking into account the data obtained through literature, the following hypothesis were proposed: H1. Measures of social anxiety, internal/external shame and self-criticism will be positive and significantly associated, and all these measures will be negatively and significantly associated with self-compassion; H2. Internal and external shame, self-criticism and the (lack of) self-compassion will be significant predictors of self-focused attention and social anxiety; H3. There will be a mediating effect of shame, self-criticism and (lack of) self-compassion on the relationship between self-focused attention and social anxiety.

## Method

### Sample

Participants were recruited in a convenient sample (3rd cycle and secondary schools) from urban and rural areas of the center of Portugal. In order to avoid future statistical implications, subjects were excluded according to the following exclusion criteria: (a) adolescents aged under 14 or over 18 years old, (b) incomplete fulfilling of the scales, (c) difficulty in understanding and answering the questionnaires.

This sample was composed by a total of 407 adolescents, 174 boys (42.8%) and 233 girls (57.2%). Participants' mean age was 15.47 years ( $SD = 1.44$ ), and there were no significant differences between genders concerning the distribution of this variable ( $t_{(405)} = .891$ ;  $p = .374$ ). The biggest percentage of adolescents (35.4%) were 14 years old, while the smallest had 17 years.

With regard to education the subjects were distributed between the 9<sup>th</sup> and 12<sup>th</sup> years, with the 9<sup>th</sup> year being the most prevalent, constituting 46.9% of the sample. The mean of school years was 10.03 ( $SD = 1.15$ ) and there were no significant differences across genders ( $t_{(405)} = .613$ ;  $p = .540$ ).

Regarding socioeconomic status, the majority of this sample belonged to the high socioeconomic status, and there were no significant differences between genders ( $\chi^2_{(2)} = .619$ ;  $p = .734$ ).

### Measures

A set of self-report questionnaires were used to assess social anxiety, self-focused attention, shame, self-criticism and self-compassion.

The *Social Anxiety Scale for Adolescents* (SAS-A; La Greca & Lopez, 1998) contains 22 items (including 4 filler items reflecting activity or social preferences) and assesses social anxiety experiences and fear of negative evaluation in the adolescents' peer relationships. The

answers are given in a 5-point Likert scale, higher scores corresponding to higher social anxiety. This scale has three factors: (1) Fear of Negative Evaluation (*FNE*), (2) Social Avoidance Specific to New Situations or Unfamiliar Peers (*SAD-New*) and, (3) Social Avoidance and Distress in General (*SAD-General*), with acceptable to excellent internal consistencies ( $\alpha = .76$  to  $\alpha = .91$ ) and moderate to strong temporal stability (La Greca & Lopez, 1998). In the Portuguese study (Cunha, Pinto-Gouveia, Alegre, & Salvador, 2004), the same factor structure was found, with acceptable to high internal consistencies ( $\alpha = .71$  to  $\alpha = .88$ ), acceptable temporal stability and, satisfactory convergent and divergent validities. The cut-off point of .55 allows the differential classification between adolescents with and without SAD (Cunha et al., 2004), and it was shown to be sensible to the changes due to treatment (Salvador, 2009). In this study, for statistical analysis, we only used the total, which presented an excellent internal consistency for the total ( $\alpha = .91$ ).

The *Self-focused Attention Scale for Adolescents* (SFA-A; Fontinho & Salvador, 2011) is an adaptation for adolescents of the original scale (SFA; Bögels, Alberts, & De Jong, 1996) which was developed as part of a study that intended to evaluate the relationship between self-consciousness, self-focused attention, blushing propensity and fear of blushing. SFA-A is an instrument that assesses, through a 5- point Linkert scale (where higher scores correspond to higher SFA), self-focused attention in social situations and is composed by eleven items that comprise two factors: five items measure the tendency of the subject to focus in physiological activation (*SFA-Arousal*), and the remaining six items assess self-focused attention in the subjects own behaviour during a social situation (*SFA-Behaviour*). It is therefore possible to achieve a total score as well as individual scores for each subscale. Psychometric analysis demonstrated a good internal consistency for the total result ( $\alpha = .88$ ). The Portuguese version for adolescents (Fontinho & Salvador, 2011) maintained the original format of the scale and revealed an excellent internal consistency ( $\alpha = .91$ ) and good test-retest reliability. In this study,

for the factors of the scale was obtained high internal consistencies ( $\alpha = .85$  to  $\alpha = .87$ ) and for the total score of the scale was obtained excellent internal consistency ( $\alpha = .90$ ).

The *Internalized Shame Scale for Adolescents* (ISS-A; Januário & Salvador, 2011) is the adaptation for adolescents of the original scale (ISS; Cook, 1996) and it is a measure of a trait of shame proneness or internalized shame, rather than the affect of shame. It consists on 30-item self-report inventory of internal shame designed to measure trait shame and it is composed of 2 subscales: a 24-item subscale, consisting of negatively worded items, that produces the total shame score and is the core measure of trait shame experience, and a 6-item self-esteem subscale, consisting of positively worded items, that produces a total self-esteem score. Subjects answer on a 5-point Likert scale, according to the frequency that they feel the statements presented apply to them. Higher scores indicate higher levels of internal shame. The original version obtained an excellent internal consistency ( $\alpha = .95$  in a nonclinical sample and  $\alpha = .96$  in clinical sample) in the shame subscale and a high test-retest reliability for both subscales. The Portuguese version for adolescents (Januário & Salvador, 2011) obtained excellent internal consistency ( $\alpha = .95$ ) and a high test-retest reliability for the shame subscale. A high internal consistency ( $\alpha = .84$ ) and moderate test-retest reliability for the self-esteem subscale were found. Convergent and divergent validity was also corroborated. Only the shame subscale was used in this study, which presented excellent internal consistency ( $\alpha = .96$ ).

The *Other As Shamer Scale for Adolescents- Brief Version* (OASB-A; Cunha, Xavier, Cherpe, & Pinto-Gouveia, 2014) is an adaptation of the OAS-2 (Matos, Pinto-Gouveia, Gilbert, Duarte, & Figueiredo, 2015), which in turn is a shorter version of the longer original scale for adults (OAS; Goss, Gilbert & Allan, 1994) to be applied to adolescents, as well as a shorter version of the OAS-A (Figueira & Salvador, 2010). It is composed by 8 items that explore external shame. Respondents indicate the frequency of their feelings and experiences on a 5-point Likert scale, higher scores indicating higher levels of external shame. The original scale

indicates satisfactory reliability and a three factor structure (inferiority, emptiness and “how others behave when they see me making mistakes”), and good convergent validity (Goss, Gilbert & Allan, 1994). The Portuguese longer adolescent version (OAS-A) (Figueira & Salvador, 2010) also presented a very good internal consistency ( $\alpha = .93$ ) for the total scale and good to very good for the factors (between  $\alpha = .81$  and  $\alpha = .91$ ). Satisfactory convergent validity and moderate to good temporal stability were found. The OASB-A presented an excellent internal consistency ( $\alpha = .93$ ) and factorial validity (Cunha et al., 2014). In this study, it was found an excellent internal consistency ( $\alpha = .94$ ).

The *Forms of Self-Criticizing and Reassuring Scale for Adolescents* (FSCRS-A; Silva, & Salvador, 2010) is an adaptation for adolescents of the original scale (FSCRS; Gilbert et al., 2004) that aims to assess the different forms and functions of self-criticism and self-reassuring and how individuals act in situations of error or failure. It consists of 22 items that comprise three subscales: the *inadequate self*, which captures a sense of feeling inadequate by failures and setbacks; the *reassured self*, which evaluates the ability of the self to reassure, comfort and have self-compassion; and the *hated self*, which assesses a sense of self-loathing and destructive response in failure situations. The answers are given in a 5-point Likert scale, allowing to obtain a total result of self-criticism (with the two self-criticism factors) and partial results for each of the subscales. Higher results in each factor indicate the use of a form of self-criticism or self-reassurance. Both the original version (Gilbert et al., 2004) and Portuguese version for adolescents (Silva & Salvador, 2010) presented reasonable to excellent internal consistency (from  $\alpha = .75$  to  $\alpha = .90$ ) and good temporal stability. In the present study, as a measure of self-criticism we opted to join the factors the *inadequate self* and the *hated self* in a single factor named *self-criticism*, as previously done by the authors (Gilbert et al., 2004), which presented excellent internal consistency ( $\alpha = .92$ ).



The *Self-Compassion Scale for Adolescents* (SCS-A; Cunha, Xavier, & Vitória, 2013) is also an adaptation for adolescents of the original scale (SCS; Neff, 2003b) and measures the ability to tolerate suffering with a warm and accepting attitude, using three components of self-compassion, namely (i) extending kindness and understanding to oneself rather than harsh self-criticism and judgment; (ii) seeing one's experiences as part of the larger human experience rather than as separated and isolated; and (iii) holding one's painful thoughts and feelings in balanced awareness rather than over-identifying with them. This scale is composed of 26 items divided into six subscales: (i) *self-kindness*; (ii) *self-judgement*; (iii) *common humanity*; (iv) *isolation*; (v) *mindfulness*; and (vi) *over-identification*. The answers are given in a 5-point Likert scale. For the total of the scale, the isolation, self-judgment and over-identification scales are scored reversely, so that the higher scores correspond to higher levels of self-compassion. In the adolescents version (SCS-A) (Cunha, Xavier, & Vitória, 2013), the scale revealed a high internal consistency for the total scale ( $\alpha = .85$ ) and weak to reasonable for the respective dimensions (between  $\alpha = .69$  and  $\alpha = .75$ ), as well as an average temporal stability and convergent validity. In the present study, the scale revealed reasonable to high internal consistencies ( $\alpha = .74$  to  $\alpha = .85$ ) for the dimensions and a high consistency ( $\alpha = .87$ ) for the total scale.

## **Procedure**

For the development of this study, the permission of the Ethical Commission of the Faculty of Psychology and Sciences of Education, the General Board of Innovation and Curricular Development (Direção Geral de Inovação e de Desenvolvimento Curricular - DGIDC) and the National Commission for Data Protection (Comissão Nacional de Proteção dos Dados - CNPD) were obtained. In order to obtain authorization from respective Directions for the sampling in institutions, 12 schools of the central province were contacted, 4 of which

agreed to collaborate. Adolescents and parents informed consents were gathered, being highlighted the study's volunteer and confidential character.

After obtaining the parents and adolescents informed consent, a protocol with all the measures previously described was administrated in a classroom setting. In line with ethical requirements, research's purposes were briefly explained to all students in which the voluntary nature of participation was made explicit, as well as some recommendations on filling the instruments (e.g. absence of right or wrong answers). Data confidentiality and anonymity were assured, as well as the use of the data exclusively for the research's purposes. The protocol also included a brief socio-demographic questionnaire relevant to the sample description. Each protocol took around 30 minutes and was balanced to avoid answer contamination and fatigue effects.

### **Data Analysis**

Adherence to normality was assessed using the Kolmogorov-Smirnov test, and the deviations by asymmetry (skeweness) and tailedness (kurtosis). The analysis of the outliers was made by plotting the results (boxplot graph).

For the verification of differences between genders, we used the analysis of variance (One Way ANOVA). The interpretation of the effect size parameter was based on Cohen's (1988) criteria, where partial eta-square values between 0.1 and 0.6 were considered low, between .07 e .13 medium and above .14 were considered large.

As reference values for the analysis of internal consistency indices, it was considered the stipulated values by Pestana and Gageiro (2005a), indicating that a Cronbach value of less than .60 as inadmissible; between .60 and .70 weak; between .70 and .80 acceptable; between .80 and .90 high and between .90 and 1 excellent.

To carry out the correlations, we used the parametric *Pearson* test. In assessing the magnitude of correlations we considered the values given by Pestana and Gageiro (2005a),

suggesting that a correlation coefficient lower than .20 reveals a very low association; between .21 and .39 low association; between .40 and .69 moderate; between .70 and .89 high and more than .90 an excellent association.

To carry out the regressions, it was taken into account the assumptions referenced by Pestana and Gageiro (2005b): linearity, homoscedasticity (measured through Goldfield and Quandt test) autocorrelation (measured by Durbin-Watson test) and independence and normality of errors. Since we intended to analyse the mediating effect of changeable variables between an independent variable and a dependent variable, mediation analysis were conducted (Jose, 2013). We sought to identify if the presence of the mediator variable (in regression) decreased the magnitude of the relationship between an independent variable and the dependent variable (Abbad & Torres, 2002). For this, we used the Baron and Kenny (1986) model, where it is considered that for a variable to be considered a mediator and consequently determine the significance of the mediation, 4 conditions were to be presented (Kenny, 2016): (i) to establish the existence of an effect size by a simple linear regression between the independent variable and dependent variable (path c); (ii) calculate, through a linear regression, the predictive power of the independent variable in the mediating variable (path a); (iii) calculate the predictive power of the mediating variable in the dependent variable through a simple linear regression (path b); and (iv) calculate the predictive power of the independent variable and of the mediating variable on the dependent variable, through a multiple linear regression (path c'). Finally, the Sobel test method was used to test the significance of the mediation (Sobel 1982).

## Results

### Preliminary Analysis

The normal distribution of the variables was confirmed, as well as linearity, homoscedasticity and independence and normality of errors. Although there were outliers in the sample, they were not eliminated in order to insure ecological validity.

### Descriptive Statistics Analysis

The descriptive statistics regarding the variables of the study sample are presented in

Table 1.

Table 1.

*Comparison of the means, standard deviations and partial eta square of the measures in study by gender and total sample (N = 407). One Way ANOVA for verification of differences.*

Measures	Boys	Girls	Total	F	P	$\eta^2$
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>			
SAS-A	42.58 (13.08)	47.91 (14.01)	45.63 (13.86)	15.23	.000	.036
SFA-A_Arousal	5.97 (4.77)	7.50 (5.35)	6.84 (5.16)	8.95	.003	.022
SFA-A_Behaviour	9.89 (5.78)	10.48 (5.96)	10.22 (5.88)	.99	.321	.002
SFA-A_Total	15.86 (9.40)	17.97 (10.26)	17.07 (9.95)	4.56	.033	.011
ISS-A	22.13 (19.05)	32.63 (20.59)	28.14 (20.59)	27.61	.000	.064
OASB-A	6.15 (5.70)	8.27 (6.58)	7.37 (6.30)	11.64	.001	.026
FSCRS-A_Reassured self	19.66 (7.16)	18.16 (6.70)	18.80 (6.93)	4.67	.031	.011
FSCRS-A_Self-criticism	12.68 (10.46)	16.48 (11.43)	14.86 (11.71)	11.79	.001	.028
SCS-A_Kindness	13.24 (4.61)	13.01 (4.13)	13.10 (4.34)	.28	.595	.001
SCS-A_CommonHumanity	10.35 (3.43)	11.37 (3.70)	10.93 (3.62)	8.04	.005	.019
SCS-A_Mindfulness	11.37 (3.67)	11.36 (3.30)	11.36 (3.46)	.00	.983	.000
SCS-A_Self-judgment	19.84 (3.92)	17.57 (4.84)	18.54 (4.61)	25.76	.000	.060
SCS-A_Isolation	15.53 (3.51)	13.97 (3.82)	14.63 (3.77)	17.84	.000	.042
SCS-A_Over-identification	16.13 (3.20)	14.05 (3.58)	14.94 (3.57)	36.83	.000	.083
SCS-A_Total	86.45 (13.48)	81.32 (15.20)	83.51 (14.70)	12.51	.000	.030

*Note.* SAS-A= Social Anxiety Scale for Adolescents. ISS-A= Internalized Shame Scale for Adolescents. OASB-A= Other As Shamer Scale for Adolescents-Brief Version. FSCRS-A= Forms of Self-Criticizing and Reassuring Scale for Adolescents. SCS-A= Self-Compassion Scale for Adolescents.

Although the ANOVA indicated that boys and girls significantly differed in several of the measures, the use of the partial eta square only revealed moderate effects in one of them

(SCS-A\_Over-Identification). Therefore, we decided not to control the effect of gender in subsequent analyses.

### **Association between Social Anxiety, Self-focused Attention, Internal Shame, External Shame, Self-Criticism and Self-Compassion**

The correlation results between the different measures used in this study are presented in the appendix.

The Pearson's product-moment correlations indicated the relationships between the studied variables. Correlations showed that self-focused attention, social anxiety, shame (whether internal or external) and self-criticism were positively, significantly and moderately to highly associated. The negative factors of self-compassion (*self-judgment, isolation and over-identification*) presented significant negative moderate to high correlations with all other variables. On the other hand, the positive factors of self-compassion (*kindness, common humanity, mindfulness*) presented very low correlations with all other variables, with the exception of the correlation with the *reassured-self*, with which the correlation was significant, positive and moderate.

Considering that the *reassured-self* factor of the FSCRS-A and the *kindness, common humanity* and *mindfulness* factors of the SCS-A were not correlated neither with self-focused attention nor with social anxiety, in the subsequent analysis we opted to only consider the value obtained in the *self-criticism* factor of the FSCRS-A and the *self-judgement, isolation and over-identification* of the SCS-A.

### **The predictive effect of Self-focused Attention, Shame, Self-Criticism and Self-Compassion in Social Anxiety**

The analysis began with the prediction of social anxiety (SAS-A) by self-focused attention (SFA-A factors). Social anxiety (SAS-A) was predicted by both factors (*arousal and*

*behaviour*) of self-focused attention, that explained 30.10% of the variance ( $R^2 = .301$ ,  $F_{(2, 404)} = 86.913$ ;  $p < .001$ ;  $\beta_{Arousal} = .428$ ,  $p < .001$ ;  $\beta_{Behaviour} = .168$ ,  $p = .002$ ).

Next, we analysed the predictive power of shame, both internal (ISS-A) and external (OASB-A), on social anxiety (SAS-A), including both independent variables in the same block. Both predicted 49.80% of social anxiety ( $R^2 = .498$ ,  $F_{(2,404)} = 200.481$ ,  $p < .001$ ;  $\beta_{ISS-A} = .366$ ,  $p < .001$ ;  $\beta_{OASB-A} = .383$ ,  $p < .001$ ).

Self-criticism explained 32.70 % of social anxiety ( $R^2 = .327$ ,  $F_{(1,405)} = 196.349$ ,  $p < .001$ ;  $\beta = .571$ ,  $p < .001$ ).

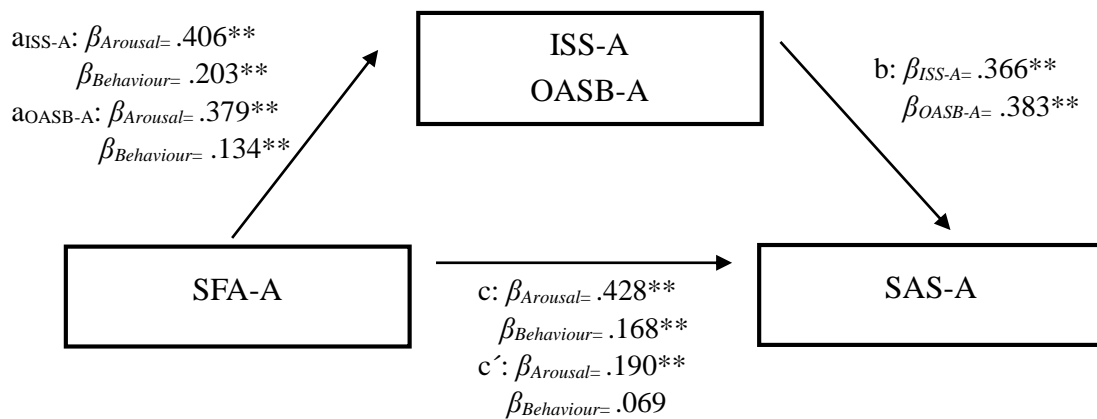
Regarding self-compassion, we tried to find out which of the three self-compassion measures better predicted social anxiety, putting the three in the same block. It was found that (the lack of) self-compassion explained 33.80% of variance ( $R^2 = .338$ ,  $F_{(3,403)} = 68.611$ ,  $p < .001$ ) and that the *self-judgment* factor did not predict social anxiety ( $\beta = -.032$ ,  $p = .653$ ), meaning that only the *isolation* ( $\beta = -.422$ ,  $p < .001$ ) and *over-identification* ( $\beta = -.164$ ,  $p = .024$ ) factors significantly predicted social anxiety.

### **The mediating effect of Shame in the relationship between Self-focused Attention and Social Anxiety**

Following Baron and Kenny's (1986) recommendation, all required pre-requisites for mediation were met. As it was previously confirmed, there was a predictive relationship of both factors of self-focused attention (SFA-A) ( $R^2 = .301$ ,  $F_{(2, 404)} = 86.913$ ;  $p < .001$ ;  $\beta_{Arousal} = .428$ ,  $p < .001$ ;  $\beta_{Behaviour} = .168$ ,  $p = .002$ ) on social anxiety (SAS-A) – *path c*. Regarding *path a*, it was found that both SFA-A<sub>Arousal</sub> and SFA-A<sub>Behaviour</sub> were significant predictors of both shames, explaining 22.40 % of the variance of external shame ( $R^2 = .224$ ,  $F_{(2,404)} = 58.312$ ,  $p < .001$ ;  $\beta_{Arousal} = .379$ ,  $p < .001$ ;  $\beta_{Behaviour} = .134$ ,  $p < .001$ ) and 30.90% of the variance of internal shame ( $R^2 = .309$ ,  $F_{(2,404)} = 90.146$ ,  $p < .001$ ;  $\beta_{Arousal} = .406$ ,  $p < .001$ ;  $\beta_{Behaviour} = .203$ ,  $p < .001$ ).

Next, both shames predicted social anxiety (SAS-A), explaining 49.80% of the variance ( $R^2 = .498$ ,  $F_{(2,404)} = 200.481$ ,  $p < .001$ ;  $\beta_{ISS-A} = .366$ ,  $p < .001$ ;  $\beta_{OASB-A} = .383$ ,  $p < .001$ ) – *path b*.

Finally, we performed a mediation considering social anxiety as a dependent variable, the SFA-Arousal and SFA-ABehaviour as independent variables and internal and external shame as mediating variables – *path c'*. With regard to the relationship between both factors of self-focused attention and social anxiety, internal and external shame were revealed as mediators and explained 23.70% of social anxiety (Model 2:  $R^2 = .537$ ,  $F_{(4,402)} = 116.732$ ,  $p < .001$ ;  $\Delta R^2 = .237$ ,  $\Delta F_{(2,402)} = 102.765$ ,  $p < .001$ ;  $\beta_{ISS-A} = .254$ ,  $p < .001$ ;  $\beta_{OASB-A} = .357$ ,  $p < .001$ ). When internal and external shame were introduced, SFA-Behaviour lost its predictive effect ( $\beta_{Behaviour} = .069$ ,  $p = .119$ ) while the SFA-Arousal decreased its effect ( $\beta_{Arousal} = .190$ ,  $p < .001$ ), pointing to a total and partial mediation, respectively.



**Figure 1**

*The relationship between social anxiety (SAS) and self-focused attention (SFA-A), mediated by shame (ISS-A; OASB-A)*

**Note:** a = relationship between independent variable and mediator; b = relationship between mediator and dependent variable; c = direct effect of the independent variable on the dependent variable; c' = indirect effect of the independent variable on the dependent variable when controlled by the mediator.

\*\* $p < .01$

Finally, we calculated the Sobel test, which proved to be significant, revealing that both the internal ( $z_{Arousal} = 4.96$ ,  $p < .001$ ;  $z_{Behaviour} = 3.37$ ,  $p = .76$ ) and external shame ( $z_{Arousal} = 4.82$ ,

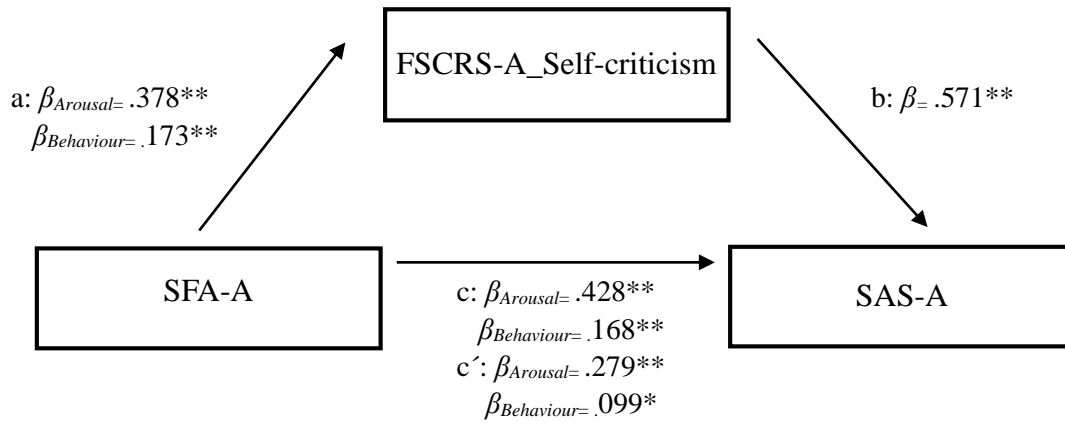
$p < .001$ ;  $z_{Behaviour} = 2.25, p = .70$ ) were significant mediators of the relationship of the *arousal* factor of self-focused attention and social anxiety.

### **The mediating effect of Self-Criticism in the relationship between Self-focused Attention and Social Anxiety**

As mentioned previously, there was a predictive relationship of both factors of self-focused attention (SFA-A) ( $R^2 = .301, F_{(2, 404)} = 86.913, p < .001; \beta_{Arousal} = .428, p < .001; \beta_{Behaviour} = .168, p = .002$ ) on social anxiety (SAS-A) – *path c*. With reference to *path a*, it was found that both SFA-A<sub>Arousal</sub> and SFA-A<sub>Behaviour</sub> were significant predictors of self-criticism, explaining 25.40 % of the variance ( $R^2 = .254, F_{(2,404)} = 68.839, p < .001; \beta_{Arousal} = .378, p < .001; \beta_{Behaviour} = .173, p < .001$ ). Self-criticism also predicted social anxiety (SAS-A), explaining 32.70 % of the variance ( $R^2 = .327, F_{(1,405)} = 196.349, p < .001; \beta = .571, p < .001$ ) – *path b*.

It was performed a mediation considering social anxiety as a dependent variable, SFA-A<sub>Arousal</sub> and SFA-A<sub>Behaviour</sub> as independent variables and self-criticism as the only mediating variable – *path c'*. Regarding the relationship between both factors of self-focused attention and social anxiety, self-criticism was revealed as a mediator and explained 11.70% of social anxiety (Model 2:  $R^2 = .418, F_{(3,403)} = 96.294, p < .001; \Delta R^2 = .117, \Delta F_{(1,403)} = 80.745, p < .001; \beta = .396, p < .001$ ). Although both factors of the SFA-A maintained statistically significant with the introduction of self-criticism ( $\beta_{Arousal} = .279, p < .001; \beta_{Behaviour} = .099, p = .043$ ), it was verified that the SFA-A<sub>Arousal</sub> had a larger effect. Thus, the results point to a partial mediation.





**Figure 2**

*The relationship between social anxiety (SAS) and self-focused attention (SFA-A), mediated by self-criticism (FSCRS-A\_Self-criticism)*

**Note:** a= relationship between independent variable and mediator; b = relationship between mediator and dependent variable; c = direct effect of the independent variable on the dependent variable; c' = indirect effect of the independent variable on the dependent variable when controlled by the mediator.

\* $p < .05$ , \*\* $p < .01$

The results of the Sobel test proved to be significant, revealing that self-criticism was a significant mediator of the relationship of self-focused attention and social anxiety ( $z_{Arousal} = .6.98, p < .001$ ;  $z_{Behaviour} = 6.33, p < .001$ ).

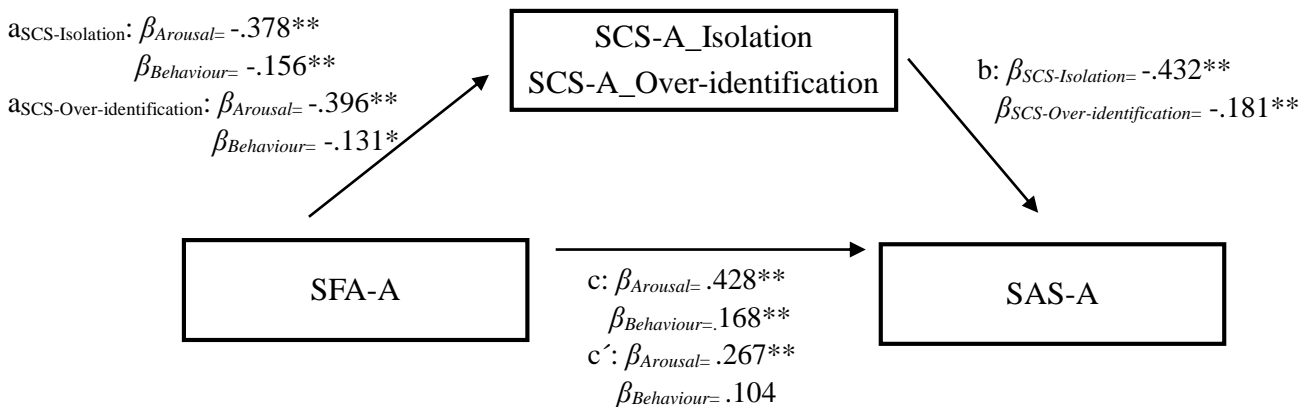
### **The mediating effect of Self-Compassion in the relationship between Self-focused Attention and Social Anxiety**

In the mediation analysis, and taking into account the results of the regression analysis, we chose to use only the *isolation* and *over-identification* factors as representative mediators of self-compassion variable, since only these proved to have explanatory power of social anxiety.

As seen before, there was a predictive relationship of both factors of self-focused attention (SFA-A) ( $R^2 = .301, F_{(2, 404)} = 86.913; p < .001$ ;  $\beta_{Arousal} = .428, p < .001$ ;  $\beta_{Behaviour} = .168, p = .002$ ) on social anxiety (SAS-A) – *path c*. Subsequently, it was analysed the predictive power of both SFA-A<sub>Arousal</sub> and SFA-A<sub>Behaviour</sub> on (lack of) self-compassion – *path*

*a*, which explained 24 % of the variance of *isolation* ( $R^2 = .24$ ,  $F_{(2,404)} = 63.887$ ,  $p < .001$ ;  $\beta_{Arousal} = -.378$ ,  $p < .001$ ;  $\beta_{Behaviour} = -.156$ ,  $p = .005$ ) and 23.80% of the variance of *over-identification* ( $R^2 = .238$ ,  $F_{(2,404)} = 63.218$ ,  $p < .001$ ;  $\beta_{Arousal} = -.396$ ,  $p < .001$ ;  $\beta_{Behaviour} = -.131$ ,  $p = .019$ ). Concerning *path b*, both factors of (lack of) self-compassion predicted social anxiety (SAS-A), explaining 33.80% of the variance ( $R^2 = .338$ ,  $F_{(2,404)} = 103.019$ ,  $p < .001$ ;  $\beta_{Isolation} = -.432$ ,  $p < .001$ ;  $\beta_{Over-identification} = -.181$ ,  $p = .004$ ).

Finally, we performed a mediation considering social anxiety as a dependent variable, the SFA-A<sub>Arousal</sub> and SFA-A<sub>Behaviour</sub> as independent variables and *isolation* and *over-identification* factors as mediating variables – *path c'*. Model 2 was significant, and both (lack of) self-compassion factors explained 12.20% of social anxiety (Model 2:  $R^2 = .417$ ,  $F_{(2,402)} = 73.533$ ,  $p < .001$ ;  $\Delta R^2 = .122$ ,  $\Delta F_{(2,402)} = 42.359$ ,  $p < .001$ ). However only the *isolation* factor was as a significant mediator, ( $\beta_{Isolation} = -.336$ ,  $p < .001$ ;  $\beta_{Over-identification} = -.087$ ,  $p = .142$ ). SFA-Behaviour lost its predictive effect ( $\beta_{Behaviour} = .104$ ,  $p = .133$ ) while the SFA-Arousal decreased its effect ( $\beta_{Arousal} = .267$ ,  $p < .001$ .), pointing to a total and partial mediation, respectively.



**Figure 3**

*The relationship between social anxiety (SAS) and self-focused attention (SFA-A), mediated by the lack of self-compassion (SCS-A\_Isolation; SCS-A\_Over-identification).*

**Note:** *a* = relationship between independent variable and mediator; *b* = relationship between mediator and dependent variable; *c* = direct effect of the independent variable on the dependent variable; *c'* = indirect effect of the independent variable on the dependent variable when controlled by the mediator.

\* $p < .05$ , \*\* $p < .01$

The Sobel test proved to be significant, revealing that *isolation* ( $z_{Arousal} = 2.25, p = .02$ ;  $z_{Behaviour} = .33, p = .74$ ) was a significant mediator of the relationship of the *arousal* factor of self-focused attention and social anxiety.

## Discussion

The present study aimed to explore the relationship between self-focused attention, considered by the cognitive models as an important maintenance factor of social anxiety, and the constructs of shame, self-criticism and the (lack of) self-compassion, which have been shown to be highly associated with the disorder. To carry out this aim, correlations and regressions were calculated to analyse the relationships between variables. The mediating effect of shame, self-criticism and self-compassion on the relationship of self-focused attention and social anxiety was also explored.

The relationship found between social anxiety and self-focused attention, confirmed that self-focused attention is increased in social anxiety, and that individuals tend to focus their attention towards themselves when confronted with feared social situations (Bögels & Mansell, 2004; Hoffman, 2000; Woody & Rodriguez, 2000). The measure of social anxiety presented the strongest correlation with external and internal shame, with similar magnitudes. This correlation hypothesizes that social anxiety in adolescents is associated with the way one thinks others see the self, as well as the negative perception that the individual has regarding his personal attributes and behaviours (Gilbert, 2000; Gilbert & Irons, 2008; Gilbert & Procter, 2006). These results corroborate H1, as well as go in line with previous studies conducted in both adult and adolescent population (Garcia & Salvador, 2013; Januário & Salvador, 2011; Rebelo & Salvador, 2012; Shahar, Doron, & Szepeswol, 2014). Nevertheless, although both shames are associated with social anxiety, higher correlations between social anxiety and internal shame have been found in Portuguese studies with adults (Fernandes & Salvador,

2014; Seabra & Salvador, 2014; Xavier & Salvador, 2011). This can be explained by the fact that adolescents are still highly sensitive to the way they exist in others (parents and peers) minds, with the subsequent internalization of this information about themselves. Therefore, it is understandable that both external and internal shame may be related to social anxiety. However, in adulthood, probably due to previous developmental periods with vulnerable experiences, namely shame experiences, individuals may already have internalized these shame prone experiences, resulting in seeing and evaluating the self as flawed, inferior, rejectable, and self-condemning, as others have previously done (Gilbert, 2002; Gilbert & Irons, 2004; Tangney & Dearing, 2002). In fact, social anxiety in adulthood has been shown to be related to the rumination on negative aspects of the self, where individuals become focused on personal deficits and perceived inadequacies (Gilbert, 1997; Gilbert & Procter, 2006). This may be related to a stronger association of social anxiety with internal shame where individuals expect others to evaluate them negatively due to their perceived personal flaws.

The relationships of social anxiety with self-criticism (positive association) and (lack of) self-compassion (negative association) were also corroborated. On one hand, this supports that individuals with social anxiety tend to have a tendency to self-criticize, which may be due to negative comparison with others (Gilbert & Irons, 2004) and that when faced with high levels of social anxiety, self-criticism may become a self-correction strategy to cope with failure and prevent or correct inadequate behaviour, in order to reduce the likelihood of being rejected or criticized. On the other hand, the negative association with the negative factors of self-compassion, goes in line with previous findings (Cox et al., 2002; Werner et al., 2012), showing that individuals with social anxiety engage in more self-critical strategies to prevent future errors, in greater isolation in their suffering and over-identify with thoughts and feelings, therefore possessing lower levels of self-compassion regarding their perceived failures. Concerning the positive factors of self-compassion, a significant association was not found.

This may indicate that it may not be necessary for adolescents to be kind and accepting with their errors in situations that cause social anxiety, as long as they do not involve themselves in self-attacking strategies, isolation and over-identification. In turn, these results may also mean that adolescents may not yet have developed self-compassion competencies, which they may do later in life.

Self-criticism and the (lack of) self-compassion were correlated with self-focused attention (positively and negatively, respectively), suggesting that the increase of self-awareness can underline errors that will posteriorly be subject to negative internal attributions and self-criticism, probably related with the fact that one is not being mindful and kind with ones thoughts and feelings. This may be due to the activation of the threat system, which entails identifying and focusing on the self, whether on behaviour or physiological arousal, in order to protect from perceived danger.

The strongest correlation presented in the study was between self-criticism and internal shame, going in line with Gilbert's (2000; Gilbert & Procter, 2006) suggestion that internal shame is linked to self-critical dialogues and an inability to be caring and compassionate towards the self. This correlation was expected since self-criticism has more of a personal nature, focusing on the negative perceptions of the adolescent.

Regarding the regression analysis, it was found that social anxiety was predicted by both factors of self-focused attention, however the *arousal* factor was more significant. This result indicates that individuals with social anxiety may be more concerned about their physiological symptoms, since it is an automatic reaction that they cannot control, rather than the way they behave, which can be controlled through safety behaviours. This may be due to the fact that they create an image of themselves in consistency with their bodily sensations, inferring an inadequate image they believe that others will have of them, which may entail a threat to the social self. Therefore, this attentional process can be considered as a central factor

in the exacerbation and maintenance of social anxiety (Clark & Wells, 1995), since adolescents believe that other people are as attentive to their behaviours and appearance as they are of themselves.

Internal and external shame were both predictors of social anxiety, implicating that there is a high association between levels of social anxiety and external and internal shame cognitions, where if one thinks of oneself as inadequate, and expects others to see the self in the same way (Goss et al., 1994), one may experience higher levels of social anxiety. These findings are in line with other studies conducted (Cunha et al., 2012; Rappe & Heimberg, 1997), which emphasise that anxiety may be heightened due to the importance of how the self perceives himself, as well as the sense of self as existing negatively in the eyes of others. This confirms the results previously found in the correlation analysis.

Self-criticism also predicted 32.70 % of social anxiety, confirming that self-criticism is considered an important construct in the development and maintenance of social-anxiety, and that changes in self-criticism may be significantly associated with the improvement of socially anxious symptoms (Cox et al., 2000; Cox, Walker, Enns, & Karpinski, 2002; Cox et al., 2004).

Regarding the (lack of) self-compassion, only the *isolation* and *over-identification* factors significantly predicted social anxiety. Thus, the sense of feeling imperfect and different from others and over-identifying with their negative thoughts predicts the fear of negative evaluations by others. Although these findings appear to indicate that adolescents do not respond with self-judgment after errors or failures, self-criticism was a significant predictor of social anxiety. Therefore, this may entail that self-critical thoughts are explained due to adolescents feeling isolated and over-identifying with their thoughts.

All these results regarding regression analysis totally confirmed H2.

Concerning the mediation analysis, both internal and external shame were shown to be significant mediators in the relationship between self-focused attention and social anxiety.

However, when these mediated variables were introduced in the model, self-focused attention on the *arousal* was still a significant predictor of social anxiety while self-focused attention on *behaviour* totally lost its predictive effect. Both these effects were confirmed by the sobel test, indicating a partial and total mediation, respectively. This indicates that the effect on social anxiety of self-focused attention on *behaviour* is totally due to the way adolescents believe they are inadequate and feel insecure regarding others perceptions, being more likely to fear negative evaluations and to avoid social situations, which may suggest that during a social situation self-consciousness and monitoring of adolescents' behaviour may be a defense strategy in order to manage self-presentation and to avoid shame experiences. However, the effect on social anxiety of self-focused attention on *arousal* is both direct and indirect, meaning that *arousal* may have a stronger and primary effect on social anxiety.

It was also obtained a significant partial mediation of self-criticism in the relationship between self-focused attention and social anxiety. This demonstrates that the impact of self-focused attention in adolescents with social anxiety is partially due to self-criticism. Therefore, when adolescents focus on aspects that they interpret as inadequate and inferior to others, they criticise themselves, expecting others to also perceive their errors and failures. However, the *arousal* factor had a larger effect, suggesting that when adolescents are being self-critical, they are more aware of their bodily sensations, which may be due to the fact that anxiety problems often involve a fear of bodily sensations and subsequently trying to avoid having those sensations, since these can be noticed by others, which may culminate in criticism.

In the mediation analysis, only the *isolation* factor was shown to be a significant mediator in the relationship between self-focused attention and social anxiety. When mediating variables were introduced in the model, self-focused attention on the *arousal* was still a significant predictor of social anxiety while self-focused attention on *behaviour* totally lost its predictive effect. In accordance to the sobel test, it is indicated a partial and total mediation,

respectively. Thus, this suggests that the effect on social anxiety of self-focused attention on *behaviour* is totally due to the adolescents perception of their behaviour as an isolating experience, that is, of feeling alone in their struggles with inadequacy or failure, rather than as part of a larger human experience. This explanation can also be applied to the indirect effect of self-focused attention on *arousal* on social anxiety, although a direct effect was still maintained.

Not all the proposed mediating variables were proved to be significant mediating variables. Therefore, H3 was partially confirmed.

To our knowledge, this study was the first to analyse the role of shame, self-criticism and self-compassion in the relationship between self-focused attention and social anxiety in a sample of adolescents, and it may suggest some clinical implications. Given the high incidence of adolescents with social anxiety and social anxiety disorder, and taking into account that it is not enough for adolescents to engage in self-focused attention to increase social anxiety, being necessary the activation of the shame processes, self-critical thinking and feelings of isolation, we believe that these variables should be addressed through Compassion focused Therapy, to promote effective intervention strategies. Thus, introducing explicit training in self-compassion to deshame adolescents and to help them not to criticise themselves, or to feel they are different from others for whatever they may be aware to in the process of self-focused attention, may be relevant in the treatment of social anxiety disorder.

Despite the relevance of this study, the findings presented should be considered taking into account some methodological limitations. First, the sample was only collected in the centre region of Portugal, which does not permit a generalization of the results obtained. Second, all analysis depended on a cross-sectional design, which does not allow the establishment of causal relationships between variables. Thus, short-term longitudinal studies would be better to further explore etiological pathways. Also, long-term longitudinal studies could be extremely



interesting in the study of the impact of shame, self-criticism and self-compassion across developmental stages (children, adolescents and adults).

Future research might profit from the use of non-self-report instruments such as structured interviews that allow a more insightful, accurate and comprehensive exploration of the impact of these variables in social anxiety. Moreover, it would also profit from the use of activating strategies to enhance the assessment of the variables in social situations and their cognitive and behavioural impact on adolescents. The impact of these variables should also be studied in a clinical sample, since it is along this population that we can better understand the phenomenon of social anxiety and its association with the respective studied constructs.

Despite its limitations, this study may be useful for research and clinical practice, stressing the importance of giving clinical attention to the perception the adolescent has about the self (internal shame) and the processes of self-criticism and self-compassion, rather than predominantly working on the anticipation of negative evaluation from others biased cognitive processes.

### **Bibliographic References**

- Abbad, G., & Torres, C. V. (2002). Regressão múltipla stepwise e hierárquica em psicologia organizacional: Aplicações, problemas e soluções. *Estudos em Psicologia Natal*, 7, 19-29.
- Albano, A. M., DiBartolo, P. M., Heimberg, R. G., & Barlow, D. H., (1995). Children and Adolescents: Assessment and Treatment. In R. Heimberg, M. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment and treatment*. (pp387–426). New York: Guilford Press.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental Disorders: DSM-5* (5<sup>a</sup> ed.). Washington, DC: New School Library.

- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173-1182.
- Barret, K. C. (1995). A functionalist approach to shame and guilt. In J. P. Tangney, & K. W. Fischer, (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp25-63). New York: Guilford.
- Bögels, S. M., Alberts, M., & Jong, P. (1996). Self-consciousness, self-focused attention, blushing propensity and fear of blushing. *Personality and Individual Differences*, *21*, 573-581.
- Bögels, S. M., & Mansell, W. (2004). Attention processes in the maintenance and treatment of social phobia: hypervigilance, avoidance and self-focused attention. *Clinical Psychology Review*, *24*, 827-856. doi:10.1016/j.cpr.2004.06.005
- Carvalho, A. R., & Salvador, M. C. (2012). Fobia Social na Adolescência: o Impacto e Prevalência de uma Perturbação Silenciosa. Manuscrito não publicado. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.
- Clark, D. M., & Wells, A. (1995). A cognitive model of social phobia. In R. Heimberg, M. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment and treatment*. (pp 69–93). New York: Guilford Press.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2<sup>a</sup> ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cook, D. R. (1996). *Internalized Shame Scale. Technical manual*. North Tonawanda, New-York: Multi-Health Systems, Inc.

- Cox, B. J., Fleet, C., & Stein M, B. (2004) Self-criticism and social phobia in the US national comorbidity survey. *Journal of Affective Disorders*, 82(2), 227-234. doi:10.1016/j.jad.2003.12.012
- Cox, B. J., Rector, N. A., Bagby, R. M., Swinson, R. P., Levitt, A. J., & Joffe, R. T. (2000). Is self-criticism unique for depression? A comparison with social phobia. *Journal of Affective Disorders*, 57(13), 223-228. doi: 10.1016/S0165-0327(99)00043-9.
- Cox, B. J., Walker, J. R., Enns, M. W., & Karpinski, D. C. (2002). Self-criticism in generalized social phobia and response to cognitive-behavioural treatment. *Behavior Therapy*, 33 (4), 479-491. doi: 10.1016/S0005-7894(02)80012-0
- 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.
- Cunha, M., Pinto Gouveia, J., Alegre, S. & Salvador, M. C. (2004). Avaliação da ansiedade social na adolescência: A versão portuguesa da SAS-A. *Psychologica*, 35, 249-263.
- Cunha, M., Xavier, A., Cherpe, S., & Pinto-Gouveia, J. (2014). *Avaliação da vergonha externa em adolescentes: 'Other as Shamer Scale'*. Manuscrito submetido para publicação. Coimbra.
- Cunha, M., Xavier, A., Vitória, I. (2013). Avaliação da Auto-compaixão em Adolescentes: Adaptação e Qualidades Psicométricas da Escala de Auto-compaixão. *Revista de Psicologia da Criança e do Adolescente*, 4 (2), 95-117.
- Essau, C. A., Conradt, J., & Petermann, F. (1999). Frequency and comorbidity of social phobia and social fears in adolescents. *Behaviour research and therapy*, 37(9), 831-43.

- Fernandes, A. F., & Salvador, M. C. (2014). *O Contributo de Variáveis Evolucionárias nos Processos Atencionais na Perturbação de Ansiedade Social*. Manuscrito não publicado. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.
- Figueira, S., & Salvador, M. C. (2010). *A Escala de Vergonha Externa para Adolescentes (OAS-A): Características Psicométricas numa amostra da população portuguesa*. Manuscrito não publicado. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.
- Fontinho, A., & Salvador, M. C. (2011). *Questionário do Focus de Atenção (FAQ): estudo da dimensionalidade e das características psicométricas do FAQ para adolescentes da população portuguesa*. Manuscrito não publicado. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.
- Garcia, C., & Salvador, M. C. (2013). Fobia Social Específica e Generalizada: diferenças e semelhanças na relação com a vergonha e autocrítico. Manuscrito não publicado. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.
- Gilbert, P. (1997). The evolution of social attractiveness and its role in shame, humiliation, guilt and therapy. *British Journal of Medical Psychological*, 70, 113-147. doi: 10.1111/j.2044-8341.1997.tb01893.x
- Gilbert, P. (1998). What is Shame? Some Core Issues and Controversies. In P. Gilbert & B. Andrews (Eds.), *Shame, Interpersonal Behavior, Psychopathology, and Culture*. (pp3-38). New York: Oxford University Press.
- Gilbert, P. (2000). The Relationship of Shame, Social Anxiety and Depression: The Role of the Evaluation of Social Rank. *Clinical Psychology and Psychotherapy*, 7, 174-189. doi: 10.1002/1099-0879(200007)7:3<174

- 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* (3–54). London: Brunner- Routledge.
- Gilbert, P. (2005) *Compassion: Conceptualisations, Research and Use in Psychotherapy*. London: Routledge.
- Gilbert, P. (2007). The evolution of shame as a marker for relationship security: A biopsychosocial approach. In J. L. Tracy, R. W. Robins & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp283-309). New York: Guilford
- Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology*, 53, 6–41. doi:10.1111/bjc.12043
- Gilbert, P., Clark, M., Hempel, S., Miles, J. N. V. & Irons, C. (2004) Criticising and reassuring oneself: An exploration of forms, styles and reasons in female students. *British Journal of Clinical Psychology*, 43, 31-50. doi: 10.1348/014466504772812959
- Gilbert, P., & Irons, C. (2005). Focused therapies and compassionate mind training for shame and self-attacking. In P. Gilbert (Ed.), *Compassion: Conceptualisations, research and use in psychotherapy* (pp263–325). London: Routledge
- Gilbert, P., & Irons, C. (2008). Shame, self-criticism and self-compassion in adolescence. In Allen.N., & Sheeber, L., *Adolescent Emotional Development and the Emergence of Depressive Disorders* (pp195-214). Cambridge: Cambridge University Press.
- Gilbert, P., & Miles, J. N. V. (2000). Sensitivity to Social Put-Down: it's relationship to perceptions of social rank, shame, social anxiety, depression, anger and self-other blame. *Personality and Individual Differences*, 29, 757-774. doi:10.1016/S0191-8869(99)00230-5

- Gilbert, P., Pehl, J., & Allan, S. (1994). The phenomenology of shame and guilt: An empirical investigation. *British Journal of Medical Psychology*, *67*, 23-36. doi: 10.1111/j.2044-8341.1994.tb01768.x
- Gilbert, P., & Procter, S. (2006). Compassion mind training for people with high shame and self-criticism: overview and pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy*, *13*, 353-379. doi: 10.1002/cpp.507
- Goss, K., Gilbert, P., & Allan, S. (1994). An exploration of shame measures. The “Other as Shamer Scale”. *Personality and Individual Differences*, *17*, 713-717. doi: 10.1016/0191-8869(94)90149-X
- Higa, C. K., & Daleiden, E. L. (2008). Social anxiety and cognitive biases in non-referred children: The interaction of self-focused attention and threat interpretation biases. *Journal of Anxiety Disorders*, *22* (3), 441-452. doi: 10.1016/j.janxdis.2007.05.005
- Hoffman, S. G. (2000). Self-focused attention before and after treatment of social phobia. *Behavior Research and Therapy*, *38*, 717-725.
- Ingram, R. E. (1990). Self-focused attention in Clinical Disorders: Review and a Conceptual Model. *Psychological Bulletin*, *107*(2), 156-176. doi: 10.1037/0033-2909.107.2.156
- Januário, P., & Salvador, M. C. (2011). *A versão portuguesa da Escala de Vergonha Interna para adolescentes (ISS-A): Características psicométricas*. Manuscrito não publicado. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.
- Jose, P. (2013). *Doing statistical mediation & moderation*. New York: The Guilford Press.
- Kenny, D. (2016). The four steps. Retrieved from: <http://davidakenny.net/cm/mediate.htm#BK>

- Kley, H., Tuschen-Caffier, B., Heinrichs, N. (2012). Safety behaviors, self-focused attention and negative thinking in children with social anxiety disorder, socially anxious and non-anxious children. *Journal of Behavior Therapy and Experimental Psychiatry*, 43, 548-555. doi: 10.1016/j.jbtep.2011.07.008
- Kocovski, N. L., Endler, N. S., Rector, N. A., & Flett, G. L. (2005). Ruminative coping and post-event processing in social anxiety. *Behavioral Research Theory*, 43(8), 971-984. doi: 10.1016/j.brat.2004.06.015
- La Greca, A. M., & Lopez, N. (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. *Journal of Abnormal Child Psychology*, 26(2), 83-94. doi: 10.1023/A: 1022684520514
- Matos, M., Pinto-Gouveia, J., Gilbert, P., Duarte, C., & Figueiredo, C. (2015). The Other as Shamer Scale-2: Development and validation of a short version of a measure of external shame. *Personality and Individual Differences*, 74, 6–11. doi: 10.1016/j.paid.2014.09.037
- McManus, F., Sacadura, C. & Clark, D. M. (2008). Why social anxiety persists: An experimental investigation of the role of safety behaviours as a maintaining factor. *Journal of Behavior Therapy and Experimental Psychiatry*, 39, 147-161. doi: 10.1016/j.jbtep.2006.12.002
- Mills, R. S. L. (2005). Taking stock of the developmental literature on shame. *Developmental Review*, 25, 26-63. doi:10.1016/j.dr.2004.08.001
- Neff, K. D. (2003a). Self-compassion: an alternative conceptualization of a healthy attitude toward oneself. *Self and Identity*, 2, 85-102. doi: 10.1080/15298860390129863

- Neff, K. D. (2003b). The development and validation scale to measure self-compassion. *Self and Identity*, 2, 223-250. doi: 10.1080/15298860390209035
- Pestana, M. H. & Gageiro, J. N. (2005a). *Análise de dados para ciências sociais: A complementaridade do SPSS* (4th ed.). Lisboa: Edições Sílabo.
- Pestana, M. H. & Gageiro, J. N. (2005b). *Descobrendo a regressão: Com a complementaridade do SPSS*. Lisboa: Edições Sílabo.
- Rapee, R. M. & Heimberg, R. G. (1997). A Cognitive-Behavioral Model of Anxiety in Social Phobia. *Behaviour Research and Therapy*, 35(8), 741-756. doi: 10.1016/S0005-7967(97)00022-3
- Rapee, R. M. & Sanderson, W. C. (1998) *Social Phobia: Clinical Application of Evidence – Based Psychotherapy*. New Jersey: Jason Aronson.
- Rebelo, S. & Salvador, M. C. (2012). *Fobia Social em Adolescentes: O papel da Vergonha e do Autocriticismo*. Manuscrito não publicado. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.
- Rodrigues, E., & Salvador, M. C. (2013). *Shame and social anxiety in adolescence: the experience of shame scale for adolescents*. Manuscrito não publicado. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.
- Salvador, M. C (2009). “*Ser eu próprio entre os outros*” *Um novo protocolo de intervenção para adolescentes com fobia social generalizada*. Dissertação de Doutoramento em Psicologia. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.
- Seabra, D., & Salvador, M. C. (2014). *O papel do autocriticismo e da vergonha no processamento pós-situacional numa população clinica com PAS*. Manuscrito não publicado. Faculdade de Psicologia e Ciências da Educação da Universidade de



Coimbra, Coimbra.

- Shahar, B., Doron, G., & Szepeswol, O. (2015). Childhood Maltreatment, Shame-Proneness and Self-Criticism in Social Anxiety Disorder: A Sequential Mediation Model. *Clinical Psychology & Psychotherapy*, 22(6), 570-579. doi: 10.1002/cpp.1918
- Shahar, B. & Gilboa-Shechtman, E. (2007). Depressive Personality Styles and Social Anxiety in Young Adults. *Journal of Cognitive Psychotherapy: An International Quarterly*, 21(4), 275-284. doi: 10.1891/088983907782638734
- Silva, C. & Salvador, M. C. (2010). *A Escala das Formas de Auto-Criticismo e de Auto-Traquilização (FSCRS): Características psicométricas na população adolescente*. Manuscrito não publicado. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In Leinhardt, S. (Ed.). *Sociological methodology*. San Francisco: Jossey Bass.
- Spurr, J. M., & Stopa, L. (2002). Self-focused attention in social phobia and social anxiety. *Clinical Psychology Review*, 22, 947-975.
- Tangney J. P. (1995). Shame and guilt in interpersonal relationships. In JP Tangney JP, KW Fischer (Eds). *Self-Conscious Emotions: The Psychology of Shame, Guilt, Embarrassment and Pride* (pp114-139). New York: Guilford.
- Tangney, J. P., & Dearing, R. L. (2002). *Shame and Guilt*. New York: Guildford Press.
- Tangney, J. P., Wagner, P. & Gramzow, R. (1992). Proneness to shame, proneness to guilt, and psychopathology. *Journal of Abnormal Psychology*, 103, 469-478.
- Wells, A. (1997). *Cognitive Therapy of Anxiety Disorders. A Practice Manual and Conceptual Guide*. West Sussex: John Wiley & Sons Ltd.

- Werner, K. H., Jazaieri, H., Goldin, P. R., Ziv, M., Heimberg, R. G., & Gross, J. J. (2012). Self-compassion and Social Anxiety Disorder. *Anxiety, Stress & Coping*, 25(5), 543-558. doi: 10.1080/10615806.2011.608842
- Woody, S. R. & Rodrigues, B. F. (2000). Self-Focused Attention and Social Anxiety in Social Phobics and Normal Controls. *Cognitive Therapy and Research*, 24, 473-488. doi: 10.1023/A:1005583820758
- Xavier, S., & Salvador, M. C. (2011). *Relação entre Ansiedade Social e Vergonha numa amostra de estudantes universitários*. Manuscrito não publicado. Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra, Coimbra.

## Appendix

Table 2.  
Correlations between the variables in study (N=407)

Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. SAS-A	1														
2. SFA-A_Arousal	.53**	1													
3. SFA-A_Behaviour	.43**	.62**	1												
4. SFA-A_Total	.53**	.89**	.91**	1											
5. ISS-A	.66**	.53**	.45**	.55**	1										
6. OASB-A	.67**	.46**	.37**	.46**	.78**	1									
7. FSCRS-A_Reassured self	-.29**	-.12**	-.08**	-.11**	-.35**	-.29**	1								
8. FSCRS-A_Self-criticism	.57**	.49**	.41**	.49**	.83**	.67**	-.24**	1							
9. SCS-A_Kindness	-.14**	-.02**	-.08**	-.06**	-.12**	-.08**	.59**	-.14**	1						
10. SCS-A_CommonHumanity	-.02	.03	.02	.03	-.02	-.01	.40**	.01	.62**	1					
11. SCS-A_Mindfulness	-.12*	-.10*	-.12*	-.01*	-.12*	-.08*	.46**	-.12*	.69*	.63*	1				
12. SCS-A_Self-judgement	-.47**	-.45**	-.40**	-.57**	-.73**	-.57**	.20**	-.73**	.06**	-.10*	.01	1			
13. SCS-A_Isolation	-.57**	-.48**	-.39**	-.48**	-.77**	-.63**	.21**	-.74**	.00	-.13**	.06	.74**	1		
14. SCS-A_Over-identification	-.51**	-.48**	-.38**	-.47**	-.73**	-.54**	.18**	-.71**	-.01	-.10*	.76**	.79**	.76**	1	
15. SCS-A_Total	-.48**	-.40**	-.35**	-.42**	-.66**	-.51**	.54**	-.67**	.63**	.49**	.63**	.69**	.66**	.67**	1

*Note.* SAS-A= Social Anxiety Scale for Adolescents. ISS-A= Internalized Shame Scale for Adolescents. OASB-A= Other As Shamer Scale for Adolescents- Brief Version. FSCRS-A= Forms of Self- Criticizing and Reassuring Scale for Adolescents. SCS-A= Self-Compassion Scale for Adolescents.

\* p < .05, \*\* p < .01