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## **ADVANCING THE ASSESSMENT OF COMPASSION** A Study on the psychometric characteristics of the compassion motivation and action scales in a Portuguese sample

Dissertação no âmbito do Mestrado em Psicologia Clínica e da Saúde na Subárea de Especialização em Intervenções Cognitivo-Comportamentais orientada pela Doutora Marcela Salomé Albuquerque Andrade de Matos e pela Professora Doutora Ana Cardoso Allen Gomes

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Faculdade de Psicologia e Ciências da Educação Universidade de Coimbra

## ADVANCING THE ASSESSMENT OF COMPASSION: A STUDY ON THE PSYCHOMETRIC CHARACTERISTICS OF THE COMPASSION MOTIVATION AND ACTION SCALES IN A PORTUGUESE SAMPLE

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#### Resumo

A compaixão pode ser definida como uma sensibilidade ao sofrimento, tanto do eu como do outro, com uma motivação e compromisso para aliviar e prevenir este sofrimento (Gilbert, 2014). Existem diversos estudos que referem a importância das intervenções no âmbito da compaixão, sinalizando os inúmeros benefícios destas. No entanto, não existia ainda nenhuma escala que permitisse a avaliação dos progressos obtidos com este tipo de intervenções (Steindl et al., unpublished). Assim, de modo a se conseguir avaliar, semanalmente, como os indivíduos melhoram em termos de ações compassivas e com as referidas intervenções, procedeu-se à criação das *Escalas da Motivação e Ação Compassiva* (EMAC; Steindl et al., 2017).

O presente estudo pretende examinar as características psicométricas das EMAC (Matos et al., 2018) na população Portuguesa. Uma amostra de 516 participantes foi utilizada para realizar uma Análise Fatorial Exploratória e Confirmatória. As análises confirmaram a estrutura original do instrumento, com três subscalas (intenção, tolerância ao sofrimento e ação), tanto para a escala de compaixão pelos outros (12 items) como para a escala de autocompaixão (18 items). O estudo psicométrico revelou também boa consistência interna das escalas e validade de constructo adequada. Assim, a escala constituiu-se como um instrumento útil para avaliação e investigação da compaixão e do autocriticismo na Sintomatologia Depressiva. Experiências subjetivas de Compaixão em relação aos outros e ao próprio foram também discutidas.

Palavras-chave: compaixão, autocompaixão, motivação, ação, propriedades psicométricas

#### Abstract

Compassion can be defined as a sensitivity to suffering, both from the self and the other, with a motivation and commitment to alleviate and prevent this suffering (Gilbert, 2014). There are several studies that mention the importance of interventions in the scope of compassion, signaling the countless benefits of these. However, there is no scale to assess the progress made with this type of interventions (Steindl et al., unpublished). Thus, in order to evaluate, weakly, how individuals improve in terms of compassionate actions and with existing interventions, the Compassion Motivation and Action Scales were created (CMAS; Steindl et al., 2017).

This study aims to examine the psychometric characteristics of EMAC (Matos et al., 2018) in the Portuguese population. A sample of 516 participants was used to perform an Exploratory and Confirmatory Factor Analysis. Analyzes confirmed the original structure of the instrument, composed by three subscales (intention, distress tolerance and action), both for the Compassion for others scale (12 items) and the Self-Compassion scale (18 items). The psychometric study also revealed good internal consistency of the scales and adequate construct validity. Thus, the scale seems to constitute a valid instrument for the evaluation and investigation of compassion. The present study also confirmed the predictive role of Self-Compassion and Self-Criticism in Depressive Symptoms. Subjective experiences of Compassion towards others and ourselves were also discussed.

Keyword: compassion, self-compassion, motivation, action, psychometric properties

#### Introduction

Compassion is studied worldwide, from various points of view, and as a result there are many definitions of compassion. Yet, there is no universally agreed definition. However, there is agreement that compassion involves "a sensitivity to the suffering of self or others with a deep commitment to try to relieve it" (Dalai Lama, 1995). Goetz et al. (2010) define compassion "as the *feeling* that arises in witnessing another's suffering and that motivates a subsequent desire to help". Strauss et al. (2016) suggest that compassion includes recognizing suffering, common humanity, empathy, distress tolerance, and motivation to act. Jinpa (2010) defines compassion through four key components (cognitive, affective, intentional and motivation, respectively): (1) an awareness of suffering, (2) sympathetic concern related to being emotionally moved by suffering, (3) a wish to see the relief of that suffering, and (4) a responsiveness or readiness to help relieve that suffering (Jazaieri et al., 2013).

According to Gilbert (2014), compassion can be seen as "a sensitivity to suffering in self and others, with a motivation and commitment to try to alleviate and prevent it". Buddhist and evolutionary approaches perceive compassion as rooted in a caring motivational system (Gilbert, 2019). This system is linked with what Bowlby called the 'caregiving behavioral system' (an innate behavioral system in parents and other caregivers that responds to the needs of dependent others), suggesting that this same system can be extended to all suffering creatures (Gillath et al., 2015). Therefore, compassion can be seen as a social mentality (social motives that involve creating mutually reciprocal roles; Gilbert, 2014, 2016, 2019). Thus, compassion is part of a reciprocal process where providers will evaluate the impact of their caring behavioral displays on others, and the recipients will be sensitive to the help/support they are receiving (Gilbert, 2019). So, compassion can be seen as a social motive and a social mentality (Gilbert, 2015). Gilbert (2019) posits that without a motive, emotions can't be triggered. This assumption assumes that motives are different to emotions in that they exist in the mind whether active or not, and can guide both conscious and unconscious processes (Gilbert, 2019). It's the distress and suffering that triggers the motive of compassion but the emotions associated with caring and compassion are complex and context dependent (Gilbert, 2019). So, this approach argues that there must be a degree of motivation, willingness, courage and distress tolerance for one to deliberately turn towards and tune into suffering (Gilbert, 2019). The problem is that as a motivation, compassion has to compete with other motives (Huang & Bargh, 2014; Gilbert, 2015) like tribalism and individualistic competitiveness (Gilbert, 2015). Part of the challenge of compassion therefore is not only to understand how it can promote personal well-being but also to comprehend how it can break through these evolution limitations (Gilbert, 2009, 2015, 2019).

Regardless of the definition of compassion, adopting prosocial, caring and compassionate attitudes and behaviors to oneself and others brings huge benefits to people (Jazaieri et al., 2014; Matos et al., 2017). According to MacBeth e Gumley (2012; in a meta-analysis) higher levels of compassion (as a whole) were associated with lower levels of mental health symptoms. Similarly, compassionate goals have been shown to predict lower distress and greater interpersonal connectedness (MacBeth & Gumley, 2012; in a meta-analysis). Gilbert et al. (2017) believe that there are three flows of compassion: the compassion we feel for other people, our experience of compassion from other people, and self-compassion. These three orientations (self-, from others and to others) were positively correlated with safe positive affect (Steindl et al., 2018) and with well-being (Gilbert et al., 2017). Research has shown that self-compassion is related to lower depression and anxiety, increasing resilience to stress and greater satisfaction with life (increased wellbeing) (MacBeth & Gumley, 2012 - in a meta-analysis; Neff, 2003a). Steindl et al. (2018) also found that people with higher levels of self-compassion scored lower on depressive symptoms. Higher levels of self-compassion were also found to be associated with better physical health and improved interpersonal relationships (Kirby, 2017). In opposition, lower levels of self-compassion are linked to high levels of worry, rumination, guilt, and self-criticism (Gilbert et al., 2011; MacBeth & Gumley, 2012 - in a meta-analysis). In working with patients with shame memories, compassion (through CFT) can be useful since we can cultivate the undeveloped affiliative soothing system, promoting a self-to-self relationship based on feelings of kindness, warmth and compassion which enable the individual to tone down distress and negative affect via selfsoothing (Matos et al., 2015). Therefore, self-compassion emerges as a protective factor for well-being (Gilbert et al., 2017). Concerning compassion for others, higher levels of compassion have been found to be associated with improved well-being and enriched interpersonal relationships (Kirby, 2017) while, once more, lower levels of compassion are linked to high levels of worry, rumination, guilt, and self-criticism (Gilbert et al., 2011; MacBeth & Gumley, 2012 - in a meta-analysis). Lastly, Steindl et al. (2018) found that people with higher levels of receiving compassion from others also scored lower on depressive symptoms.

Given the benefits of compassion, many interventions have been created with the aim of cultivating compassion (Kirby, 2017). These are: Mindful Self-Compassion (MSC; Neff & Germer, 2013), Cultivation Compassion Training (CCT; Jazaieri et al., 2013), Cognitively Based Compassion Training (CBCT; Pace et al., 2009), Cultivating Emotional Balance (CEB; Kemeny et al., 2012), Compassion and Loving-Kindness Meditations (e.g., Hoffman et al., 2011) and Compassion-Focused Therapy (CFT; Gilbert, 2014). Paul Gilbert developed CFT that draws from evolutionary psychology, attachment theory, and applied psychology processes from neuroscience and social psychology (Gilbert, 2009). In CFT compassion is perceived as a motivational and behavioral component, according to the previously discussed model of compassion (Gilbert, 2015). CFT works to reduce fears of compassion, and develop the three compassion flows and competencies, to alleviate distress and cultivate safe affect (Steindl et al., 2018). The CFT model focuses on the interplay between three types of emotion regulation system: threat and protective systems; drive, resource-seeking and excitement systems; and contentment, soothing and safeness systems (Gilbert, 2009). This therapy works specially with shame and self-criticism and it's hypothesized that the affect regulation system is poorly accessible to people who experienced this problems (Gilbert, 2009). The aim of this approach is to use compassionate mind training to help people develop and work with experiences of inner warmth, safeness and soothing, via compassion and self-compassion (Gilbert, 2009). The remaining interventions have shown great results, such as increases in self-compassion, mindfulness, well-being outcomes and reduced negative affect, for example (Kirby, 2017).

Therefore, the study of compassion is necessary and important. In the last 20 years it was possible to see a huge number of research exploring the benefits of compassion and prosocial cultivation (Jazaieri et al., 2013; Matos et al., 2017). Yet, there was not much research that examined whether interventions aimed to increase compassion leads to increased compassionate action (Kirby et al., 2017). In this way, it seemed important to measure the action or behavioral component of compassion-based interventions (Gilbert, 2019; Steindl et al., unpublished). Since the most common way of measuring compassion is through self-report, there are a number of scales measuring it (Steindl et al., unpublished; Strauss et al., 2016). According to Kirby et al. (2017) the most well used measures are Self-Compassion Scale (SCS; Neff, 2003b) and Fears of Compassion Scales

(FCS, Gilbert et al., 2010). The Self-Compassion Scale (Neff, 2003b) assesses trait levels of self-compassion (although not compassion for others). The Fears of Compassion Scales (Gilbert et al., 2010) is designed to identify barriers that exist for all kinds of compassion (Gilbert et al., 2011; Steindl et al., unpublished). The SCS and FCS do not explicitly assess for compassionate motivation or action (Steindl et al., unpublished). The Compassionate Engagement and Action Scales (CEAS; Gilbert et al., 2017) seems to be the only measure that aims to measure self-reported compassionate motivation and behavior, with three scales: giving compassion to others, and receiving compassion from others and oneself (Gilbert et al., 2017; Steindl et al., unpublished). This measure meets a CFT perspective (Gilbert et al., 2017; Steindl et al., unpublished). These three scales (SCS, FCS and CEAS) assess compassion as a trait-based tendency giving stable insights into how compassion operates for an individual (Steindl et al., unpublished). Taking into account the benefits already discussed of compassion, we can consider that is extremely important to understand what can help enhance the motivation and commitment for taking compassionate action towards others or oneself (Matos et al., 2017). Thus, Steindl et al. (unpublished) proposed that a measure informed by Motivational Interviewing (especially with focus on Change Talk) and other related insights would provide a framework for assessing these motivational and action-oriented components of compassion. Therefore, a measure aimed to track weekly compassionate motivation and action would be useful for clinical work. So, under these circumstances it was necessary to create a measure with minimal assessment burden, that was sensitive to change in both clinical and non-clinical populations, that would evaluate compassion for others and selfcompassion and could be applicable for interventions aiming to cultivate compassion (Steindl et al., unpublished).

Following this guidance, the Compassion Motivation and Action Scales were developed. Compassionate motivation and action are the key factors to target and increase in compassion-based interventions (Kirby, 2016; Steindl et al., unpublished) and therefore, were chosen as constructs domains for assessment. Under the review of existing measures and taking into account the principles of motivational interview, specifically in relation to change talk, the initial item pool was generated (Steindl et al., unpublished). Believing that Change Talk predicts client behavior, authors focused on these aspects related to compassion to assess changes in intrinsic motivation (Steindl et al., unpublished). This resulted in an initial 84-item pool, which assessed both compassion for others and compassion for self (Steindl et al., unpublished). The initial item pool was disseminated to experts in the compassion and motivational interviewing literature for feedback and to ensure that wording and content were culturally relevant (Steindl et al., unpublished). After completing these procedures, Compassionate Motivation and Action Scales were rigorously evaluated in terms of their factor structure with both exploratory and confirmatory factor analyses (Steindl et al., unpublished). Some measures were used to assess concurrent validity of CMAS by examining its associations with other constructs, including validated self-report compassion measures (SCS, FCS), psychological distress (DASS-21), and self-criticism and self-reassurance (FSCRS).

The results were clear and promising. Psychometric evaluation found support for the 12-item, three factor structure of the Compassion for Others Scale of the CMAS, and for the 18-item, three factor structure of the Self-Compassion Scale of the CMAS and found that both scales had very good internal consistency. The Compassion and Self-Compassion scales were significantly correlated with mental health, particularly depression, as well as self-hatred and inadequacy. It is also possible to assert the measure shows promise for use with clinical samples since a potential clinical sample responded differently on the Self-Compassion Scale, specifically the distress tolerance and action subscales. The unique contribution of the measure is the inclusion of the Action subscales for compassion and self-compassion. To date, no compassion measure has attempted to capture self-report behavioral action. Here, the Self-Compassion Scale was found to be significantly correlated with depression, self-hatred and inadequacy, more than Compassion Scale. The CFA revealed the items intended to measure motivation formed two separate factors referring to intention and distress tolerance for both the compassion and self-compassion scales. In terms of the performance of the subscales, the Distress Tolerance subscale of both the self-compassion and compassion scales was the best performing in relation to its significant associations with other established psychometric measures. This Distress Tolerance subscale is also important since its items assess selfefficacy (a strong predictor of successful behavior change and positive mental health). Therefore, it was proposed that distress tolerance may be particularly important in a clinical setting but also in cultivating more compassion action in daily life (Steindl et al., unpublished).

Since there has been no measure of changes in compassionate action, specifically as a result of existing interventions, the contribution of CMAS is related to the fact that one could assess, weekly, how individuals are improving in compassionate and selfcompassionate action across the dosage of the intervention (Steindl et al., unpublished). Since the original study of this measure was conducted in a sample of participants from Australia, USA, UK, and New Zealand, the present work focuses in the study of the European Portuguese version of the CMAS scales.

Thus, this work aims at examining psychometric properties of the CMAS scales in the Portuguese population; specifically the CMAS factor structure, using exploratory and confirmatory procedures, internal reliability and construct validity. Therefore, the relationship between the CMAS scales, quality of sleep and other indicators of psychological adjustment and well-being, such as psychological distress, self-criticism and self-reassurance, will be explored. The predictive effect of self-compassion (CMAS) and self-criticism (FSCRS) on psychopathological symptoms will also be evaluated. Finally, subjective experiences of being compassionate towards others and oneself will also be qualitatively explored.

#### Methodology

#### **Participants**

This study was comprised by 516 participants from the general population, of all genders. Predominantly, the sample consisted of females (n = 349, 78.6 %), with only 21.2% of the sample being male (n = 94) and 0.2 % of the sample characterized by "other gender" (n = 1). The sample was from the north to the south of Portugal. Participants age was on average 25.49 years old (SD = 9.42) with ages ranging from 18 to 60. Fifty three participants were married (10.3 %), 436 single (84.5 %), 12 separated/divorced (2.3 %), 2 widows (0.4 %) and 13 were in a cohabiting relationship (2.5 %). Participants' years of education mean was 14.12 (SD = 2.55). The majority of participants were students (n = 166, 59.5 %) and 4 participants (1.4 %) were inactive or retired. Twenty nine participants (10.4 %) had a low socioeconomic level, 49 participants (17.6 %) had a medium socioeconomic level and 31 participants (11.1 %) had a high socioeconomic level.

Another group of participants (n = 173), from which 44.51 % were part of the previous group, also responded to a set of qualitative questions about their experiences of compassion. 55.49 % of participants only filled these qualitative questions.

The existing missings are real and due to the lack of response of some participants.

#### Procedure

Authorization was obtained from the Ethical and Deontology Committee of Research from the Faculty of Psychology and Educational Sciences of the University of Coimbra - CEDI\_FPCEUC (28.11.2019). In the present study two types of data (quantitative and qualitative data) were used through a multimethod approach (online and in paper). The first step for participants was to filling out of the informed consent while they were informed that their cooperation was voluntary, that their answers were confidential and only used for the purpose of the study and that they could abandon the study whenever they want. Then they were asked to complete the set of self-report questionnaire described below.

Thus, after collecting the questionnaires, data analysis was performed.

#### Measures

The Compassion Motivation and Action Scales (CMAS) (Steindl et al., 2017; Portuguese version by Matos et al., 2018)

This scales assesses compassion motivation and a more behavioral component, that is, the use of compassion actions that people have to prevent or deal with the suffering of others or the suffering of the self. This is a self-report measure with two scales (compassion for others and self-compassion), where the first (compassion for others) has 12 items and the second (self-compassion) has 18 items. These items are rated on a 7-point Likert scale (1-7). The instructions are the same for both scales, changing just the direction of the compassion (others or self). Higher scores indicate higher levels of compassion or self-compassion (Steindl et al., unpublished).

In the original version, in the compassion for others scale, the Cronbach's alphas indicated very good/excellent internal consistency (Intent = .866, distress tolerance = .880, action = .961, total scale = .879). Similarly, there was also an excellent internal consistency present for the self-compassion scale (Intent = .916, distress tolerance = .946, action = .962, total scale = .937) (De Vaus, 2002).

This scales were then translated and adapted to the Portuguese Population following the same procedures of the original scales. The scales were translated by the Portuguese research team and the back translations were examined by a bilingual researcher to examine accuracy and fidelity of the original scales.

Compassion Engagement and Action Scales (CEAS) (Gilbert et al, 2017; Portuguese Version by Matos et al., 2015)

This self-report questionnaire encompasses three subscales measuring the three orientations/flows of compassion: self-compassion, compassion to others, and compassion from others (Gilbert et al., 2017). Each subscale has 13 items and is divided into 2 sections. The first (engagement) is related with the motivations and capacities to deal with suffering. It includes the six compassion engagement elements: motivation to care for well-being, attention/sensitivity to suffering, sympathy, distress tolerance, empathy and being accepting and non-judgmental (Gilbert et al., 2017). The second section (compassionate action) is related with the ability to pay attention to, learn about and act on what is helpful – developing the wisdom and commitment to do something about it. It includes compassion action elements: directing attention to what is helpful, thinking and reasoning about what is likely to be helpful, taking helpful actions and creating inner feelings of support, kindness, helpfulness and encouragement to deal with distress (Gilbert et al., 2017). Recently, the same group of investigators created a forth subscale (openness to compassion from others). These items are rated on a 10-point Likert scale (1-10). Higher scores indicate higher levels of compassion.

The CEAS was found to have robust psychometric properties (Gilbert et al., 2017). In the scale "Compassion *for* others—Engagement" the Cronbach's alpha was  $\alpha = .90$ (Portuguese version  $\alpha = .82$ ). The Cronbach's alpha for "Compassion *for* others— Actions" was  $\alpha = .94$  (Portuguese version  $\alpha = .90$ ). In "Compassion *from* others— Engagement" the Cronbach's alpha for this scale was  $\alpha = .89$  like in the Portuguese version. The Cronbach's alpha for "Compassion *from* others—Actions" scale was  $\alpha = .91$ (Portuguese version  $\alpha = .95$ ). In "Compassion *from* others—Actions" scale was  $\alpha = .91$ (Portuguese version  $\alpha = .95$ ). In "Compassion *for* self—Engagement" the Cronbach's alpha for the 2 item emotional sensitivity scale was  $\alpha = .77$  (Portuguese version  $\alpha = .72$ ) and  $\alpha = .72$  (Portuguese version  $\alpha = .63$ ) for the 4 item engagement with suffering scale. Finally, in the scale "Compassion *for* self—Actions" the Cronbach's alpha was  $\alpha = .90$ , like in the Portuguese Version (Pereira, 2015; Gilbert et al., 2017).

In the present study, the scale "Compassion *for* others—Engagement" had a Cronbach alpha of .64. The Cronbach's alpha for "Compassion *for* others—Actions" was  $\alpha = .74$ .

In "Compassion *from* others—Engagement" the Cronbach's alpha for this scale was  $\alpha =$  .73. The Cronbach's alpha for "Compassion *from* others—Actions" scale was  $\alpha =$  .72. In "Compassion *for* self—Engagement" the Cronbach's alpha for the 2 item emotional sensitivity scale was  $\alpha =$  .62 and  $\alpha =$  .75 for the 4 item engagement with suffering scale. Finally, in the scale "Compassion *for* self—Actions" the Cronbach's alpha was  $\alpha =$  .88.

Almost all Cronbach's alphas were above the cut-off value of .70 for good internal consistency with some excellent alphas ( $\alpha > .90$ ) (De Vaus, 2002).

It is important to note that only the scale of compassion for others and self-compassion will be used.

# The Forms of Self-criticizing/Attacking and Self-reassuring Scale (FSCRS) (Gilbert et al., 2004; Portuguese Version by Castilho et al., 2014)

This scale assesses participants' thoughts and feelings about themselves during a perceived failure. Two subscales measure forms of self-criticizing (inadequate self and hated self) and one subscale measures tendencies to be reassuring to the self (reassured self). In this 22-item scale participants respond on a 5-point Likert scale (0 = Not at all like me, 4 = extremely like me) (Gilbert et al., 2004).

The scale showed Cronbach's alphas of .90 for inadequate self, .86 for hated self and .86 for reassured self (Gilbert et al. 2004). In the study of Castilho et al. (2015), Cronbach's alphas were .89, .72 and .87 for the nonclinical sample and .91, .82 and .81 for the clinical sample, for inadequate self, hated self and reassured self, respectively. The present study revealed Cronbach's alphas of .86 for inadequate self, .80 for hated self and .88 for reassured self. Cronbach's alphas were above the cut-off value of .70 for good internal consistency (De Vaus, 2002).

### Depression, Anxiety and Stress Scale (DASS-21) (Lovibond & Lovibond, 1995; Portuguese Version by Pais-Ribeiro et al., 2004)

The DASS-21-item shortened version of the DASS-42 consists of three subscales measuring three dimensions of psychopathological symptoms: depression, anxiety and stress. Participants rate how much each statement applied to them over the past week. Items indicate negative emotional symptoms and are rated on a 4-point Likert scale (0-3). Higher scores indicate higher levels of negative affective states (Pais-Ribeiro et al., 2004).

On the original version, DASS-21 subscales have Cronbach's alphas of .91 for Depression, .84 for Anxiety, and .90 for Stress (Lovibond & Lovibond, 1995). The Portuguese version showed a Cronbach alpha of .85 for Depression, .74 for Anxiety, and .81 for Stress (Pais-Ribeiro et al., 2004). The present study had Cronbach's alphas of .89 for Depression, .88 for Anxiety and .89 for Stress. Cronbach's alphas were above the cut-off value of .70 for good internal consistency (De Vaus, 2002).

#### Basic Scale on insomnia and Quality of Sleep (BaSIQS+) (Gomes et al., 2011, 2015)

This basic scale consists of 7 items evaluating sleep onset, maintenance, early awakening, perceived depth and sleep quality pertaining a "typical week", considering last month (Miller-Mendes et al., 2019). All items are rated on a 5-point Likert scale (0-4) except for the last two (reversed), summing up to 28 – higher scores denote poorer sleep (Miller-Mendes et al., 2019). The added items in BaSIQS plus are aimed to evaluate the sleep efficiency, sleep midpoint, sleep durations, and others.

The Cronbach alpha of BaSIQS was between .73 and .76 in university and elderly population and .84 in a non-student adult population (Gomes et al., 2015). In the present study the Cronbach alpha was .77. Cronbach's alphas were above the cut-off value of .70 for good internal consistency (De Vaus, 2002).

It is important to note that only the first part of the scale (basic scale) will be used.

#### Set of qualitative questions about their experiences of compassion

A set of qualitative questions were used about the experience of compassion. These questions were related to personal experiences of compassion. Thus, participants would have to describe in detail a situation in which they felt compassion for other people and for themselves. The objective was to evaluate the subjective experiences of compassion.

#### Data analysis

In order to analyze the Compassion Motivation and Action Scales (CMAS) factor structure, the sample was randomly split into two, with the first sample used for Exploratory Factor Analysis (n = 249) and the second used for the Confirmatory Factor Analysis (n = 267).

Then, to explore how many factors it was possible to obtain in this specific Portuguese sample, an **exploratory factor analysis (EFA)** was performed using SPSS Version 22. There was a *priori* specified factor structure for the measure, with three factors for each scale (Steindl et al., unpublished). Still, the EFA was conducted without taking into account this previous results (without forcing this factor structure). A principal components analysis (PCA) was conducted to examine the number of factors to extract and, to also determine the number of factors to extract, scree plots and eigenvalues were examined (Pallant, 2007). Once the number of factors were determined, the factors were "rotated". The PROMAX (oblique) rotation method was chosen to interpret factors in an easier way while also allowing the factors to correlate. Items with a factor loading of above .70 were considered as part of the factor.

The next step was to carry out confirmatory factor analysis (CFA) in order to evaluate the factor structure of the scales. The variables were treated as continuous in the analysis (7- point Likert scale) and robust maximum likelihood estimator MLR was employed. The models' fit was evaluated using the standardized root mean square residual (SRMR), the root mean square error of approximation (RMSEA), the comparative fit index (CFI), the normed fit index (TLI), the goodness of fit (GFI) and the normed chi-square ( $\chi^2$ /df). The SRMR index represents the difference between the observed correlation and the predicted correlation and here, values close to .08 or less represent a good fit (Hu & Bentler, 1999). The RMSEA index indicates the error of approximation and, in this index, values up to .08 are considered reasonable and values of .05 or less are considered close fit (Browne & Cudeck, 1989). The CFI compares the fit of a target model to the fit of an independent (or null) model and, here, values above .90 are adequate and above .95 are considered very good (Hu & Bentler, 1999). The TLI indicate if the model of interest improves the fit by 95% ( $\geq$ .95) relative to the null model (Hu & Bentler, 1999). The GFI is the proportion of variance accounted for by the estimated population covariance and expect values above .90 (Hu & Bentler, 1999). The normed chi-square assess overall fit and the discrepancy between the sample and fitted covariance matrices and expect values between 2 and 5 (good fit; p-value > 0.050) (Kline, 2005). Models were then based on modification indices (MIs). These indices indicated the expected decrease in chi-square given the relaxation of imposed constraints. Beyond the modal fit adjustment, local adjustment was evaluated. This was assessed through the standardized regression weight (which are adequate when values are equal or superior to .40) and square multiple correlations (Tabachnick & Fidell, 2013).

Internal consistency of the scales were also examined for EFA and CFA. Using Cronbach's alphas, values above .70 were considered good and above .90 as excellent indicators of internal consistency (De Vaus, 2002). Descriptive Statistics were performed for CMAS scales, subscales and items, and for other related scales, described below. Independent samples t-test was used to evaluate gender differences in the CMAS scales. The effect size was evaluated trough Cohen's d. According to Pallant (2007), the effect size may be classified as small (.2), medium (.5) or large (.8). Pearson productmoment correlation coefficients were calculated to explore the relationships between the CMAS scales and its subscales. Convergent Validity was analyzed using the Pearson correlation coefficients between the CMAS scales, the CEAS self-compassion and compassion for others scales and self-reassurance (of FSCRS scale). Discriminant Validity was evaluated using the Pearson correlation coefficients between the CMAS scales and indicators of psychological adjustment and well-being, such as psychological distress, self-criticism and quality of sleep. Correlations of 1 are considered perfect correlations, between .8 and 1 strong correlations, between .5 and .8 moderate, between .1 and .5 weak, between 0 and .1 negligible, and there is no correlation if the value is 0 (Santos, 2010). Multiple regression analyses were conducted using the self-compassion scale (total scale) and self-criticism scale (of FSCRS) to predict three dimensions of psychopathological symptoms (depression, anxiety and stress). Thematic analysis was used to identify, analyze and report patterns (themes) within the qualitative data regarding compassion experiences (Braune & Clarke, 2006). There was a familiarization with the data due to the transcriptions that were read and re-read. Initial codes were then generated systemically across the data set. Once codes had been ascribed, potential themes were identified, reviewed and defined based on relevant theory. Finally, a chi-square test for independence was also performed.

#### Results

#### **Exploratory Factor Analysis**

The suitability of the data for factor analysis was assessed. The Kaizer-Meyer-Oklin value was .86 (for compassion for others scale), and .88 (for self-compassion scale), exceeding the recommended value ( $\geq$  .05). Bartlett's Test of Sphericity for both scales reached statistical significance, supporting the factorability of the correlation matrix. The 12 (compassion for others) and 18 (self-compassion) items were then subjected to principal components analysis (PCA). The examination of eigenvalues suggested three factors for both compassion for others and self-compassion scales with eigenvalues exceeding 1 (see Table 1). The three-component solution for compassion for others scale explained a total of a 74,1 % of the variance, while in self-compassion scale the three-component solution explained 71,3 % of the variance. The results of scree plot confirm the three component structure (see Figure A1 and B1). The PROMAX (oblique) rotation method was then performed and the factor loadings for the compassion for others scale and self-compassion scale are also presented in Table 1 and 2, respectively. This produced similar results to the original study. In compassion for others scale (12-items), this resulted in three factors showing a number of strong loadings (above .70) and all variables loading substantially on only one factor. In self-compassion scale (18-items) the three-factor structure showed strong loadings (above .70). In this last scale the items had significant and meaningful loadings on the specified factors, although there are some cross-loadings. Nevertheless, the items saturated more in the respective factors (with a difference of > .20 between the two saturations) (see Table A1 and B1).

#### Table 1

Item	Factor	Factor	Factor
	1	2	3
11. I have offered support to people in need more than usual over the past week.	.908		
12. Compared to usual, this past week I have been more compassionate to people who are struggling.	.901		
10. I have been actively more kind this past week to others in my life who are struggling.	.894		
9. The past week has seen me take more action in relieving another's suffering.	.863		
8. Over the past week I have been more helpful than usual.	.851		
7. Compared to usual, I have acted more compassionately towards others over the past week.	.844		
2. I plan to take action and be more helpful to others.		.895	
1. I want to be kinder and more caring towards people I don't know.		.889	
3. I am going to show more care and concern when I see people hurting.		.776	
5. I feel confident that I can cope with the distress that another person might be experiencing.			.90

#### Factorial Structure of Compassion for others Scale

4. I am able to cope with my feelings in response to another person's suffering.			.812
6. I am able to be with someone who is struggling in their life.			.713
Eigenvalue	5.257	1.995	1.644
Eigenvalue	5.257	1.//5	
Explained Variance	43.808	16.621	13.703

#### Table 2.

Factorial Structure of Self-Compassion Scale

Item	Factor	Factor	Factor
	1	2	3
9. I have the ability to be supportive of myself when I feel like I have failed.	.901		
10. I am able to be kind to myself, even when it feels uncomfortable to do so.	.881		
8. I can show tolerance towards myself in times of hardship.	.876		
7. I am able to be loving towards myself when I feel emotional pain.	.871		
11. I am able to cope with facing my own struggles in order to be kind to myself.	.868		
12. I can cope with the difficult feelings that come with attending to my own needs.	.724		
6. I am confident that I can be kind and caring towards myself when struggling with problems.	.720		
14. Over the past week I have been more kind and caring towards myself than usual.		.960	
16. I have been treating myself in a more gentle and caring way over the past week		.951	
15. I have been taking steps over the past week to show myself more self- compassion.		.914	
13. Compared to usual, I have acted more self-compassionately over the past week.		.887	
18. Compared to usual, this past week I have been more accepting of myself.		.845	
17. The past week has seen me be more forgiving even when I have made mistakes.		.804	
3. Being compassionate towards myself will improve my overall wellbeing.			.85
2. I want to be supportive towards myself when I face disappointments in my life.			.854
4. Being accepting of myself will help improve my quality of life.			.77
1. I wish to be kind and caring towards myself when faced with difficulties.			.744
5. There are lots of reasons to be more self-compassionate.			.58
Eigenvalue	7.792	2.685	2.36
Explained Variance	43.289	14.918	13.120

#### Internal Consistency - EFA

In both scales, Cronbach's alphas were above the cut-off value of .70 for good internal consistency with some alphas showing excellent internal consistency (above .90) (De Vaus, 2002). The Cronbach's alphas of Compassion for others scale were: Intent = .82, Distress tolerance = .74, Action = .94 and in the Total scale = .97. In the Self-compassion scale, the Cronbach alphas were: Intent = .82, Distress tolerance = .93, Action = .95 and in the Total scale = .92. In the Compassion for others scale there would be a small improvement in Cronbach alpha if items 1, 4, 5 (of Total scale) and 6 (Distress tolerance subscale) were removed. Likewise, in Self-compassion scale there would be a minor improvement in Cronbach alpha if items 4 (of Total scale), 5 (Intent subscale) and 12 (Distress tolerance subscale) were removed. Given that this did not significantly improve the internal consistency of the scale (the alpha only improved by a maximum of .006), and taking into account that AFC was going to be performed, the decision was to not remove any item (see Table 3 and 4).

#### Table 3.

Corrected Item-total Correlations and Cronbach alpha if the item was excluded, for the Compassion for others scale

		Explorato	Exploratory FactorConfirmateAnalysis subsampleAnalysis s		ory Factor
		Analysis s			ubsample
		R	α	R	α
Intention	Item 1	.66	.76	.66	.77
Subscale	Item 2	.73	.70	.75	.66
	Item 3	.63	.78	.60	.79
Distress	Item 4	.57	.67	.61	.75
Tolerance	Item 5	.69	.50	.71	.65
Subscale	Item 6	.49	.76	.62	.75
Action	Item 7	.76	.94	.78	.95
Subscale	Item 8	.79	.93	.85	.94
	Item 9	.85	.93	.82	.94
	Item 10	.84	.93	.87	.94
	Item 11	.84	.93	.87	.94
	Item 12	.85	.93	.87	.94

#### Table 4.

Corrected Item-total Correlations and Cronbach alpha if the item was excluded for the Self-Compassion scale

		Explorato	Exploratory Factor		ory Factor
		Analysis s	subsample	Analysis s	ubsample
		R	α	R	α
Intention	Item 1	.62	.79	.68	.88
Subscale	Item 2	.72	.76	.79	.86
	Item 3	.71	.76	.75	.87
	Item 4	.58	.80	.76	.86
	Item 5	.48	.83	.72	.87
Distress	Item 6	.71	.93	.73	.93
Tolerance	Item 7	.84	.91	.78	.93
Subscale	Item 8	.84	.91	.81	.93
	Item 9	.85	.91	.83	.92
	Item 10	.79	.92	.83	.92
	Item 11	.81	.92	.88	.92
	Item 12	.60	.94	.70	.94
Action	Item 13	.81	.95	.87	.96
Subscale	Item 14	.90	.94	.92	.95
	Item 15	.87	.94	.88	.96
	Item 16	.91	.94	.92	.95
	Item 17	.81	.95	.87	.96
	Item 18	.81	.95	.85	.96

#### **Confirmatory Factor Analyses**

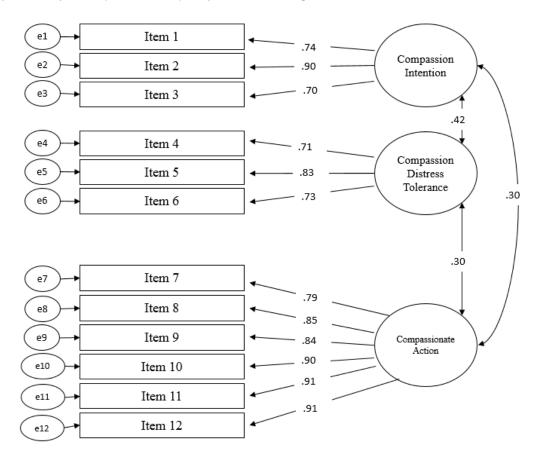
The analysis of the factor structure of **Compassion for others** and **Self-Compassion scales** started with the hypothesized three factor model (Intention, Distress Tolerance and Action Subscale) for each scale (Model A; see Figure 3 and 5).

However, in both scales, chi-square showed statistically significant lack of fit (p < .050), which is common given the sensitivity of this test in large samples or with many degrees of freedom. For this reason, we decided to interpret this index also through the normed chi-square ( $\chi^2$ /df) that expects values between 2 to 5. The remaining indexes also showed that the model could be improved in both scales. For this reason, the model was improved.

Compassion for others scale. Model A achieved good fit according to CFI, TLI, GFI, SRMR and chi-square but not according to RMSEA (see Table 5). Modification indices were examined in order to improve the model, and correlations between some items' errors were performed. The model was recalculated (model B, see Table 5) correlating the errors of items 11 (Factor 1) "I have offered support to people in need more than usual over the past week" and item 12 (Factor 1) "Compared to usual, this past week I have been more compassionate to people who are struggling". The model fit improved but didn't reach adequate fit. The model was recalculated (model C) correlating the errors of items 7 (Factor 1) "Compared to usual, I have acted more compassionately towards others over the past week" and item 8 (Factor 1) "Over the past week I have been more helpful than usual". All estimated correlations between items' errors were within the same factor (action). Model C showed a good fit to the data and was therefore the final adjusted model. Model C fit indices based on CFI, TLI, GFI, SMRM and RMSEA indicated that a good fit with a reasonable amount of data being explained by the model  $(\gamma 2/df = 1.684, p < .050; CFI = .985; TLI = .980; GFI = .951; SRMR = .045; RMSEA =$ .051 [90% CI .031 – .069]) (see Table 5 and Figure 4).

#### Figure 3

Three-factor Confirmatory Factor Analysis of the 12-item compassion scale (Model A)



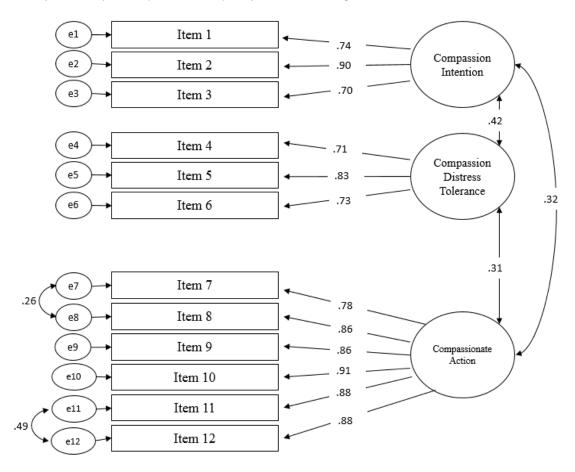
#### Table 5.

Confirmatory Factor Analysis results for Compassion for Others Scale

	χ2/df	CFI	TLI	GFI	SRMR	RMSEA	RMSEA
							90% CI
Model A	2.821***	.958	.946	.910	.048	.083	.067-
							.099
Model B with correlated error	1.906***	.979	.973	.943	.045	.058	.040-
between item 11 and 12							.076
C with correlated error between item	1.684*	.985	.980	.951	.045	.051	.031-
7 and 8							.069

#### Figure 4

*Three-factor Confirmatory Factor Analysis of the 12-item compassion scale (Model C)* 



Regarding local fit, all items revealed Standardized Regression Weights (SRW) ranging from .70 (item 3) to .92 (item 10). Squared Multiple Correlations' (SMC) results confirmed the items' reliability: values ranged from .48 (item 3) to .84 (item 10) (Table 6).

#### Table 6.

Compassion Motivation and Action Scales (Compassion for others scale) – Standardized regression weights (SRW) and squared multiple correlations (SMC)

	SRW	SMC
Item 1	.74	.55
Item 2	.90	.82
Item 3	.70	.48
Item 4	.71	.50
Item 5	.83	.69

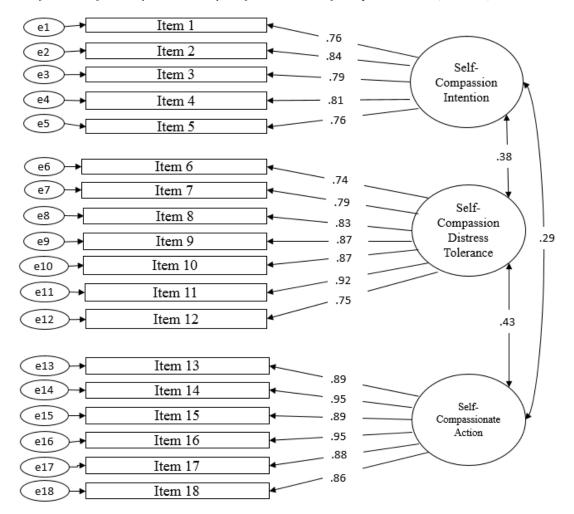
Item 6	.73	.54
Item 7	.78	.61
Item 8	.86	.74
Item 9	.86	.74
Item 10	.92	.84
Item 11	.88	.77
Item 12	.88	.77

Self-compassion scale. Model A achieved an acceptable fit, according to CFI and SRMR but not according to TLI, GFI, RMSEA and chi-square (see Table 7). Modification indices were examined in order to improve the model, and correlations between some items' errors were performed. The model was recalculated (model B, see Table 7) correlating the errors of items 1 (Factor 3) "I wish to be kind and caring towards myself when faced with difficulties" and item 2 (Factor 3) "I want to be supportive towards myself when I face disappointments in my life", both items assessing intention to be selfcompassionate. The model fit improved but didn't reach adequate fit. The model was recalculated (model C, see Table 7) correlating the errors of items 7 (Factor 1) "I am able to be loving towards myself when I feel emotional pain" and item 8 (Factor 1) "I can show tolerance towards myself in times of hardship", both items assessing distress tolerance. The model fit improved but didn't, once more, reach adequate fit. The model was recalculated (model D, see Table 7) correlating the errors of items 11 (Factor 1) "I am able to cope with facing my own struggles in order to be kind to myself" and item 12 (Factor 1) "I can cope with the difficult feelings that come with attending to my own needs", both items assessing distress tolerance. Once more, despite improving its fit, the model didn't reach adequate fit. The model was recalculated (model E, see Table 7) correlating the errors of items 6 (Factor 1) "I am confident that I can be kind and caring towards myself when struggling with problems" and item 7 (Factor 1) "I am able to be loving towards myself when I feel emotional pain", both items assessing distress tolerance. Despite improving its fit, the model didn't reach adequate fit. The model was recalculated (model F, see Table 7) correlating the errors of items 8 (Factor 1) "I can show tolerance towards myself in times of hardship" and item 10 (Factor 1) "I am able to be kind to myself, even when it feels uncomfortable to do so", both assessing distress tolerance. The model fit improved but didn't reach, once more, adequate fit. The model was recalculated (model G, see Table 7) correlating the errors of items 13 (Factor 2)

"Compared to usual, I have acted more self-compassionately over the past week" and item 14 (Factor 2) "Over the past week I have been more kind and caring towards myself than usual", both items assessing action. All estimated correlations between items' errors were within the same factor (Intention, Distress Tolerance and Action, respectively). Model G showed a good fit to the data and was therefore the final adjusted model. Model G fit indices based on CFI, TLI, GFI, SMRM and RMSEA indicated that a good fit with a reasonable amount of data being explained by the model ( $\chi$ 2/df = 2.081, *p* < .001; CFI = .969; TLI = .963; GFI = .901; SRMR = .051; RMSEA = .064 [90 % CI. 053–.075]) (see Table 7 and Figure 6).

#### Figure 5

Three-factor Confirmatory Factor Analysis of the 18-item self-compassion scale (Model A)



#### Table 7.

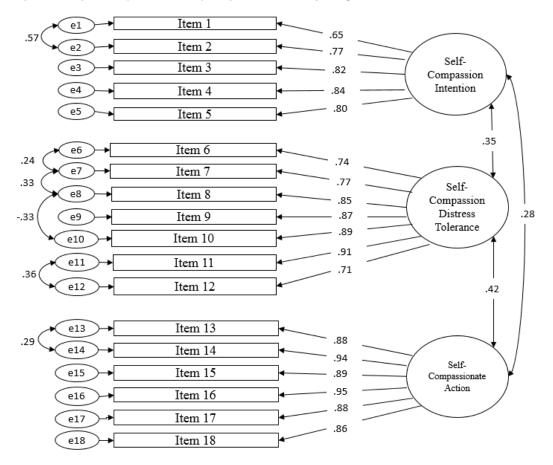
Confirmatory factor analysis results for Self-Compassion Scales

	$\chi 2/df$	CFI	TLI	GFI	SRMR	RMSEA	RMSEA 90% CI
Model A	3.362***	.930	.919	.839	.049	.094	.085104
Model B with correlated	2.812***	.930	.938	.862	.049	.094	.073093
error between item 1 and 2	2.012	.747	.930	.802	.050	.065	.075075
Model C with correlated	2.505***	.956	.948	.880	.051	.075	.065085
error between item 7 and 8							
Model D with correlated	2.379***	.960	.953	.887	.051	.072	.062082
error between item 11 and							
12							
Model E with correlated	2.289***	.963	.956	.892	.050	.070	.059080
error between item 6 and 7							
Model F with correlated	2.173***	.967	.960	.897	.052	.066	.056077
error between item 8 and							
10							
Model G with correlated	2.081***	.969	.963	.901	.051	.064	.053075
error between item 13 and							
14							

24

#### Figure 6

Three-factor Confirmatory Factor Analysis of the 18-item self-compassion scale (Model G)



Regarding local fit, all items revealed Standardized Regression Weights (SRW) ranging from .65 (item 1) to .95 (item 16). Squared Multiple Correlations' (SMC) results confirmed the items' reliability: values ranged from .43 (item 1) to .90 (item 16) (Table 8).

#### Table 8.

*Compassion Motivation and Action Scales (Self-Compassion Scales) – Standardized regression weights (SRW) and squared multiple correlations (SMC)* 

	SRW	SMC
Item 1	.65	.43
Item 2	.77	.59
Item 3	.82	.68
Item 4	.84	.71
Item 5	.80	.64

Item 6.74.54Item 7.77.59Item 8.85.72Item 9.87.76Item 10.89.79Item 11.91.82Item 12.72.51Item 13.88.77Item 14.94.89Item 15.89.80Item 16.95.90Item 17.88.78				
Item 8.85.72Item 9.87.76Item 10.89.79Item 11.91.82Item 12.72.51Item 13.88.77Item 14.94.89Item 15.89.80Item 16.95.90	Item 6	.74	.54	
Item 9.87.76Item 10.89.79Item 11.91.82Item 12.72.51Item 13.88.77Item 14.94.89Item 15.89.80Item 16.95.90	Item 7	.77	.59	
Item 10.89.79Item 11.91.82Item 12.72.51Item 13.88.77Item 14.94.89Item 15.89.80Item 16.95.90	Item 8	.85	.72	
Item 11.91.82Item 12.72.51Item 13.88.77Item 14.94.89Item 15.89.80Item 16.95.90	Item 9	.87	.76	
Item 12.72.51Item 13.88.77Item 14.94.89Item 15.89.80Item 16.95.90	Item 10	.89	.79	
Item 13.88.77Item 14.94.89Item 15.89.80Item 16.95.90	Item 11	.91	.82	
Item 14.94.89Item 15.89.80Item 16.95.90	Item 12	.72	.51	
Item 15.89.80Item 16.95.90	Item 13	.88	.77	
Item 16 .95 .90	Item 14	.94	.89	
	Item 15	.89	.80	
Item 17 .88 .78	Item 16	.95	.90	
	Item 17	.88	.78	
Item 18 .86 .74	Item 18	.86	.74	

#### Internal Consistency - CFA

In both scales (Compassion for others and Self-Compassion Scales), Cronbach's alphas were above the cut-off value of .70 for good internal consistency with some alphas showing excellent internal consistency (above .90) (De Vaus, 2002). The Cronbach's alphas of Compassion for others scale were: Intent = .81, Distress tolerance = .80, Action = .95 and in Total scale = .88. For the Self-compassion scale, the Cronbach alphas were: Intent = .89, Distress tolerance = .94, action = .96 and in Total scale = .93. The Cronbach's alpha of the Compassion for others total scale would improve if items 1 and 5 were removed (but only 0.05 points for each item). Despite this, when included in their specific scale, these items allowed for an increase in alpha and therefore were kept in the scale (see Table 3 and 4).

#### **Descriptive Statistics**

Means, standard deviations, skewness and kurtosis are presented for the Compassion Motivation and Action Scales (CMAS; all scales and subscales), items and in relation to other variables (Compassion Engagement and Action Scales – CEAS; Forms of Self-Criticism/Self-Reassuring Scale – FSCRS; Depression, Anxiety and Stress Scale - DASS-21; and Basic scale on insomnia and quality of sleep - BASIQS) (see Table 9 to 12).

### Table 9

Descriptive Statistics of Compassion Motivation and Action Scales and Subscales (CMAS)

	M (SD)	Skewness	Kurtosis
Total Scale (CS)	59.40 (11.12)	-0.71	1.96
Intention Subscale (CS)	16.36 (3.37)	-1.01	1.21
Distress Tolerance Subscale (CS)	16.96 (3.06)	-1.41	3.09
Action Subscale (CS)	26.08 (8.12)	-0.43	0.16
Total Scale (SCS)	89.91 (16.73)	-0.43	1.00
Intention Subscale (SCS)	30.58 (4.46)	-2.03	6.94
Distress Tolerance Subscale (SCS)	34.03 (9.03)	-0.52	-0.15
Action Subscale (SCS)	25.30 (8.05)	-0.30	0.28

Note. CS – Compassion for others scale. SCS – Self-compassion scale.

#### Table 10.

Descriptive Statistics of Compassion for Others Scale - Items

	M (SD)	Skewness	Kurtosis
Item 1	5.06 (1.56)	-0.98	0.41
Item 2	5.63 (1.16)	-1.21	1.59
Item 3	5.67 (1.22)	-1.38	2.26
Item 4	5.48 (1.21)	-1.21	1.46
Item 5	5.39 (1.33)	-1.10	0.84
Item 6	6.09 (1.07)	-1.95	5.17
Item 7	4.27 (1.55)	-0.32	-0.36
Item 8	4.18 (1.49)	-0.18	-0.33
Item 9	4.28 (1.54)	-0.28	-0.42
Item 10	4.46 (1.53)	-0.47	-0.28
Item 11	4.41 (1.52)	-0.31	-0.30
Item 12	4.48 (1.48)	-0.42	-0.16

#### Table 11.

Descriptive Statistics of Self-Compassion Scale Items

	M (SD)	Skewness	Kurtosis
Item 1	6.08	-1.83	5.59
Item 2	6.27	-2.28	8.57
Item 3	6.08	-1.92	4.43
Item 4	6.31	-2.32	6.78
Item 5	5.83	-1.27	2.11
Item 6	5.26	-0.85	0.19
Item 7	4.82	-0.52	-0.50
Item 8	4.72	-0.45	-0.75
Item 9	4.73	-0.53	-0.42
Item 10	4.67	-0.46	-0.30
Item 11	4.85	-0.72	-0.08
Item 12	4.99	-0.61	-0.17
Item 13	4.16	-0.17	-0.08
Item 14	4.22	-0.17	0.03
Item 15	4.28	-0.35	0.13
Item 16	4.22	-0.22	-0.02
Item 17	4.16	-0.26	0.01
Item 18	4.26	-0.24	-0.18

#### Table 12.

Descriptive Statistics of other variables (CEAS, FSCRS, DASS-21 and BASIQS)

	M (SD)	Skewness	Kurtosis
CEAS-SC (Total)	65.18 (14.04)	-0.30	-0.35
CEAS-SC (Engagement)	31.97 (7.60)	-0.28	-0.18
CEAS-SC (Action)	27.18 (6.91)	-0.35	-0.45
CEAS-CO (Total)	75.09 (15.07)	-0.91	1.35
CEAS-CO (Engagement)	44.37( 9.10)	-0.76	1.00
CEAS-CO (Action)	30.71 (6.67)	-0.97	1.20
FSCRS (Inadequate-Self)	17.18 (7.83)	0.11	-0.54
FSCRS (Hated-Self)	3.50 (4.01)	1.63	2.75
FSCRS (Total of Self-Criticism)	20.68 (10.90)	0.64	0.21
FSCRS (Reassured-Self)	20.66 (6.31)	-0.35	-0.06
DASS-21 (Depression)	4.70 (4.58)	1.37	1.96
DASS-21(Anxiety)	4.32 (4.65)	1.41	1.70
DASS-21 (Stress)	7.67 (4.99)	0.63	-0.04

BASIQS (total)	17.25 (4.56)	0.47	0.47

Note. SC – Compassion for self. CO – Compassion for others.

#### Gender differences

Independent samples T-tests revealed significant differences between genders in the Compassion for others total scale (total scale, p < 0.050) but not in the Self-Compassion total scale (total scale, p > 0.050). Results showed that women scored significantly higher than men in the previous comparison and on the Intention Subscale of the Compassion for others and the Self-compassion scales. However, the effect size of gender differences in the CMAS for others total scale and intention subscale was small. The effect size of gender differences in the intention subscale of the CMAS selfcompassion scale was medium (see Table 13).

#### Table 13.

Gender differences

Scale	Male <i>n</i> = 52		Female $n=168$		Female $n=168$		t	р-	Cohen's
						value	d		
-	М	SD	М	SD					
Total Scale (CS)	55.96	10.45	60.36	10.13	-2.71	<.050	0.43		
Intention Subscale	15.21	2.96	16.61	3.22	-2.78	< .050	0.45		
(CS)									
Distress Tolerance	16.37	3.06	17.16	2.78	n.s		0.27		
Subscale (CS)									
Action Subscale (CS)	24.38	8.66	26.59	7.77	n.s		0.27		
Total Scale (SCS)	88.10	14.33	90.51	16.84	n.s		0.15		
Intention Subscale	28.50	4.75	31.08	3.76	-3.59	< .050	0.60		
(SCS)									
Distress Tolerance	34.31	7.48	33.97	9.03	n.s		0.04		
Subscale (SCS)									
Action Subscale (SCS)	25.29	6.88	25.46	8.28	n.s		0.02		

Note. CS - Compassion for others scale. SCS - Self-compassion scale.

# Correlations between Compassion Motivation and Action Scales and Subscales (CMAS)

To explore how the different factors of the two CMAS scales were interrelated and associated with their respective total, Pearson product-moment correlation analyses were conducted. These results are presented in Table 14. The correlations discussed below were all significant and positive.

Results showed that the compassion for others total scale and its respective factors (intention, distress tolerance and action) were weakly to strongly correlate between each other. The self-compassion total scale and its respective factors (intention, distress tolerance and action subscales) were also weakly to strongly correlated amongst each other. The compassion for others total scale was significantly although weakly associated with the self-compassion total scale.

The Intention subscales of compassion for others and self-compassion scale were weakly associated with each other. The Distress tolerance subscales of compassion for others and self-compassion scale were weakly associated with each other. In its turn, the Action subscales of compassion for others and self-compassion scale were moderately correlated with each other.

#### Table 14.

Correlations between Compassion Motivation and Action Scales and Subscales (CMAS)

	1	2	3	4	5	6	7	8
1. Total Scale (CS)								
2. Intention Subscale (CS)	.62**							
3. Distress Tolerance Subscale (CS)	.58**	.35**						
4. Action Subscale (CS)	.90**	.30**	.27**					
5. Total Scale (SCS)	.48**	.22**	.28**	.46**				
6. Intention Subscale (SCS)	.41**	.41**	.32**	.27**	.61**			
7. Distress Tolerance Subscale (SCS)	.28**	.12	.28**	.23**	.85**	.38**		

Note. CS – Compassion for others scale. SCS – Self-compassion scale. \*p < .050. \*p < .010

#### Convergent Validity

To explore how Compassion Motivation and Action Scales (CMAS) and other self-compassion and compassion for others scales (CEAS - Compassion Engagement and Action Scales) were interrelated and associated, Pearson product-moment correlation analyses were conducted. Correlation analysis also explored the relationship between the Compassion Motivation and Action Scales (CMAS) and Self-Reassurance (FSCRS). The results are presented in Table 15.

Regarding **compassion for others scales** (for both CMAS and CEAS), the major correlations were all positive. Total scales were significantly although weakly associated with each other. The intention subscale (CMAS) and engagement subscale (CEAS) were significantly, although weakly associated with each other. The distress tolerance subscale (CMAS) and engagement subscale (CMAS) and engagement subscale were, also, significantly although weakly associated with each other. Lastly, the action subscales were not significantly associated and had a negligible correlation with each other.

Regarding **self-compassion scales**, all correlations were weak, positive and significant. These correlations were between total scales, intention/engagement subscales, distress tolerance/engagement subscales and action subscales of both scales (CMAS and CEAS, respectively).

Results showed correlations between CMAS (scales and subscales) and Reassured-Self. These correlations were all positive and significant in its majority. The compassion for others scales and subscales (CMAS) were weakly correlated with reassured-self subscale. The self-compassion scales and subscales (CMAS) were weakly to moderately correlated with reassured-self subscale. There was no significant correlation between intention subscale of compassion for others scale (CMAS) and reassured-self subscale. The same happened between action subscale of compassion for others scale (CMAS) and reassured-self subscale.

#### Table 15.

Correlations between the Compassion Motivation and Action Scales (CMAS) and others self-compassion and compassion for others scales (CEAS)

	CEAS	CEAS	CEAS	CEAS	CEAS	CEAS	FSCRS
	Total	Engagement	Action	Total	Engagement	Action	Reassured
	scale	(SC)	(SC)	scale	(CO)	(CO)	Self
	(SC)			(CO)			
CMAS - Total	.25**	.24**	.20**	.18**	.16*	.19**	.13*
Scale (CS)							
CMAS - Intention	.18**	.19**	.09	.31**	.33**	.25**	.06
Subscale (CS)							
CMAS - Distress	.27**	.25**	.24**	.34**	.30**	.36**	.21**
Tolerance							
Subscale (CS)							
CMAS - Action	.16**	.15*	.15*	02	04	.02	.07
Subscale (CS)							
CMAS - Total	.43**	.41**	.42**	.12	.12	.11	.45**
Scale (SCS)							
CMAS - Intention	.21**	.23**	.13*	.30**	.29**	.29**	.20**
Subscale (SCS)							
CMAS - Distress	.49**	.48**	.48**	.08	.10	.07	.54**
Tolerance							
Subscale (SCS)							
CMAS- Action	.23**	.19**	.26**	02	03	.00	.21**
Subscale (SCS)							

Note. SC – Compassion for self. CO – Compassion for others. CS – Compassion for others scale. SCS – Selfcompassion scale. \*p < .050. \*\*\*p < .001.

#### **Discriminant Validity**

Correlation analysis explored the relationship between the Compassion Motivation and Action Scales (CMAS), and measures of Mental Health (EADS-21: Depression, Anxiety and Stress), Self-Criticism (FSCRS) and Quality of Sleep (BaSIQS). The results are presented in Table 16. Results showed correlations between **CMAS** (scales and subscales) and Self-**Criticism** (total scale, inadequate and hated self-subscales). Both the compassion for others scale and the self-compassion scale, were weakly correlated with self-criticism (total scale, inadequate and hated self-subscales). The CMAS (scales and subscales) were more correlated with the inadequate self-scale.

Results showed correlations between CMAS (scales and subscales) and Depression. The compassion for others scales and subscales (CMAS) were, in general, weakly correlated with depression subscale. The action subscale (of compassion for others) was not correlated with depression subscale. The self-compassion scales and subscales (CMAS) were weakly correlated with depression subscale. Results showed correlations between CMAS (scales and subscales) and Anxiety. The compassion for others scales and subscales (CMAS) were weakly correlated with anxiety subscale. The self-compassion scales and subscales (CMAS) were weakly correlated with anxiety subscale. Results showed correlations between CMAS (scales and subscales) and Stress. The compassion for others scales and subscales (CMAS) were weakly correlated with stress subscale. The self-compassion scales and subscales (CMAS) were, again, weakly correlated with stress subscale.

Results showed a few significant correlations between CMAS (scales and subscales) and Quality of Sleep scores (BaSIQS). Both the compassion for others scale and the self-compassion scale, were weakly correlated with poor quality of sleep. Given that higher scores on BaSIQS reflect poorer sleep, the inverse associations indicate that as scores in CMAS scales increase the sleep quality improves (BaSIQS score drops). Compassion for others scale had non-significant correlations with the quality of sleep, whereas the self-compassion total scale and the distress tolerance subscale were significantly, negatively and weakly correlated with quality of sleep, meaning better sleep (lower BaSIQS scores) is associated with higher scores in those measures.

The Distress Tolerance Subscales (of Compassion for others and Self-Compassion Scales) were the only subscales that were consistently and negatively associated with all measures previously addressed. Self-Compassion (scale and subscales) was consistently and significantly more negatively associated with measures of Self-Criticism and Mental Health, rather than Compassion for others.

## Table 16.

Correlations among the CMAS (compassion for others and self-compassion scales), Measures of Mental
Health, Self-Criticism and Quality of Sleep

		FSCRS			EADS		BaSIQS
	Inadequate	Hated	Self-	Depression	Anxiety	Stress	Total
	Self	Self	Criticism				
			(Total)				
Total	.08	.02	.07	.03	.02	.07	.03
Scale (CS)							
Intention	.22**	.11	.20**	.14*	.10	.11	04
Subscale							
(CS)							
Distress	07	11	09	04	04	01	02
Tolerance							
Subscale							
(CS)							
Action	.05	.03	.04	00	.01	.06	.06
Subscale							
(CS)							
Total	22**	19**	23**	24**	19**	23**	20*
Scale							
(SCS)							
Intention	.12	01	.08	04	04	.07	06
Subscale							
(SCS)							
Distress	39**	30**	39**	30**	25**	35**	23**
Tolerance							
Subscale							
(SCS)							
Action	08	06	08	14*	09	13*	11
Subscale							
(SCS)							

 $\overline{\text{CS} - \text{Compassion for others scale. SCS} - \text{Self-compassion scale.}}$ \*p < .050. \*\*p < .010.

# Multiple Regression

Three multiple linear regression analyses were conducted using the selfcompassion motivation and action scale (SCS-CMAS) and the inadequate self-form of Self-Criticism (FSCSRS) to predict depressive, anxiety and stress symptoms (see Table 17).

For depressive symptoms, the model accounted for 38% of the variance (F = 81.26, p < .001). Inadequate self emerged as the best predictor of depression ( $\beta = .59, p < .001$ ), followed by self-compassion ( $\beta = -.11, p < .050$ ).

For anxiety symptoms, the model accounted for 24% of the variance (F = 40.48, p < 001). Inadequate self emerged as the only predictor ( $\beta = .46$ , p < .001). Self-compassion does not significantly predict anxiety symptoms ( $\beta = -.09$ , p = .101).

For stress symptoms, the model accounted for 42% of the variance (F = 93.11, p < .001). Inadequate self emerged, again, as the only predictor ( $\beta = .62$ , p < .001). Self-compassion does not significantly predict stress symptoms ( $\beta = -.09$ , p = .059).

### Table 17.

	EADS -21 (Depression)			EAD	S-21 (Any	kiety)	EADS-21 (Stress)		
	Beta	t	р	Beta	t	р	Beta	t	Р
Inadequate	0.59	11.766	0.000	0.46	8.268	0.000	0.62	12.767	0.000
Self (FSCRS)									
Self-	-0.11	-2.201	0.029	-0.09	-1.646	0.101	-0.09	-1.897	0.059
Compassion									
(CMAS)									

### Multiple Linear Regressions

### Thematic Analyzes

Thematic analyses were conducted to explore participants' qualitative responses about past subjective experiences of compassion for others and of self-compassion.

In regard to participants' recollections of compassion for others experiences, the thematic analysis resulted into six different themes: compassion in a grieving situation, compassion for friends, compassion for strangers, compassion for family, compassion for colleagues and compassion for the partner.

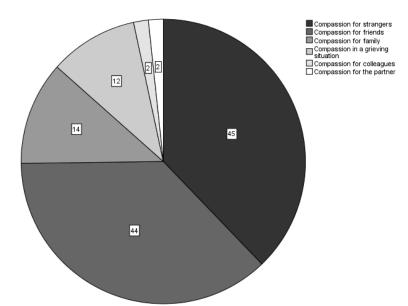
Regarding past self-compassion experiences, the thematic analysis resulted in nine different themes: self-compassion in a grieving situation, self-compassion when facing problems with friends, self-compassion when facing academic problems, self-

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compassion when facing personal problems, self-compassion when facing family problems, self-compassion when facing health problems, self-compassion when facing problems with the partner, self-compassion when facing work problems and selfcompassion when facing failure.

In terms of compassion for others experiences, the most frequent experience recalled by participants was compassion for strangers (37.82 %, see Figure 7). An example of a testimony of such an experience was "One day, on the way to a supermarket to shop for my house, I met a homeless person at the door with an abandoned dog making him company. When doing my shopping, I thought a lot about the situation I saw before entering, so I bought bread and butter, bottles of water and food for the dog and went there to give him...". The second most frequent experience recalled by participants was compassion for friends (36.97 %, see Figure 7). An example of a testimony of such an experience was "Recently a friend of mine was sad and immediately my priority was to help her. She explained what was going on and in order to help her I had to put myself in her place. Despite never having been through some situations that make her sad, I analyzed her perspective and the situation itself and advised her to take some actions, always respecting the fact that it was only a personal opinion and that the decision was up to her. I made it clear that whatever her final decision would be, I would support it even if I didn't agree with it". The third most frequent experience was compassion for family (11.76 %, see Figure 7). An example of a testimony of such an experience was "I often feel compassion for others, that is, I put myself in the position of the other, understanding their suffering and getting involved in actions that can help. A few days ago I felt that my mother was sad and worried about work. When I noticed this situation I tried to show my availability and understanding and I tried to help her to feel better, challenging her to go for a walk. I felt that it really helped and I felt good for having contributed to her well being".

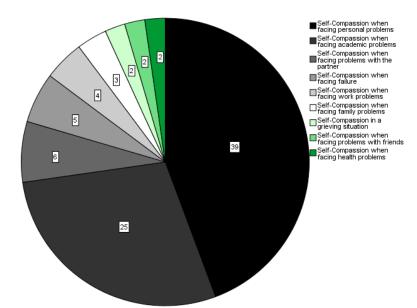
**Figure 7.** *Compassion for others – Distribution of Themes* 



Note. Numbers presented represent the number of cases for each theme

Regarding self-compassion experiences, the most frequent experience recalled by participants was self-compassion when facing personal problems (44.32 %, see Figure 8). An example of a testimony of such an experience was "When I have anxiety spikes and I have the capacity to recognize them as such, perceiving them as something normal and fleeting, not blaming myself for them". The second most frequent experience recalled by participants was self-compassion when facing academic problems (28.41 %, see Figure 8). An example of a testimony of such an experience was "A few weeks ago I was confronted with a mistake I had made in my thesis and I was extremely concerned about the consequences of that. The self-compassion I had towards myself was fundamental, the way I understood and accepted what I was feeling, moving my focus to actions that were really useful". The third most frequent experience was self-compassion when facing problems with the partner (6.82 %, see Figure 8). An example of a testimony of such an experience was "I remember that when I was writing my internship report, I got upset with the boy I like. At that time, it was very difficult to reconcile the responsibility I had at hand with the constant thoughts about him. I had to be able to focus on the report, have an understanding attitude (understand that we all have bad times) and accept that I was in this situation with him, accept my sadness about it to be able to be productive in the rest".

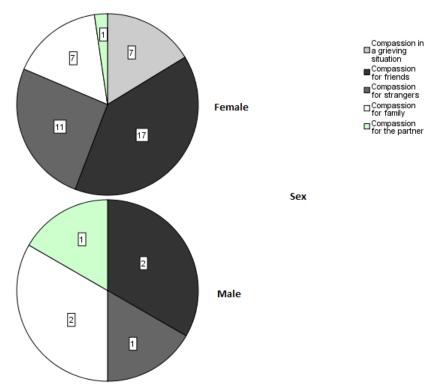
**Figure 8.** Self-Compassion – Distribution of Themes



Note. Numbers presented represent the number of cases for each theme

Then, distribution by sex was analyzed (Figure 9 and 10). A chi-square test for Independence indicated no significant association between gender and compassion for others,  $\chi^2(5, n = 77) = 5.66$ , p = .340, Cramer's V = .27. The association was large (Kim, 2017). There was also no significant association between gender and self-compassion,  $\chi^2$ (9, n = 69) = 7.73, p = .560, Cramer's V = .34. The association was large (Kim, 2017). Likewise, Fisher's Exact Test also showed no significant associations p = .330 and p = .521, respectively. Chi-square test of independence demonstrates the violation of assumption where all cells should have expected counts greater than or equal to five, which means the sample size could be improved to increase the reliability of the results (Kroonenberg & Verbeek, 2018)

**Figure 9.** *Compassion for others – Distribution by sex* 



Note. Numbers presented represent the number of cases for each theme

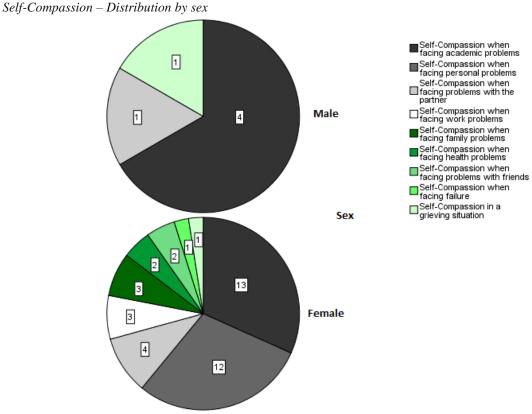


Figure 10.

Note. Numbers presented represent the number of cases for each theme

## Discussion

Compassion is recognized and studied around the world and the application of compassion as a psychotherapeutic intervention has received increasing attention (Leaviss & Uttley, 2015). As seen above, there are already some interventions available and with evidence, such as Compassion Focused Therapy (CFT; Gilbert, 2009). In order to recognize the changes achieved with this type of interventions, Steindl et al. (unpublished) developed Compassion Motivation and Action Scales (CMAS). Thus, the present study aims to study psychometric properties of the CMAS scales in the Portuguese Population, namely its factor structure, internal reliability and construct validity. The predictive effect of self-compassion (CMAS) and self-criticism (FSCRS) on psychopathological symptoms and the subjective experiences of being compassionate towards others and oneself were also object of study. This study replicated the analyses from the original study, with additional analyses.

The data obtained in the analysis of the factorial structure, carried out through an Exploratory Factor Analysis (EFA) showed clear results. The EFA found support for the 12-item, three factor structure of the Compassion for Others Scale of the CMAS, and for the 18-item, three factor structure of the Self-Compassion Scale of the CMAS. The first factor of Compassion for Others Scale seems to measure compassionate action (items 7 to 12), the second seems to measure intention to be compassionate (items 1 to 3) and the third seems to measure distress tolerance (items 4 to 6). The first factor of Self-Compassion Scale seems to measure compassionate action seems to measure distress tolerance (items 6 to 12), the second seems to measure distress tolerance (items 6 to 12), the second seems to measure distress tolerance (items 6 to 12), the second seems to measure intention to be compassionate action (items 1 to 5). Both scales had good internal consistency (with some excellent alphas), which supports the reliability of this instrument.

A Confirmatory Factor Analysis (CFA) was performed in order to confirm the factor structure proposed by the exploratory factor analysis, and to examine if it is possible to improve the quality of measurement of the constructs. These analyses confirm the threefactor structure (intention, distress tolerance, and action) for both the compassion and self-compassion scales. However, confirmatory factor analysis showed that the model could be improved. It was improved and the final model for both Compassion for Others and Self-Compassion Scales show a good fit. Here, both scales have good internal consistency (with some excellent alphas), which indicates that the instrument has good reliability. Results of Exploratory Factor Analyses match the results of the original scale (Steindl et al., unpublished). Therefore, the Confirmatory Factor Analysis served to confirm both Exploratory Factor Analyses (from the present study and the original study).

Differences between genders were found in Compassion for others total scale and in the Intention subscale of both Compassion for others and Self-compassion scale. According to literature, women are more compassionate for others than men (Neff & Pommier, 2012; Yarnell et al., 2015). This study confirmed the existing data. This significant effect on compassion for others may be due to the female evolutionary role as caregivers, which has been suggested to make them more prone to be compassionate towards others (Ruble & Martin, 1998; Yarnell et al., 2015). No gender differences were found in self-compassion, similarly to other studies (López et al., 2018; Neff and Pommier, 2012).

Regarding the subscales of CMAS (Intention, Distress tolerance and Action subscale), for both Compassion for others and Self-compassion scales, these were positively and significantly found related to each other, as expected, presenting correlations that vary from weak to moderate. In general, this means that individuals with higher levels of compassion for others show higher levels of self-compassion. Likewise, individuals with higher levels of motivation to be compassionate towards others and to themselves have more compassionate actions (for others and oneself). The same (significant but weak-moderate correlations) were found in previous studies (Gilbert, 2014; Steindl et al., unpublished). These data suggest that while there are associations between different orientations of compassion towards oneself and towards others, they are only moderately associated, confirming that they measure different but related constructs.

Regarding the study of convergent validity, the pattern of correlations found indicates that CMAS has good convergent validity since scales measure related constructs (compassion for others and self-compassion). Positive and significant correlations were obtained between the subscales of CMAS with measures of compassion for others and self-compassion (Compassion Engagement and Action Scales - CEAS), especially when measuring the same/similar constructs (total scales; intention of CMAS/engagement of CEAS; distress tolerance of CMAS/engagement of CEAS; action subscales). This means that the CMAS is effective at measuring intention to be compassionate, tolerant to distress and engage in compassionate action. Thus, individuals with the intention of being compassionate and who are more tolerant to distress, reveal increased engagement with

suffering and are able to engage more in compassionate actions (both for others and oneself). However, it was found that the action subscale of compassion for others scale (CMAS) was the only subscale with non-significance correlations with similar measures (compassion for others scales and subscales of CEAS). This result appears to be related to the unique characteristics of the action subscale since it tries to capture self-report behavioral action, what doesn't happen at CEAS. The results were similar to the original study (Steindl et al., unpublished). Future studies should try to relate this construct to instruments that measure a more behavioral component of compassion. On the other hand, weakly but positive correlations were obtained between the CMAS (scales and subscales) and the Reassured Self, showing significant correlations especially related to selfcompassion scale. This means that individuals with higher levels of compassion (especially self-compassion) are more self-reassuring when they encounter hardships or moments of difficulty. This is in line with previous studies, where there was also this positive and significant relationship between self-compassion and a self-reassurance (Castilho et al., 2015; Steindl et al., unpublished) and between compassion for others and a reassured-self (Steindl et al., unpublished).

Discriminant validity was studied between the subscales of CMAS, measures of psychological distress (anxiety, depression and stress), the various forms of self-criticism (inadequate self and hated self) and the quality of sleep. The vast majority of correlations were weak and not significant (only a few stronger correlations in the case of the distress tolerance subscale of self-compassion scale) and were almost always in the expected (reverse) direction, indicating that the constructs are independent. Nevertheless, as expected, in some cases the constructs were associated. According to the literature, selfcriticism is negatively related with compassion for others and self-compassion (Castilho et al., 2015; Gilbert et al., 2017; Steindl et al., unpublished). The present study showed that individuals with higher levels of self-compassion revealed lower levels of selfcriticism. However, the same did not happen with compassion for others. The Intention subscale was even positively related to self-criticism, that is, individuals with more intention to be compassionate to others revealed more self-criticism. When referring measures of psychological distress, literature have showed that higher levels of compassion were associated with lower levels of mental health symptoms (MacBeth & Gumley, 2012 - in a meta-analysis). The present study showed that individuals with higher levels of self-compassion revealed less psychological distress (depression, anxiety and stress). Thus, self-compassion seems to be a protective factor for wellbeing (Gilbert et al., 2017; Steindl., 2018). Once more, the same did not happen with compassion for others, which did not showed almost none significant correlation with these measures. There was only a significant but positive and weak relationship, between intention to be compassionate to others and depression. Relying on only three items could be a reason for this subscale (intention subscale of compassion for others scale) underperforming, since Intention subscale of self-compassion scale performed better (Steindl et al., unpublished). Regarding the relationship between sleep quality and compassion, Unger (2016) found no relationship between self-compassion and sleep quality. However, Butz and Stahlberg (2020) found a medium correlation between self-compassion and sleep quality, arguing that sleep quality improved with a compassion-based intervention. The present study showed, in general, no significant relationship between compassion for others and sleep quality. However, it showed that self-compassionate individuals (in general and with greater distress tolerance) tend to have higher quality of sleep, as mentioned by the authors previously cited (Butz & Stahlberg, 2020).

Theory and research support the link between self-criticism, self-compassion and depression (Joeng & Turner., 2015; Neff, 2003b; Steindl et al., 2018). This multiple linear regression showed that self-compassion and an inadequate self-form of self-criticism predicted depression. The model showed that the less self-compassion and the greater self-criticism, the more depressive symptoms would be present. The relation between self-compassion and depression is in line with previous studies who confirmed that self-compassion was negatively correlated with depression (MacBeth & Gumley, 2012 - in a meta-analysis; Neff, 2003b; Steindl et al., 2018). On the other hand, these results are in line with the existing studies that people who are self-critical are more vulnerable to depression (Cantazaro & Wei, 2010; Joeng & Turner., 2015). So, together, self-compassion and self-criticism are significant predictors of depression.

In the thematic analysis, compassion for strangers seems to be the most remembered experience in compassion for others. The most frequent experience in self-compassion seems to be self-compassion when facing personal problems. Thematic analysis showed that there are more recurring themes in the category of compassion for others. There are also some common themes in both orientations for compassion (compassion for others and self-compassion). These common themes are related to grieving, friends, family and the partner. No significant association between gender and compassion for others and self-compassion was present. No literature was found regarding the subjective experience of compassion. However, according to Gilbert (2019), compassion is characterized by a system of motivational care where individuals tend to be more compassionate to kin and friends. These results showed that compassion can be extended to strangers. All of these results can be explained by the need to help people who are suffering or who are doing less well than ourselves (Gilbert, 2019), whether they are strangers or close people.

The relevance of this study is hence related with the possibility of simultaneously assessing both directions of compassion. CMAS is a valid instrument that can be used in the context of research, but also in a therapeutic context, thus contributing to the advancement of assessment. As defended by Steindl et al. (unpublished), the unique contribution of the CMAS is one could assess, weekly, how individuals are improving in compassionate and self-compassionate action across the dosage of the intervention (through the compassionate action subscales). The present study also adds to the existing literature a thematic analysis, which enriched the information given by the quantitative data regarding experiences of compassion towards other and the self. Thus, these data added an important value to the study since no other study reported the subjective experience of compassion from a qualitative point of view.

This study contemplates some limitations that must be taken into account in the present study and in future investigations. Firstly, the fact that the present sample is composed mainly of women is a limitation in that it does not allow homogeneity of data related to gender. Future studies should take this into account and constitute a more heterogeneous sample in terms of gender distribution. Future studies should also increase the sample size, since it is possible that it may enhance some non-significant results. On the other hand, it may be of great interest to know how the scale behaves when assessing a clinical population and understand if discriminate between clinical and non-clinical populations. It was not possible, due to COVID-19, to perform the retest of CMAS. It would be important, in the future, to evaluate the temporal reliability of the scale in order to evaluate its accuracy over time.

## Conclusion

The aim of the present study was to examine the psychometric properties of the CMAS scales in a convenience sample of the Portuguese Population. Findings revealed

that the CMAS is a robust scale of compassionate and self-compassionate motivation and action, valid for compassion evaluation and research purposes. Thus, through quantitative, but also qualitative data, we were able to understand the experience of compassion towards others and oneself in a more comprehensive and complete way.

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# Appendix

Item	Patte	Pattern Coefficients				Structure Coefficients			
	Factor	Factor	Factor	Factor	Factor	Factor			
	1	2	3	1	2	3			
11.	,908	-,065	,007	,893	,183	,259	,800		
12.	,901	-,044	,038	.900	,209	,292	,813		
10.	,894	,028	-,027	,894	,266	,240	,800		
9.	,863	,048	,057	,893	,294	,319	,803		
8.	,851	,053	-,044	,853	,275	,215	,731		
7.	,844	-,012	-,027	,833	,212	,217	,694		
2.	-,031	,895	,009	,215	,889	,180	,791		
1.	-,087	,889	-,006	,153	,864	,147	,754		
3.	,157	,776	,003	,369	,820	,205	,695		

Table A1.

Pattern and Structure Matrix for PCA with PROMAX (obliaue) rotation method – Compassion Scale

Note: Major loadings for each item are bolded.

#### Table B1.

5.

4.

6.

,000,

-,084

,092

-,080

,105

-,013

Item	Patt	ern Coeffici	ents	Struc	Communali ties		
	Factor	Factor	Factor	Factor	Factor	Factor	
	1	2	3	1	2	3	
9.	,901	,031	-,081	,891	,414	,194	,799
10.	,881	-,050	-,007	,856	,348	,236	,735
8.	,876	,050	-,044	,886	,435	,230	,788
7.	,871	-,018	,081	,886	,404	,332	,791
11.	,868	-,020	,040	,871	,387	,289	,760
12.	,724	-,031	-,049	,695	,282	,154	,487
6.	,720	,077	,058	,772	,423	,295	,606
14.	-,047	,960	-,006	,388	,937	,290	,880
16.	-,008	,951	-,015	,420	,943	,289	,889

,798

,667

,550

,890

,809

,737

,243

,182

,296

,906,

,812

,713

,102

,245

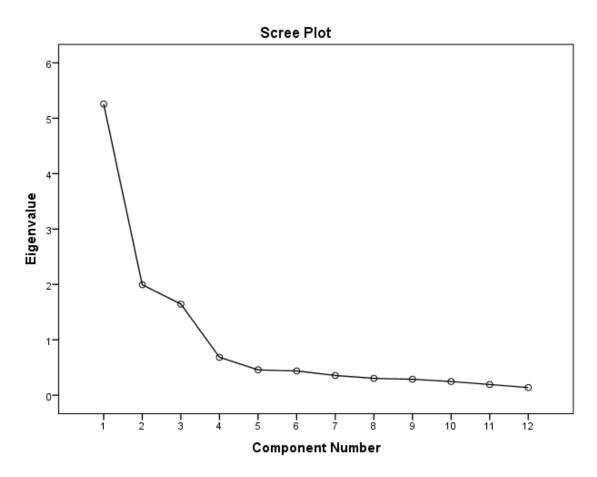
,155

15.	,019	,914	-,026	,427	,914	,274	,836
13.	-,060	,887	,044	,356	,874	,312	,767
18.	,039	,845	,000	,424	,863	,284	,747
17.	,098	,804	,023	,471	,857	,311	,742
3.	-,085	,016	,857	,174	,254	,837	,707
2.	,057	-,077	,854	,273	,224	,845	,720
4.	-,049	-,033	,771	,163	,194	,746	,561
1.	,108	-,001	,744	,326	,288	,775	,612
5.	-,038	,157	,588	,206	,329	,628	,413

Note: Major loadings for each item are bolded.

# Figure A1.

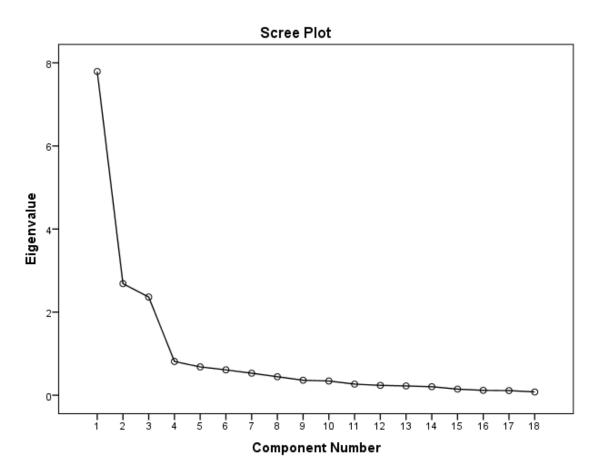
Scree Plot of Compassion-Scale



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# Figure B1.

Scree Plot of Self-Compassion Scale



# **Appendix C.** Portuguese Version of CMAS

## EMAC

(Versão original: Steindl, S. S., Tellegen, C. L., Filus, A., Seppala, E., Doty, J. R., & Kirby, J. N. 2017; Tradução e adaptação: Matos, M., Palmeira, L., Albuquerque, I., Cunha, M., Galhardo, A., & Lima, M.P. 2018)

**Instruções:** As desilusões, os problemas e o sofrimento fazem parte da experiência humana. Em baixo encontrase um conjunto de itens relacionados com a forma como se sente em relação aos outros e lhes responde em momentos difíceis. Por favor assinale o grau em que concorda ou discorda com as seguintes afirmações. Não pense demasiado acerca de cada afirmação. Não existem respostas certas ou erradas.

Discordo completamente	Discordo	Discordo um pouco	Neutro	Concordo pouco		Conco	rdo		oncor pletan	
1 Compaixão em r	2 relação aos ou	3 tros	4	5		6			7	
					1 2	3	4	5	6	7
1. Quero conheço.	ser mais amável	e atencioso(a) pa	ara com pessoas	que não						
2. Tencion	o ter mais ações e	ser mais útil para o	s outros.							
3. Vou mo	strar mais atenção	e preocupação qua	ndo vir pessoas a	sofrer.						
4. Sou cap de outra pessoa.	az de lidar com os	s meus sentimentos	em resposta ao s	ofrimento						
5. Sinto co outra pessoa possa e		a capacidade de lida enciar.	ar com o sofrime	ento que a						
6. Sou cap na sua vida.	az de estar com al	guém que está a pa	ssar por moment	os difíceis						
7. Ao long com os outros, comp		a tenho agido de fo abitual.	orma mais compa	issiva para						
8. Ao long habitual.	o da última seman	a tenho tentado aju	dar mais os outro	s do que é						
9. Ao long sofrimento de outra(		ana tenho agido ma	ais no sentido de	e aliviar o						
10. Ao lor outras pessoas na mi		nana tenho sido ati o a sofrer.	vamente mais an	nável para						
11. Ao lon precisam, comparati	-	ana tenho oferecido al.	o mais apoio a po	essoas que						
12. Ao lor pessoas que estão a p	0	ana tenho sido mai tos difíceis.	is compassivo(a)	para com						

## EMAC

(Versão original: Steindl, S. S., Tellegen, C. L., Filus, A., Seppala, E., Doty, J. R., & Kirby, J. N. 2017; Tradução e adaptação: Matos, M., Palmeira, L., Albuquerque, I., Cunha, M., Galhardo, A., & Lima, M.P. 2018)

Instruções: As desilusões, os problemas e o sofrimento fazem parte da experiência humana. Em baixo encontrase um conjunto de itens relacionados com a forma como se sente em relação a si mesmo e reage em momentos difíceis. Por favor assinale o grau em que concorda ou discorda com as seguintes afirmações. Não pense demasiado acerca de cada afirmação. Não existem respostas certas ou erradas.

Discordo completamente	Discordo	Discordo um pouco	Neutro	Concordo un pouco	n Conce	ordo	Co comp	ncoroletam	
1	2	3	4	5	6			7	
Auto-compaix	ĩão			$\frown$					
				1	2 3	4	5	6	7
1. Ç	Quero ser amigável	para comigo e ci	uidar de mim qu	uando me					
deparo dificuldade	es/problemas na min	ha vida.							
2. Q enfrento desilusõe	Quero ser capaz de o es na minha vida.	dar apoio e suporte	e e mim mesmo(	a) quando					
3. S estar geral.	er compassivo(a) pa	ura comigo mesmo(	a) irá melhorar o	meu bem-					
vida.	Aceitar-me a mim n	nesmo(a) irá melho	orar a minha qua	ilidade de					
5. F	lá muitas razões para	a se ser mais auto-c	ompassivo(a).						
	into-me confiante d quando enfrento pro		amável e atencio	so(a) para					
	ou capaz de ser afe		(a) para comigo	mesmo(a)					
8. C momentos difíceis	Consigo ser tolerant s.	e em relação a m	im/ comigo mes	mo(a) em					
9. Т	Cenho a capacidade	de me apoiar a mi	im mesmo(a) qua	undo sinto					
que falhei.									
10. S	ou capaz de ser an	nável para comigo	mesmo(a), mesm	o quando					
me sinto desconfo	rtável ao faze-lo.								
11. S	ou capaz de enfrent	ar as minhas própri	as lutas internas c	le forma a					
ser amável para co	omigo mesmo(a).								
12. 0	Consigo lidar com	emoções/sentimer	ntos difíceis qu	e surgem					
quando presto ater	nção às minhas próp	rias necessidades.							

	1	2	3	4	5	6	7
13. Ao longo da última semana tenho agido de forma mais auto- compassiva), comparativamente ao habitual.							
14. Ao longo da última semana tenho sido mais amável e atencioso(a) para comigo mesmo(a), comparativamente ao habitual.							
15. Ao longo da última semana tenho agido no sentido de mostrar mais compaixão para comigo mesmo(a).							
16. Ao longo da última semana tenho-me tratado de forma mais amável e atenciosa.							
17. Ao longo da última semana tenho sido mais capaz de me perdoar quando cometo erros.							
18. Ao longo da última semana tenho-me aceitado mais a mim mesmo(a), comparativamente ao habitual.							