

Short Title:

Psychometric properties of the ISS

Full Title:

When I don't like myself: Psychometric properties of the Portuguese version of the Internalized Shame Scale.

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Abstract

In the past two decades, there has been a growing theoretical and empirical interest on the role of shame, namely internal shame, on the conceptualization of human functioning and several interpersonal and emotional problems. The current study explores the psychometric properties of the Portuguese version of the Internalized Shame Scale (ISS), a self-report measure which assesses trait shame, composed by an Internal Shame subscale, measuring internalized shame, and a Self-Esteem subscale. The factor structure, internal consistency, test-retest reliability and convergent and discriminant validity for both subscales, are presented, in a sample of 385 college students. The Principal Components Analyses reveal that both Internal Shame and Self-Esteem subscales present a one-dimensional structure which explains, respectively, 48.54% and 57.7% of the variance. The subscales present high internal consistency, with high Cronbach' alphas (.95 e .85) and moderate to high item-total correlations. The two subscales present an excellent temporal stability. Convergent and discriminant validity of the subscales was corroborated through the moderate correlations with a measure of shame and of social comparison, and through the low and moderate correlations with the subscales Depression, Anxiety, and Stress. The Portuguese version of the ISS is a valid and reliable instrument to measure internalized shame.

Keywords: Internal shame; ISS; Psychometric properties; Psychopathology

Resumo

Tem-se assistido a um crescente interesse teórico e empírico acerca do papel da vergonha, nomeadamente da vergonha interna, na conceptualização do funcionamento humano e de vários problemas emocionais e interpessoais. Este estudo explora as propriedades psicométricas da versão portuguesa da *Internalized Shame Scale (ISS)*, um instrumento de auto-resposta que avalia a vergonha traço, composto por uma subescala de *Vergonha Interna*, que mede a experiência de vergonha internalizada, e uma subescala de *Auto-estima*. São apresentadas, numa amostra de 385 estudantes universitários, a estrutura factorial, consistência interna, fidelidade teste-reteste e validade convergente e divergente de ambas as subescalas. Através de Análises em Componentes Principais verifica-se que as subescalas *Vergonha Interna* e *Auto-estima* apresentam uma estrutura unidimensional que explica, respectivamente, 48.54% e 57.7% da variância. As subescalas revelam elevada consistência interna, com valores de alfa de *Cronbach* elevados (.95 e .85) e correlações item-total moderadas a elevadas. As duas subescalas apresentam uma excelente estabilidade temporal. A validade convergente e divergente das subescalas foi corroborada através das correlações moderadas com uma medida de vergonha e de comparação social e das correlações baixas a moderadas com as subescalas *Depressão*, *Ansiedade* e *Stress*. A versão portuguesa da ISS constitui um instrumento válido e fiável para a avaliação da vergonha internalizada.

Palavras-chave: Vergonha; ISS; Validação; Propriedades Psicométricas; Estrutura Factorial

Introdução

Shame is an emotion distinctive of human species, which has been linked to the internal experience of the self as an unattractive, undesirable, worthless, defective or powerless social agent (Gilbert, 2007; Lewis, 1992; Tangney & Dearing, 2002; Tracy & Robins, 2004). This self-conscious emotion plays a crucial role in identity formation and emerges as a defensive affect related to social status maintenance, prevention of group rejection and negotiation of complex social structures (Gilbert, 1998, 2007; Tangney & Fischer, 1995). This affect of inferiority, as defined by Kaufman (1989), is associated with negative self-evaluations of inadequacy and defect and with the exposure of these negative attributes and loss of status in the eyes of the others (Lewis, 1992, 2000; Gilbert, 1998, 2007; Tangney & Dearing, 2002; Tracy & Robins, 2004). The emotion of shame arises within early interactions with significant others, influencing human functioning at individual, interpersonal, group and cultural levels (Gilbert, & Andrews, 1998; Tangney & Dearing, 2002).

In the last two decades there has been an increasing empirical support to the importance of shame at conceptual and clinical levels, in a wide range of psychopathological symptoms. Specifically, this emotion has been associated with interpersonal and emotional difficulties, and psychopathology: depression (Alexander, Brewin, Vearnals, Wolff, & Leff, 1999; Andrews, Qian, & Valentine, 2002; Ashby, Rice, & Martin, 2006; Cheung, Gilbert & Irons, 2004; Matos & Pinto-Gouveia, 2009; Tangney & Dearing, 2002; Tangney, Stuewig, & Mashek, 2007; Thompson & Berenbaum, 2006; for a review see Kim, Thibodeau, & Jorgensen, 2011); anxiety (Irons & Gilbert, 2005; Pinto-Gouveia & Matos, 2010; Tangney, Wagner, & Gramzow, 1992); social anxiety (Gilbert, 2000; Grabhorn, Stenner, Stangier, & Kaufhold, 2006; Matos, Pinto-Gouveia, & Gilbert, 2011); paranoia (Matos et al., 2011); post-traumatic stress disorder (Lee, Scragg, & Turner, 2001; Leskela, Dieperink, & Thuras, 2002); eating disorders (Skarderud,

2007; Troop, Allan, Serpell, & Treasure, 2008); personality disorders, especially borderline personality disorder (Rüsh et al., 2007) and dissociation (Talbot, Talbot & Xin tu, 2004).

Shame may be related to the emotional experience itself in a particular moment, that is, as an acute and transitory feeling in certain situations – state shame (Tangney, 1996; Tangney & Dearing, 2002); or to the disposition to feel shame, which involves the factors that precede the surfacing of this emotion, that is, the vulnerability to experience shame – trait shame (Andrews, 1998; Goss, Gilbert, & Allan, 1994).

Shame proneness may be conceptualized in several ways. According to Gilbert (1998, 2003, 2007), it comprises two different dimensions: external shame and internal shame. This distinction is based on the focus of attention, thoughts and behaviours involved in the shame experience. Thus, in external shame, the attention is directed outwardly, to the external social world, and is linked to negative global judgments that the self exists negatively in the mind of the others (e.g., as an unattractive, inferior, flawed, incompetent or weak social agent) and one's behavior might be orientated towards trying to positively influence one's image in the mind of the others, or towards defensive strategies, such as escape, submission or appeasement.

In turn, internal shame is linked to the internal dynamics of the Self and to how one judges and feels oneself (Gilbert, 2003). In this type of shame, attention and cognitive processing are directed inwardly to the Self's emotions, personal attributes and behaviour, and focused on the Self's flaws and shortcomings. Gilbert (1998) argues that internal shame is when shame affects are constellated around self-devaluations and feelings of being inferior, inadequate, undesirable, weak, disgusting or globally bad. Several authors have proposed that internal/internalized shame is linked to complex memory systems such as scenes of previous episodes of being shamed (Kaufman, 1989), deriving from intense and enduring levels of shame experienced in early social interactions and throughout life (Claesson & Sohlberg, 2002; Kaufman, 1989; Lewis, 1992; Matos & Pinto-Gouveia, 2009).

Internal shame is more about the closeness to an ‘undesired’ and ‘unattractive’ Self, a Self one does not want to be, rather than the distance from a ‘desired Self’ (Lindsay-Hartz, 1984; Lindsay-Hartz, de Rivera, & Mascolo, 1995), and is typically linked to the painful internal experience of self-judgment and self-criticism (Gilbert, 1998, 2003). An individual with high internal shame holds a negative view about himself and feels inferior and inadequate in comparison to others even when they direct positive affect to him. Thus, the pain of internal shame is self-persecutory and emerges from these negative evaluations of the self as seen through one own eyes.

However, shame experiences typically involve the interaction of both external and internal shame, which fuel one another. The same is to say that, the pain that derives from recognizing that one’s social attractiveness has declined is likely to encompass harsh self-devaluation and self-blame. At the same time, it is unlikely that the hurting affect of private depreciation arises in the absence of an awareness that others share the same negative view of the Self. Nevertheless, the dimension that is experienced as most salient can vary in shame events, and some individuals may be more prone to experience one more than the other (Gilbert, 2003, 2007; Kim et al., 2011).

A growing body of research has focused on the relationship between internal shame and various emotional and interpersonal problems, such as depression (Allan, Gilbert, & Goss, 1994; Ashby et al., 2006; Mahalingam & Jackson, 2007; Matos & Pinto-Gouveia, 2009; Pinto-Gouveia, Castilho, Matos & Xavier, 2011; Wong & Cook, 1992), anxiety (Pinto-Gouveia & Matos, 2010), paranoia and social anxiety (Matos et al., 2011), abandonment and rejection (Claesson & Sohlberg, 2002), substance abuse (Cook, 1991; Fisher, 1987; Wells, Bruss, & Katrin, 1998), insecure attachment (Cook, 1991; Wells & Hansen, 2003), eating disorders (Murray & Waller, 2002), identity integration (Wells & Hansen, 2003), narcissic personality (Gramzow & Tangney, 1992; Grosch, 1994; Morrison, 1983, 1999), trauma and sexual abuse

(Feinauer, Hilton, & Callahan, 2003; Murray & Waller, 2002; Wells et al., 1998; Wong & Cook, 1992) and hostility and anger (Balcom, 1991; Grosch, 1994).

The theoretical and empirical acknowledgement of the relevance of shame has encouraged methodological advances in its assessment (Andrews, 1998; Harder, 1995; Harder, Cutler & Rockart, 1992; Tangney, 1995, 1996). Therefore, the evolution and refinement of the concept of shame has occurred in conjunction with the development of several psychometric instruments to measure this emotion. Nevertheless, the majority of these measures have focused mainly on the assessment of transitory and situational shame – state shame: e.g., Test of Self-Conscious Affect – 3 (TOSCA-3; Tangney, Dearing, Wagner, & Gramzow, 2000), Personal Feelings Questionnaire – 2 (PFQ-2; Harder & Zalma, 1990), Adapted Shame/Guilt Scale (ASGS; Hoblitzelle, 1987). So, the *Internalized Shame Scale* (ISS; Cook, 1987, 1994, 2001) was designed to measure trait shame, particularly internal shame. Since its first publication, the ISS has been the most widely used device in this research field. This self-report inventory was developed to measure trait shame in adolescents and adults, that is, the ISS focuses upon shame as an internalized trait of longstanding nature, contrastingly to state-shame focused instruments, which consider current and ever-changing emotional states. The ISS is composed of two subscales: a 24-item subscale assessing internal/internalized shame and a 6-item subscale evaluating self-esteem. The internal shame subscale is central in this questionnaire and its items were derived from experiential descriptions of shame from alcoholism treatment patients (e.g., “*I feel like I am never quite good enough*” “*I see myself as being small and insignificant*”, “*I feel empty and unfulfilled*”). This subscale produces a total score of internal shame trait experience. The remaining six items produce a total score of Self-Esteem and were adapted from the Rosenberg *Self-Esteem Scale* (1965). These items are positive worded items (e.g., “*I feel I have much to be proud of*”, “*On the whole, I am satisfied with myself*”) and are used to prevent response set bias. Although the Self-Esteem subscale was not created to be an independent

measure of self-esteem, Cook (1994, 2001) suggests that these items can be used as a brief indicator of positive self-esteem.

A PsycINFO data base search revealed that the ISS has been used in more than 100 research articles (including the abovementioned studies) involving the investigation of trait shame, and in numerous doctoral dissertations.

According to the ISS *Technical Manual* (Cook, 1994, 2001), this inventory is useful, not only to research purposes, but also as a clinical assessment and treatment monitoring tool. Even though the development of this scale was not originally based on a specific theoretical model of shame, after the ISS evolution to its current version, Cook (1994, 2001) noted that the ISS results could be clinically interpreted and understood in light of the biologically-based theoretical framework put forward by Nathanson (1992). This theory argues that shame cognitions aim at motivating the individual to maintain or increase positive affect and diminish negative affect. Shame experiences, hence, may involve thoughts associated with diverse themes, such as personal attributes, dependence/independence, competition, sense of Self, personal attractiveness, sexuality, issues of seeing and being seen and wishes and fear about closeness. Nathanson (1992) further proposed four potential defensive reactions to the experience of shame affect and cognitions: withdrawal, attack Self, avoidance and attack others. Cook (1994, 2001) considers that the ISS results may be of particular clinical utility if understood in the context of such cognitions and reactions.

In spite of the empirical and clinical relevance of this assessment tool, the ISS psychometric properties remain scarcely investigated since its original publication. In fact, only two studies have examined its temporal stability. Cook (1994, 2001), in a sample of 44 college students, found test-retest correlations of .84 and .69 for Internal Shame and Self-Esteem subscales, respectively. Del Rosario and White (2006) confirmed the high test-retest stability of the ISS, reporting correlations of .81 and .75 for both ISS subscales, in a sample of college

students ($N = 184$). These results confirm, therefore, that the ISS assesses relatively stable and enduring characteristics of internal shame (del Rosario & White, 2006).

The existent studies also demonstrate the internal consistency of the ISS. In particular, Cook (1994, 2001) reported Cronbach' alphas of .95 in a nonclinical sample and of .96 in a clinical sample, for the Internal Shame subscale. Regarding Self-Esteem subscale, the internal consistency coefficients were of .90 and .87, respectively. Rybak e Brown (1996) investigated the psychometric properties of the ISS in a sample of students from clinical and nonclinical groups ($N = 159$), and again found a high internal reliability of the Internal Shame subscale, with Cronbach alphas of .97, and of the Self-Esteem subscale with .90. Similarly, Del Rosario and White (2006) established that the two subscales revealed high internal consistency coefficients (.95 for Internal Shame, and .89 for Self-Esteem). Furthermore, Rybak and Brown (1996), concluded that the ISS presents high construct validity, given the association between the Internal Shame subscale of the ISS and other affect constructs theoretically connected to shame, such as anxiety, hostility, depression and positive affect.

Regarding the factor structure of this self-report instrument, Cook (1994, 2001) refers that the ISS was developed to consist of a single underlying factor, measuring the core experience of internalized shame (termed Inferiority – one's self-evaluation as being deeply inferior), and should not, therefore, be divided into other independent factors. To date, only a study analyzed the underlying dimensionality of the 24-item Internal Shame Subscale. Del Rosario and White (2006), using a Principal Components Analysis with Varimax rotation, demonstrated that, in contrast to Cook's (1994) conceptualization, the ISS comprised three distinct dimensions of thoughts and reactions: one dominant factor labeled Inferiority (i.e., assessing a sense of inadequacy or deficiency), and two lesser factors, termed Fragility/Exposed (e.g., referring to a tendency towards feeling out of control, being emotionally unstable, and fearful of being exposed), and Empty/Lonely (e.g., defined by feelings of emptiness and abandonment).

Therefore, these findings emphasize the need to develop studies assessing the multi-factor or one-factor structure of this instrument. At the same, the ISS and its psychometric properties have not yet been investigated in the Portuguese population.

In order to overcome these limitations, the present study encompasses three main aims. The first is to adapt the ISS to the Portuguese language. Second, we set out to study its underlying factor structure in a sample of college students. Finally, we aim at examining the psychometric properties of the obtained factor structure, specifically item' analysis and internal consistency, test-retest reliability and convergent and discriminant validity, by comparing the ISS to measures of shame, social comparison, depression, anxiety and stress symptoms.

Method

Participants

The sample of this study comprises a total of 385 students of the University of Coimbra, which are part of a wider sample of a research project on shame experiences and psychopathology. Participants present a mean age of 22.83 ($SD = 6.16$) and of 14.36 years of education. Most of them are female ($n = 338$; 87.8%) and single ($n = 349$; 90.6%). There were no significant differences between genders regarding the studied variables and thus the analyses considered the total sample.

Measures

Internalized Shame Scale (ISS; Cook, 1987; 1994, 2001) was translated and adapted to Portuguese language by Matos and Pinto-Gouveia (2006) and the comparability of content was verified through stringent back-translation procedures (cf. Content validity). The ISS is a self-report inventory that comprises a 24-item measure of internal shame (ISS_S), consisting of negatively worded items (e.g., “*Compared with other people, I feel like I somehow never*

measure up”) assessing the frequency in which people experience feelings of shame; and a 6-item scale consisting of positively worded items (e.g., “*All in all, I am inclined to feel that I am a success*”) assessing self-esteem (ISS_SE). All items are rated on a 5-point Likert scale (0 = *Never* to 4 = *Almost always*). Higher scores on the ISS_S are indicative of higher internal shame.

Other As Shamer Scale (OAS; Goss, Gilbert, & Allan, 1994; Portuguese version by Matos, Pinto-Gouveia, & Duarte, 2011a). This self-report scale consists of 18 items measuring external shame (i.e., global judgments of how people think others view them). Respondents are asked to indicate the frequency on a 5-point scale (0 = *Never* to 4 = *Almost always*) of their feelings and experiences to items such as, ‘*I feel other people see me as not quite good enough*’ and ‘*I think that other people look down on me*’. Higher scores on this scale reveal high external shame. In their study, Goss et al. (1994) found this scale to have a Cronbach’s alpha of .92. In its Portuguese version (Cronbach’s $\alpha = .91$) (Matos et al., 2011), as well as in the current study (Cronbach’s $\alpha = .91$), the OAS also revealed an excellent internal consistency.

Social Comparison Scale (SCS; Allan & Gilbert, 1995; Portuguese translation and adaptation by Gato & Pinto-Gouveia). This self-report scale measures self-perceptions of social rank and relative social standing. The SCS uses a semantic differential methodology and consists of 11 bipolar constructs, such as *Inferior/Superior*, *Unattractive/Attractive*. These 11-items cover judgements concerned with rank, attractiveness and how well the person thinks he/she ‘fit in’ with others in society. Participants are required to make a global comparison of themselves in relation to other people and to rate themselves along a ten-point scale. For example, the scale asks: “In relationship to others I feel *Incompetent* 1 2 3 4 5 6 7 8 9 10 *More competent*”. Low scores point to feelings of inferiority and general low rank self-perceptions. The scale has been found to have good reliability, with Cronbach alphas of .88 and

.96 with clinical populations and .91 and .90 with student populations (Allan & Gilbert, 1995, 1997). In this study the SCS showed a Cronbach' alpha of .89.

Depression Anxiety Stress Scales (DASS-42; Lovibond & Lovibond, 1995; Portuguese version by Pais-Ribeiro, Honrado, & Leal, 2004) is a self-report measure of 42 items and designed to assess three dimensions of psychopathological symptoms: depression, anxiety and stress. The items indicate negative emotional symptoms and the respondents are asked to rate each item on a 4-point scale (0 = *Did not apply to me at all*; 3 = *Applied to me very much, or most of the time*). The DASS-42 provides a separate score for each of the three subscales: Depression, Anxiety and Stress, with scores ranging from 0 to 42. In the original version, Lovibond and Lovibond (1995) found the subscales to have high internal consistency (Depression subscale Cronbach's $\alpha = .91$; Anxiety subscale Cronbach's $\alpha = .84$; Stress subscale Cronbach's $\alpha = .90$). In the present research, the three subscales were found to have high internal consistencies (Depression subscale Cronbach's $\alpha = .94$; Anxiety subscale Cronbach's $\alpha = .90$; Stress subscale Cronbach's $\alpha = .93$).

Procedure

Methodological procedures

The first author, with the assistance of graduate Psychology students, administered the set of self-report questionnaires to the participants in the following order: ISS, OAS, SCS, DASS-42. These measures were filled at the end of a lecture, with previous knowledge and consent of the Professor in charge and the respective Faculty. The Portuguese version of the ISS was also filled by a convenience sample of 35 subjects to examine the test-retest reliability, with a time interval of four to six weeks. In line with ethical requirements, it was emphasized that

participants co-operation was voluntary and that their answers were confidential and only used for the purpose of the study.

Data analysis

Data analysis was performed using PAWS version 18.0 (Predictive Analytics Software, version 18; SPSS Inc., Chicago, IL, USA). Effects with $p < .050$ were considered statistically significant (Howell, 2006). In the dimensional analysis of the ISS, a Principal Component Analysis was conducted in order to examine the scales structure and the associations between the variables comprised in each dimensions (Maroco, 2010; Stevens, 1986; Tabachnick & Fidell, 2007). Such option was based on the fact that this exploratory procedure allows us to investigate how variables are gathered in components, considering the total available variance. This is a flexible methodology that, in the case of large samples, such as the one used in the present study, allows the extraction of dimensions, similarly to an Exploratory Factor Analysis procedure. In the decision of the number of components to extract, two widely used criteria were applied: eigenvalues superior than 1 (Kaiser, 1960) and the scree test (Cattell, 1966), which indicates the number of factors to retain based on the inflection point in the curve (scree) of the eigenvalues graphical representation (i.e., *Scree plot*) (DeVellis, 2003; Costello & Osborne, 2005; Marôco, 2010). A factorial loading of .50, a robust loading value, was considered to include each item into a factor. In interpreting the communalities we considered the values ranging from .40 to .70, as common and recommended values in social sciences (Costello & Osborne, 2005; Tabachnick & Fidell, 2007). Afterwards, we analyzed the internal consistency through the Cronbach alpha analysis, which is regarded as the best fidelity measure of a test (Nunnally, 1978). The items' quality was examined through the item-total correlation analysis and the Cronbach alpha if item deleted (Nunnally, 1978).

Pearson product-moment correlation coefficients were calculated to assess test-retest reliability as well convergent and discriminant validities (Nunnally, 1978). To compare the scores of the ISS in the two assessment moments of temporal reliability analysis, Paired Samples Student's T-Tests were performed (Maroco, 2010; Howell, 2006).

Results

Content validity

Adaptation of the measure to Portuguese

Ethical requirements, regarding contacting and asking the author of the original instrument for authorization to use the measure, were assured. Additionally, the scale went through a rigorous translation and back-translation process in order to guarantee the comparability of content of the ISS Portuguese version and the original one. First, a psychologist with strong English language skills, spoken and written, translated the items into Portuguese. Lexical and conceptual aspects were analyzed in order to maintain each item content. Then, an English translator verified the content of the final version of the ISS through a back-translation process, repeated until the meaning of each item corresponded to the original item of the ISS.

Study of the psychometric characteristics of the *Internal Shame Subscale (ISS_S)*

Dimensionality

In the dimensionality analysis of the 24 items of the shame subscale (ISS_S), a Principal Component Analysis (PCA) with Varimax rotation was conducted, following the procedure performed by other authors in validation studies of this measure (del Rosario & White, 2006). The initial solution resulted in three components with eigenvalues superior than 1: 11.298; 1.618; 1.208; which explained, respectively, 47.07%, 6.74% e 5.03% of the variance. However, analysis of Cattell' Scree Plot revealed an accentuated droop in the inflexion curve between the first and

the remaining components. Besides, the eigenvalues and the variance explained by the initially extracted second and third components were poor. Moreover, several items loaded significantly in more than one component and the extracted components were not revealed as theoretically interpretable. Thus, these results pointed to a one-dimension solution, which was in line with Cook's (1994, 2001) suggestion in the original version of the scale.

In this sense, the PCA was replicated and the solution was forced to a single factor. This solution revealed good indicators of matrix adequacy [*Kaiser-Meyer-Olkin* – KMO = .956; and Bartlett's sphericity test [$\chi^2_{(276)} = 5646.780$, $p = .000$], and all items showed communalities ranging from .27 to .59, with the exception of item 16, which revealed a communality value of .14, below the cut-off point recommended to retain an item. This item also presented the lowest factorial loading (.38), revealed an item-total correlation of .18 and the internal consistency of the scale would increase if this item was removed (Cronbach alpha if item deleted). Therefore, we decided to remove item 16 from subsequent analyses and repeated the PCA procedure aforementioned. The final solution, with 23 items, revealed excellent indicators of matrix adequacy [*Kaiser-Meyer-Olkin* – KMO = .956; and Bartlett's sphericity test [$\chi^2_{(253)} = 5575.948$, $p=.000$], corresponded to an eigenvalue of 11.165 and explained 48.54% of the variance. The items revealed moderate communality values and factorial loadings from .51 to .79 (see Table 1). Two items presented lower communalities, specifically item 3 (“*I think people look down on me*”) with .26, and item 13 (“*I feel an overpowering dread that my faults will be revealed in front of others*”) with .37. However, their factorial loadings were adequate (.51 and .61, respectively).

Table 1

In the study of the ISS-S items' quality, we found correlations among all items varying from .26 to .73 and moderate to high (.47 to .76) item-total correlations. This analysis also revealed that, although item 3 and 13 presented low communalities, they significantly correlated with the total scale and the remaining items, and thereby they were not removed from the scale (see Table 2). The analysis of the Cronbach alpha if item deleted indicated that the exclusion of any item would not increase the scale internal consistency (Cronbach alpha of .95), confirming the robustness of this one-dimensional structure and its excellent internal consistency (Cronbach, 1984) (see Table 3).

Table 2

Table 3

Test-retest reliability

In regard to temporal reliability, ISS_S retest presented a Cronbach alpha of .97. Pearson correlation between test and retest ($N = 35$) was .95 ($p < .001$) ($N = 35$) in a period of 4 to 6 weeks. Accordingly, the evaluation of temporal stability of this scale using Paired Samples Student T-Tests showed no statistically significant differences between the two assessment moments. In summary, the ISS_S showed an excellent temporal stability (see Table 4).

Table 4

Study of the psychometric characteristics of the Self-Esteem subscale (ISS-SE)

Dimensionality

In the investigation of the dimensional structure of the 6 items included in the ISS_SE, we conducted a Principal Component Analysis (PCA), with a Varimax rotation. The solution led us to retain one component with an eigenvalue of 3.462, explaining 57.7% of the variance, which was confirmed by Cattell' Scree Plot analysis, communality values (.38 to .70) and factorial loadings (.61 to .84). This solution presented good indicators of matrix adequacy [*Kaiser-Meyer-Olkin* – KMO = .872; and Bartlett's sphericity test [$\chi^2_{(15)} = 892.655, p = .000$] (see Table 5).

Table 5

The analysis of the items' quality revealed correlations among all items varying between .30 and .64, and moderate to high (.48 to .73) item-total correlations (see Table 6). The Cronbach alpha if item deleted analysis indicated that the removal of any item maintained internal consistency (Cronbach alpha of .85), supporting the existence of a robust one-dimension structure, with a high internal consistency (Cronbach, 1984) (see Table 3).

Table 6

Test-retest reliability

The ISS_SE presented a high temporal reliability, with a Cronbach alpha for retest of .87. The Pearson correlation between the two assessment moments was of .86 ($p < .001$) ($N = 35$) for a period of 4 to 6 weeks. Paired Samples Student *T* Tests revealed that there are no statistically significant differences (see Table 4). So, ISS_SE revealed excellent temporal stability characteristics.

Convergent and discriminant validity

Pearson correlations between the ISS_S and ISS_SE and OAS, SCS and Depression, Anxiety and Stress (DASS-42) were conducted to explore convergent and discriminant validity of the ISS subscales (Table 7).

Regarding convergent validity, the ISS_S was positively and strongly associated with external shame (OAS, $r = .77$; $p = .000$), and negatively correlated with favorable social comparisons (SCS, $r = -.51$; $p = .000$). In turn, the ISS_SE was negatively and moderately associated with external shame (OAS, $r = -.53$; $p = .000$), and positively linked to social comparisons (SCS, $r = .58$; $p = .000$).

In discriminant validity analysis, we sought out to investigate whether ISS_S would discriminate between individuals with low and high levels of internal shame regarding depressive, anxiety and stress symptoms. Results showed that ISS_S was moderately and positively associated with depression ($r = .66$; $p = .000$), anxiety ($r = .54$; $p = .000$) and stress ($r = .57$; $p = .000$). In contrast, ISS_SE was negatively correlated with depression ($r = -.50$; $p = .000$), anxiety ($r = -.36$; $p = .000$), and Stress ($r = -.35$; $p = .000$).

In order to compare individuals with high scores with those with low scores in internal shame regarding depressive, anxiety and stress symptoms, two groups were created (high ISS_S and low ISS_S) using the median value (31). Independent Samples *T* Tests' results (see Table 8) indicated that individuals with high scores on ISS_S presented significantly higher levels of depression ($t = 10.146$; $p < .001$), anxiety ($t = 7.544$; $p < .001$) and stress symptoms ($t = 9.264$; $p < .001$) in comparison with those with low scores in the ISS_S. Thus, individuals with high internal shame, i.e., that judge themselves negatively as inferior, inadequate or defective, tend to present increased levels of depressive, anxiety and stress symptomatology, comparatively to individuals with low levels of internal shame.

Finally, both the ISS_S and ISS_SE subscales were moderately and negatively correlated with each other ($r = -.63$; $p = .000$).

Table 7

Table 8

Discussão

In the past decades, there has been a growing body of research focused on shame and its empirical and clinical implications. At the same time, there is increasing empirical support for the central role internal shame plays in the conceptualization of multiple emotional and interpersonal problems (e.g., Balcom, 1991; Claesson & Sohlberg, 2002; Cook, 1991; Feinauer et al., 2003; Fischer, 1987; Gramzow & Tangney, 1992; Grosch, 1994; Murray & Waller, 2002; Wells et al., 1998; Wells & Hansen, 2003; Morrison, 1983, 1999; Wong & Cook, 1992). The empirical interest on internal shame motivated the development of the *Internalized Shame Scale* (ISS; Cook, 1987, 1994, 2001), a self-report inventory that measures shame as an internalized trait. However, research on the psychometric properties of the ISS is still scant (del Rosario & White, 2006; Rybak & Brown, 1996).

Therefore, the present study aimed at investigating the psychometric qualities of the ISS in a sample of Portuguese college students. Specifically, we explored the factor structure, internal consistency, test-retest reliability and convergent and discriminant validity, for each of the ISS scales: Internal shame (ISS_S) and Self-esteem (ISS_SE).

Regarding construct validity of the ISS_S and the ISS_SE, we replicated the statistical procedures followed by previous studies on the ISS validation (del Rosario & White, 2006). Thus, in order to examine the organization of the ISS items, we used a multivariate exploratory statistical procedure – Principal Components Analysis. Results indicated that the Portuguese version of the ISS_S reveals a one-dimensional structure, corroborating the existence of a single

interpretable factor, assessing a general experience of internalized shame, that is, a core sense of self as being deeply inferior and inadequate. This finding empirically supports Cook's (1994, 2001) suggestion that the factor structure of the ISS Shame scale should be considered as one-dimensional, that is, as comprising "a single-factor (...) in which the core experience being measured (i.e., internalized shame) cannot be adequately divided into other independent factors" (Cook, 1994, 2001, p. 16). Besides, several studies have used the ISS Shame scale as a global measure of internal shame (Allan et al., 1994; Ashby et al., 2006; Mahalingam & Jackson, 2007; Matos et al., 2011; Murray & Waller, 2002; Pinto-Gouveia et al., 2011; Wells & Hansen, 2003; Wong & Cook, 1992). Hence, the present data underline the existence of such one-dimensional factor structure of the ISS_S and suggest the relevance of its use as a global measure of an internalized shame trait.

Nevertheless, we should note that two items in the ISS_S scale showed lower communality values (item 3 "*I think people look down on me*" and item 13 "*I feel an overpowering dread that my faults will be revealed in front of others*"). A possible explanation for this finding might be related to the semantic construction of these items, which may be measuring the construct of external shame instead (e.g., a global perception that others see the self negatively). Even so, their factorial loadings, item-total correlations and internal consistency if item deleted were adequate and support their maintenance in the Portuguese version of the ISS. Future studies should then seek to confirm the factor structure found in the Portuguese population and the relevance of retaining these items.

Results concerning the ISS_SE factor structure also revealed a one-dimensional structure, which is in accordance with existing studies on the dimensionality of this ISS scale (del Rosario & White, 2006; Rybak & Brown, 1996).

Regarding internal consistency, in the present study, the ISS_S and the ISS_SE presented a robust internal consistency reliability, with Cronbach' alphas of .95 and .85, respectively.

These results are in line with findings of other studies regarding the ISS validation (Cook, 1987; 1994; 2001; del Rosario & White, 2006; Rybak & Brown, 1996), confirming that the Portuguese version of the ISS presents high reliability indicators. Specifically, the Cronbach' alpha of the ISS_S, indicative of an excellent internal consistency, supports its use as a global measure of internal shame.

In regard to temporal stability analysis, explored in a test and retest 4 to 6 weeks interval, it was demonstrated that the ISS_S and the ISS_SE revealed high temporal stability. In fact, the product-moment Pearson correlations and the Paired Sample Student T-Tests showed that the participants presented a similar pattern of responses in the first and in the second assessment moments.

In the analysis of the ISS_S convergent validity, results revealed that this measure was positively and strongly associated with OAS (Goss et al., 1994; Matos et al., 2011), an empirically validated self-report instrument to assess external shame. On the contrary, ISS_S was negatively and moderately correlated with favorable perceptions of social ranking, as measured by the SCS (Allan & Gilbert, 1995). Independent Samples Student T-Tests further confirmed that individuals with higher levels of internal shame, comparatively to those with lower levels on ISS_S, presented higher external shame and more unfavorable social comparisons. These findings give support to the notion that internal and external shame have a reciprocal relationship (Gilbert, 2003, 2007; Kim et al., 2011). In fact, internally shamed individuals tend to believe they exist negatively in the mind of the others, and to negatively compare themselves with them. Conversely, the ISS_SE was negatively and moderately associated with the OAS (Goss et al., 1994; Matos et al., 2011), and positively related to the SCS (Allan & Gilbert, 1995).

In terms of discriminant validity, results suggested that the ISS_S was moderately and positively associated with Depression, Anxiety and Stress subscales (DASS-42; Lovibond & Lovibond, 1995; Pais-Ribeiro et al., 2004), while the ISS_SE was negatively correlated, with low

to moderate correlation magnitudes, with depressive, anxiety and stress symptoms. A comparative analysis conducted using a Independent Samples Student T-Tests revealed that individuals with higher levels of internal shame significantly differed from those with lower scores on the ISS_S subscale regarding such psychopathology indicators. These findings suggest that this scale presents a good discriminant capacity and is able to differentiate between individuals with higher and lower degrees of psychopathological symptoms, with those with higher scores of internal shame (i.e., individuals that judge themselves negatively, as inferior, inadequate, defective, flawed) showing a higher tendency to present increased depressive, anxiety and stress symptomatology, comparatively to individuals with lower levels of internal shame. These results are in accordance with other studies that have demonstrated the existence of a strong link between internal shame and psychopathology (e.g., Allan et al., 1994; Ashby et al., 2006; Mahalingam & Jackson, 2007; Matos et al., 2011; Pinto-Gouveia et al., 2011; Pinto-Gouveia & Matos, 2010).

Overall, the data presented here empirically support the assumption that the Portuguese version of the ISS presents robust psychometric qualities. Nonetheless, a number of limitations should be considered in the interpretation of our results. First, the fact that our sample was composed by college students limits the generalization of the findings to the Portuguese general population. Thus, it is important that future studies replicate these analyses in a large and heterogeneous sample of the general population, so that more robust conclusions regarding the ISS dimensionality can be drawn. Furthermore, the nature of the sample in this study constrains the generalization of our results to a clinical sample. Because of this it was also not possible to test the capacity of the ISS scales to discriminate individuals from nonclinical and clinical samples, particularly those in which internal shame plays a crucial role. Future research should thus take into account these considerations in order to overcome the current limitations. Finally,

another aspect that warrants consideration while interpreting our results is the subjective nature of the ISS measurement scale (e.g., “Never” to “Almost always”).

Despite the aforementioned methodological limitations, the present results suggest that the ISS, in its Portuguese version, is a valid and reliable instrument to assess internal shame, as a global construct, and as a brief measure of self-esteem. Actually, the ISS presents robust psychometric properties and is associated with another measure of shame, with social comparison, and with relevant psychopathological symptoms. In this sense, the present study represents an important contribution for the use of the ISS in the research field of shame.

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Table 1. Factorial loadings and communalities for the ISS_S one-dimensional structure in the PCA ($N = 385$).

Item	Factorial loading	Communality
ISS_27	.79	.63
ISS_7	.77	.59
ISS_26	.77	.59
ISS_8	.77	.59
ISS_11	.76	.57
ISS_24	.74	.54
ISS_10	.73	.54
ISS_29	.73	.53
ISS_12	.73	.53
ISS_25	.71	.5
ISS_23	.71	.5
ISS_19	.69	.48
ISS_30	.69	.47
ISS_6	.68	.46
ISS_1	.67	.45
ISS_22	.67	.45
ISS_20	.67	.45
ISS_5	.66	.44
ISS_15	.65	.42
ISS_2	.64	.41
ISS_17	.62	.39
ISS_13	.61	.37
ISS_3	.51	.26

Table 2. Means (M), standard deviations (SD) and corrected item-total correlations of ISS_S (N = 385)

Item	<i>M</i>	<i>SD</i>	<i>r</i> Item-total
1. I feel like I am never quite good enough. <i>Sinto que nunca sou suficientemente bom.</i>	1.80	.99	.64
2. I feel somehow left out. <i>Sinto-me um pouco à parte.</i>	1.59	.91	.60
3. I think that people look down on me. <i>Penso que as outras pessoas me olham com superioridade.</i>	1.36	.87	.47
5. I scold myself and put myself down. <i>Critico-me e desvalorizo-me a mim mesmo.</i>	1.97	1.05	.63
6. I feel insecure about others opinions on me. <i>Sinto-me inseguro em relação à opinião dos outros sobre mim.</i>	1.96	.98	.64
7. Compared to other people, I feel like I somehow never measure up. <i>Em comparação com outras pessoas sinto que, de alguma forma, nunca estou à altura.</i>	1.49	1.01	.74
8. I see myself as being very small and insignificant. <i>Vejo-me como sendo pequenino e insignificante.</i>	.92	.95	.73
10. I feel intensely inadequate and full of self-doubt. <i>Sinto-me muito inadequado e cheio de dúvidas sobre mim mesmo.</i>	1.53	1.02	.7
11. I feel as if I am somehow defective as a person like there is something wrong with me. <i>Sinto-me como se tivesse algum defeito enquanto pessoa, como se alguma coisa estivesse errada em mim.</i>	1.27	.98	.72
12. When I compare myself to others I am just not as important. <i>Quando me comparo com os outros acho que não sou tão importante quanto eles.</i>	1.22	.98	.69

13. I have an overpowering dread that my faults will be revealed in front of others.	1.25	1.03	.57
<i>Tenho um medo terrível que os outros notem os meus erros.</i>			
15. I see myself striving for perfection only to continually fall short.			
<i>Vejo-me a lutar por ser perfeito mas a ficar sempre aquém do que é esperado.</i>	1.68	.99	.62
17. I could beat myself over the head club when I make a mistake.	1.41	1.54	.59
<i>Quando cometo um erro sinto vontade de bater em mim mesmo.</i>			
19. I would like to shrink away when I make a mistake.	1.63	1.16	.67
<i>Eu gostava de desaparecer quando cometo um erro.</i>			
20. I replay painful events over and over in my mind until I am overwhelmed.	1.52	1.43	.64
<i>Eu revejo na minha cabeça vezes sem conta acontecimentos dolorosos até ficar esgotado.</i>			
22. At times I feel like I will break into a thousand pieces.	1.70	1.14	.64
<i>Há alturas em que sinto como se fosse quebrar-me em mil pedaços.</i>			
23. I feel as if I have lost control over my body functions and my feelings.	1.13	1	.67
<i>Sinto-me como se tivesse perdido o controlo sobre o meu corpo e as minhas emoções.</i>			
24. Sometimes I feel no bigger than a pie.	.89	.98	.7
<i>Às vezes sinto-me tão pequeno como um rato.</i>			
25. At times I feel so exposed that i wish the earth would open up and swallow me.	1.42	1.06	.68
<i>Há alturas em que me sinto tão exposto que só queria que se abrisse um buraco no chão e desaparecer nele.</i>			
26. I have this painful gap within me that I have not been able to fill.	1.28	1.17	.74
<i>Tenho um vazio doloroso dentro de mim que ainda não consegui preencher.</i>			

27. I feel empty and unfulfilled.	1.04	1.03	.76
<i>Sinto-me vazio e incompleto.</i>			
29. My loneliness is more like emptiness.	1.15	1.07	.7
<i>A minha solidão é mais como uma espécie de vazio.</i>			
30. I feel like there is something missing.	1.64	1.1	.65
<i>Sinto-me como se faltasse alguma coisa.</i>			

Table 3. Means (M), standard deviations (SD) and internal reliability of the ISS scales ($N = 385$)

	<i>M</i>	<i>SD</i>	<i>Cronbach</i> <i>α</i>
ISS_S	32.85	16.51	.95
ISS_SE	16.21	3.98	.85

Table 4. Temporal stability of the ISS_S and the ISS_SE using Paired Samples T-Tests for test and retest ($N = 35$)

	Test		Retest		$t(34)$	p
	M	SD	M	SD		
ISS_S	25.68	15.47	25.58	15.56	1.265	.215
ISS_SE	17.55	3.92	16.84	4.20	1.801	.082

Table 5. Factorial loadings and communalities for the ISS_SE one-dimensional structure in the PCA ($N = 385$).

Item	Factorial loading	Communality
ISS_18	.84	.7
ISS_14	.81	.66
ISS_28	.79	.62
ISS_9	.75	.56
ISS_21	.75	.56
ISS_4	.61	.38

Table 6. Means (M), standard deviations (SD) and corrected item-total correlations of ISS_SE (N = 385)

Item	<i>M</i>	<i>SD</i>	Item-total <i>r</i>
4. All in all I am inclined to feel that I am a success. <i>Geralmente costumo sentir que sou bem sucedido.</i>	2.36	.84	.48
9. I feel I have much to be proud of. <i>Sinto que tenho muito de que me orgulhar.</i>	2.63	.91	.62
14. I feel I have a number of good qualities. <i>Acho que tenho várias qualidades.</i>	2.86	.79	.7
18. On the whole, I am satisfied with myself. <i>De uma forma global, estou satisfeito comigo.</i>	2.83	.87	.73
21. I feel I am a person of worth at least on an equal plane with others. <i>Sinto que sou uma pessoa com valor, pelo menos ao mesmo nível que os outros.</i>	2.82	.91	.61
28. I take a positive attitude towards myself. <i>Tenho uma atitude positiva para comigo mesmo.</i>	2.72	.93	.67

Table 7. Product-moment Pearson correlations between the ISS scales (ISS Internal shame and ISS Self-esteem) _SE, and external shame (OAS), social comparison (SCS) and depression (DEP), anxiety (ANX) and stress (STR) scales ($N = 385$)

	ISS_V	ISS_AE	OAS	SCS	DEP	ANX
ISS_SE	-.63*					
OAS	.77*	-.53*				
SCS	-.51*	.58*	-.46			
DEP	.66*	-.50*	.54*	-.41*		
ANX	.54*	-.36*	.44*	-.28*	.79*	
STR	.57*	-.35*	.45*	-.30*	.74*	.77*

* $p < .001$

Table 8. Independent Samples Student T Tests for differences between high and low internally shamed individuals in depression, anxiety and stress ($N = 385$)

	High ISS_S		Low ISS_S		$t(383)$
	M	SD	M	SD	
Depression	9.86	8.74	2.72	3.81	10.146*
Anxiety	9.34	7.82	4.35	4.46	7.544*
Stress	15.60	8.28	8.73	5.89	9.264*

Note: High ISS_S: Scores $>$ or $=$ cut point (Median = 31); Low ISS_S: Scores $<$ or $=$ cut point (Median = 31). * $p \leq .001$