Dimensionality and gender-based measurement invariance of the Compassion Scale in a community sample

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ABSTRACT

Compassion has been proposed as relevant to psychological functioning and mental health, involving being compassionate and caring towards others in times of difficulty. The Compassion Scale (CS) proposes to assess compassion for others considering its different dimensions (Kindness; Common humanity; Mindfulness; Indifference; Separation, and Disengagement) and also offers a total score. The current work investigated the psychometric properties of the Portuguese version of this instrument in adults (N = 610). Results showed the acceptability of a two higher-order factor solution representing a negative and a positive valence of compassion (i.e., Compassion and Disconnectedness), with each higher-order factor comprising three different dimensions of compassion. Multi-group analyses established measurement invariance across gender; further mean comparison analyses showed that women presented higher levels of the positive dimensions of compassion, whereas men showed higher levels of the negative ones. The CS demonstrated good internal consistency, test-retest reliability, and limited validity in relation to external variables. Overall, these findings contribute to the validation of the CS in a non-clinical adult sample, supporting a new measurement model that partially concurs with the original one. It thus provides the user with a new way of assessing and interpreting compassion that may be useful both in research and clinical settings.

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1. Introduction

Compassion has been receiving increased attention from the scientific and psychotherapeutic community (Castilho & Pinto-Gouveia, 2011; Germer & Neff, 2013; Gilbert, 2005; Pommier, 2011) and various models of compassion have been proposed based in different theories, traditions and research contributions (Gilbert, 2005; Neff, 2003b). The Buddhist perspective conceptualizes compassion as a form of empathy, in as much as we sense the suffering of others as if it was our own and so, naturally, wish them to be able to cope and get themselves free of it (Dalai Lama, 2001).

Taking these Buddhist principles into consideration, Neff (2003a, 2003b) defined compassion as the capacity of having an emotional sensibility to the suffering of others (instead of disconnecting from it), the ability of being moved by and the desire to alleviate other's distress. This ability can also be directed to oneself.

Several studies showed that compassion is associated with positive psychological dimensions (Mongrain, Chin, & Shapira, 2011), such as

improved social bonds (Crocker & Canevello, 2008) and an increased capacity to detect and respond to others' distress (Lutz, Brefczynski-Lewis, Johnstone, & Davidson, 2008). Also, compassion can be important to life satisfaction, psychological resilience (Neff, 2003a, 2003b) and psychological well-being (Neff, Rude, & Kirkpatrick, 2007). Compassion has also been associated with increased positive affect (Lutz, Greischar, Rawlings, Ricard, & Davidson, 2004) and with better intra and interpersonal functioning (Allen & Knight, 2005). When individuals experience affection and security in early development, they tend to be more compassionate and empathic and to display more caring behaviors (Gilbert, 2005) without being overwhelmed by the distress of others or the distress of their own self (Gilbert, McEwan, Matos, & Rivis, 2011). Additionally, compassion has been found to be associated with the reduction of loneliness, anxious and depressed feelings (Crocker & Canevello, 2008), shame, self-criticism, and stress (Gilbert et al., 2011). When abusive backgrounds and lack of affection and safeness memories were experienced, individuals may distance themselves from others in distress or react with contempt (Mikulincer, Shaver, Gillath, & Nitzberg, 2005).

Given that research is showing that treating others with compassion promotes individual well-being and improves mental-health, several researchers have developed interventions to enhance people's ability to give compassion to self and others. Accordingly, the compassionate mind training (CMT) has been found to promote higher levels of kindness and emotional warmth (Fehr, Sprecher, & Underwood, 2009),

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acting as a positive protective factor to various negative emotional responses (Crocker & Canevello, 2008; Gilbert et al., 2011). CMT also holds a buffering effect in the development of psychopathology (Brown & Ryan, 2003; Castilho & Pinto-Gouveia, 2011; MacBeth & Gumley, 2012).

Given its impact in the psychological functioning of individuals, the development of a specific and valid measure of compassion became relevant. Though it has previously been assessed using a subscale of a larger instrument or by using items from a scale that does not specifically assesses compassion (Pommier, 2011; e.g. the compassion subscale of the Motivational Spiritual Gifts by Cooper & Blakeman, 1994 or the use of 14 items from the Pity Experience Inventories by Florian, Mikulincer, & Hirschberger, 2000), a specific measure designed to assess compassion within a clear theoretical framework was still missing.

Neff (2003b) has defined Self-Compassion as consisting of three main components: self-kindness, common humanity and mindfulness. Each one of these dimensions has an opposing construct, namely self-judgment, isolation and over-identification, respectively. Neff (2003a) developed the Self-Compassion Scale within this theoretical framework, finding evidence for the existence of these different dimensions. The negative valences of self-compassion were defined as separate theoretical constructs, not mutually exclusive to its positive counterparts (i.e., different individuals can have various combinations of the positive and negative dimensions; Neff, 2003a, 2003b).

Based on Neff's (2003b) definition of Self-compassion, and in order to respond to the growing necessity of examining the mental health benefits of experiential practices (e.g., loving-kindness meditation and mindfulness), Pommier (2011) developed the Compassion Scale (CS), retaining the six-factor structure of Neff's (2003a) Self-Compassion Scale. The three positive dimensions received identical labels (Kindness, Common humanity, and Mindfulness) while the negative ones were renamed to better fit the individuals' tendencies for action regarding compassion for others (Indifference; Separation; Disengagement), while remaining as opposing constructs to the positive ones. (Pommier, 2011). The author theorized that the inter-correlations between these factors would explain a single factor of "compassion", given that they would work together in a symbiotic process. The Kindness factor is defined as the capacity to be kind, warm and comprehensive to the suffering of others instead of being critical or portraying a cold and dismissive response to others' suffering (i.e., Indifference). Common Humanity refers to the understanding of the personal experiences and suffering as being a shared human experience, allowing for a sense of connection, by opposition to a distanced view of others' suffering as a separate event in relation to the self (i.e., Separation). The third component of compassion, Mindfulness, involves holding one's present-moment experience in a balanced emotional perspective, so that one neither ignores nor ruminates on disliked aspects of others or other's pain, in opposition to the dismissal of other's concerns and suffering (i.e., Disengagement) (Neff, 2003a, 2003b; Pommier, 2011). Moreover, in clinical psychology, mindfulness practice have been receiving growing attention and it is commonly defined as a quality of consciousness, involving present-centered, accepting and non-judgmental attention and awareness (Bishop et al., 2004). It represents a stance of equanimity and a state of mental balance towards difficult and uncomfortable thoughts and experiences, rather than over-identification with suffering and pain (Kabat-Zinn, 2005; Neff, 2003b).

The CS was studied in a sample of 510 American adult students (238 men; 272 women) using a Confirmatory Factor Analysis procedure. The factorial structure of the Self-Compassion Scale was reproduced for the CS, confirming the existence of six subscales and a higher-order factor; also, good internal consistency values were reported, except for the Disengagement subscale (Pommier, 2011).

Different studies tested for gender differences in self-compassion and there is now considerable evidence showing that men tend to score higher in self-compassion than women (Neff, 2003b; Yarnell et al., 2015). When looking for gender differences in compassion towards others, to our knowledge, only Pommier's (2011) study showed that

women endorsed higher levels of compassion towards others than men. These findings point to different patterns of gender differences when looking to compassion and/or self-compassion. Still, such findings were put forward regardless of a substantiated test of measurement invariance, which is required to allow for reliable and credible gender comparisons (Chen, 2007).

Despite its relevance, little research has been made in the study of compassion for others as assessed by the CS. To our knowledge, there is no research addressing the measurement model of the CS in other languages and cultural backgrounds other than the scale's original student sample. Likewise, gender differences in relation to compassion for others have only been explored in the original study of the scale (Pommier, 2011), but no measurement invariance between gender was established.

The present study aims to investigate the psychometric properties of the Portuguese version of the CS in a large adult community sample, in order to fill this research gap. Specifically, the dimensionality of the CS will be explored by testing different nested models, based on previous conceptual and empirical findings. Based on those findings, we expect the six dimensions to be confirmed and additionally to find evidence for higher order negative and positive valences of compassion. Gender-based measurement invariance will also be tested. We expect to find the same measurement model to equally represent the compassionate experience of men and women. Given previous findings on gender differences in compassion, we expect women to score higher on compassion towards others than men.

2. Material and methods

2.1. Participants and sampling procedures

Participants were recruited in several institutions (e.g., educational facilities, health facilities, public security institutions, private business settings and independent workplaces) of the North and Center regions of Portugal using non-random methods. Written informed consent was obtained from all participants, after having read the aims of the study, as described in a page presented before the assessment instruments, which also contained several socio-demographic questions. It was emphasized that participants' cooperation was voluntary and that their answers would be treated confidentially by the authors. Participants took, on average, 30 min to fill out the self-report questionnaires.

The sample thus included 610 Portuguese adults, 258 men (42.3%) and 352 women (57.7%), aged between 18 and 60 years old ($M = 39.22$, $SD = 11.42$); men and women had similar mean ages [$t(608) = 0.932$; $p = 0.352$]. The complete sample had, on average, completed 11.87 years of education ($SD = 4.08$); women ($M = 12.32$; $SD = 4.18$) had completed significantly more years than men ($M = 11.25$; $SD = 3.87$) [$t(608) = -3.210$; $p = 0.001$]). Regarding marital status, 48.2% of the participants were married, 29.2% were single, 11.3% lived in union of fact, 10.3% were divorced and 1% were widows. There were no differences between gender concerning marital status [$\chi^2(4) = 4.492$; $p = 0.344$].

2.2. Measures

2.2.1. Compassion Scale (CS; Pommier, 2011; Portuguese version by Vieira & Castilho, 2012)

The CS is a 24-item self-report questionnaire that measures compassion for others, and its composed by six subscales: Kindness; Common Humanity; Mindfulness; Indifference; Separation and Disengagement. Participants rate each item according to how frequently they feel and act towards others, using a five-point Likert scale (from 1 = almost never to 5 = almost always). In the original study, confirmatory factor analyses results showed the appropriate fit of a hierarchical model, in which the six subscales converged in a higher-order factor. All measures presented acceptable internal consistency values, with an alpha of 0.90 for the scale total score and between 0.57 (Disengagement) and 0.77