



# Relationships between nurses' empathy, self-compassion and dimensions of professional quality of life: A cross-sectional study



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## ABSTRACT

**Background:** Job stress and burnout are common among healthcare professionals, and nurses in particular. In addition to the heavy workload and lack of resources, nurses are also confronted with emotionally intense situations associated with illness and suffering, which require empathic abilities. Although empathy is one of the core values in nursing, if not properly balanced it can also have detrimental consequences, such as compassion fatigue. Self-compassion, on the other hand, has been shown to be a protective factor for a wide range of well-being indicators and has been associated with compassion for others. **Objectives:** The main goal of this study was to explore how empathy and self-compassion related to professional quality of life (compassion satisfaction, compassion fatigue and burnout). In addition, we wanted to test whether self-compassion may be a protective factor for the impact of empathy on compassion fatigue.

**Methods and participants:** Using a cross-sectional design, 280 registered nurses from public hospitals in Portugal's north and center region were surveyed. Professional quality of life (Professional Quality of Life), empathy (Interpersonal Reactivity Index) and self-compassion (Self-compassion Scale) were measured using validated self-report measures. **Results:** Correlations and regression analyses showed that empathy and self-compassion predicted the three aspects of professional quality of life. Empathic concern was positively associated with compassion satisfaction as well as with compassion fatigue. Mediation models suggested that the negative components of self-compassion explain some of these effects, and self-kindness and common humanity were significant moderators. The same results were found for the association between personal distress and compassion fatigue.

**Conclusions:** High levels of affective empathy may be a risk factor for compassion fatigue, whereas self-compassion might be protective. Teaching self-compassion and self-care skills may be an important feature in interventions that aim to reduce burnout and compassion fatigue.

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## What is already known about the topic?

- Empathy is associated with positive outcomes for the healthcare provider (e.g., personal and professional well-being and quality of life).

- Healthcare professionals are at risk of developing burnout and compassion fatigue, especially if they are unable to effectively regulate their capacity to empathize and their empathic feelings.
- Self-compassion is associated with a wide range of well-being indicators in different populations.

### What this paper adds

- Self-compassion is positively associated with compassion satisfaction and negatively associated with burnout and compassion fatigue.
- Empathic feelings may be a risk factor for compassion fatigue.
- Self-compassion components mediate and moderate the relation between affective empathy and compassion fatigue.

## 1. Introduction

Empathy is a central aspect of healthcare, and has been associated with positive outcomes not only for the patient (e.g., Blatt et al., 2010; Hojat et al., 2011; Rakei et al., 2011) but also for the healthcare professional (Shanafelt et al., 2005; Thomas et al., 2007).

However, given the constant exposure to highly distressing situations, such as illness, suffering and death, healthcare professionals are particularly vulnerable to the development of professional stress and compassion fatigue, especially if they are not able to effectively regulate their capacity to empathize and their empathic feelings (Decety et al., 2010).

### 1.1. Stress and burnout among nurses

Job stress and burnout are common in healthcare professionals (e.g., McCray et al., 2008) and in nurses in particular (Dominguez-Gomez and Rutledge, 2009; Sermeus et al., 2011). Several studies have reported that stress and burnout in healthcare professionals are associated with several physical and mental health problems, such as depression, anxiety and low self-esteem (e.g., Maslach et al., 2001; Schulz et al., 2011). Stress and burnout also impact on professional effectiveness and has been associated with suboptimal patient care (Shanafelt et al., 2002), and self-reported medical errors (West et al., 2006).

In addition to objective errors in care, stress and burnout may decrease compassion in the caregiver (Neumann et al., 2011; Nunes et al., 2011; Wilson et al., 2012), and impact on their relationship with patients (Ratanawongsa et al., 2008). Thus, it is not surprising that burnout has been associated with decreased patient satisfaction, suboptimal self-reported patient care, and longer patient-reported recovery times (Shanafelt et al., 2002; Shapiro et al., 2005; Vahey et al., 2004). A survey of intensive care unit nurses and physicians in Europe and Israel indicates that one fourth of those surveyed report providing less than optimal care (Hand, 2011).

Apart from the heavy workload and lack of resources that are important risk factors for burnout (Maslach et al., 2001), healthcare providers are also confronted daily with

emotionally stressful situations associated with illness, suffering and dying, which require empathic abilities.

### 1.2. Empathy

There have been many definitions of empathy (see Batson, 2009). In general, empathy is activated when observing or imagining another person's affective state triggers an isomorphic affective response, and requires some differentiation of one's own and the other's emotional states (see Batson, 2009; Singer and Leiberger, 2009). Current approaches converge to consider empathy not as a single ability but a complex socio-emotional competency that encompasses different but interacting components (e.g., Decety and Svetlova, 2012).

Having an idea of the other person's thoughts, feelings and motives can be considered the cognitive component of empathy. There are two main categories of affective empathy responses to observing another person in pain. Self-oriented responses are feelings of distress and anxiety when witnessing another's negative state (personal distress), whereas other-focused responses are feelings that focus on the well-being of the other person (empathic concern; Davis, 1983). These two types of affective responses can have different motivational tendencies. Self-oriented feelings will motivate the observer to reduce his/her own distress, whereas other-focused feelings will motivate the observer to focus on the needs of the other and to provide care (Batson et al., 1987).

Empathy is particularly important in healthcare provider–patient relations, and is associated with improved patient satisfaction and compliance with recommended treatment (Epstein et al., 2007).

However, there can be costs associated with empathy (Hodges and Biswas-Diener, 2007). Literature suggests that being overly sensitive to others' suffering in the course of caring for patients experiencing trauma or pain can lead to deleterious effects, such as burnout or compassion fatigue (Figley, 2002, 2012). However, there are few empirical studies to date directly exploring such hypothesis.

### 1.3. Compassion

While empathy can be seen as double-edge sword, facilitating care but at the same time leaving the healthcare provider vulnerable to compassion fatigue, compassion may instead be a protective factor (Boellinghaus et al., 2012). Compassion appears to buffer the effects of stress on well-being (Poulin et al., 2013). Also, the other-oriented focus of the compassionate response may allow the observer to empathize with the other's suffering but without identifying with it, providing a self–other distinction which is essential to regulate personal distress feelings and to provide adequate care to the sufferer (Klimecki and Singer, 2012).

Research suggests that compassion can also be important for the successful treatment of patients. For example, in one study watching 40 s of compassionate communication from a provider on videotape was sufficient to reduce anxiety in breast cancer patients (Fogarty et al., 1999).

#### 1.4. Self-compassion

Several studies have suggested that compassion for others is closely linked to self-compassion (Lindsay and Creswell, 2014; Neff and Pommier, 2013; Welp and Brown, 2014). Self-compassion is simply compassion directed inward, relating to oneself as the object of care and concern when faced with the experience of suffering (Neff, 2003a).

Self-compassion, therefore, involves being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness. Self-compassion also involves a non-judgmental understanding of one's pain, inadequacies and failures, so that one's experience is seen as part of the larger human experience (Neff, 2003a). The research literature consistently suggests that self-compassion is associated with fewer psychological symptoms and with indices of psychological well-being (MacBeth and Gumley, 2012). Self-compassionate people seem to have a more adaptive psychological profile, which may explain such findings. For example, self-compassion has been associated with lower levels of rumination (Johnson and O'Brien, 2013; Odou and Brinker, 2014; Raes, 2010), avoidance (Krieger et al., 2013), suppression of unwanted thoughts and emotions, and with emotional validation skills (Leary et al., 2007; Neff et al., 2005). Self-compassion is also associated with positive psychological characteristics such as emotional intelligence, wisdom, life satisfaction, well-being and feelings of social connectedness (Neff et al., 2007a, 2007b; Neely et al., 2009). Experimental studies confirmed some of these findings (e.g., Adams and Leary, 2007; Leary et al., 2007) and suggest that self-compassion can be enhanced and contribute to well-being and less psychological distress.

Moreover, self-compassion has been shown to improve interpersonal functioning. It is linked to such traits as more empathic concern, altruism, perspective-taking, and forgiveness of others (Neff and Pommier, 2013).

Self-compassion could be helpful to healthcare professionals, and nurses in particular, because it may play an important role in maintaining their mental health and because of the emerging evidence that self-compassion is associated with compassion for others, which has been shown to have a significant impact on patient outcomes. Thus, developing self-compassion may be vital for preventing compassion fatigue and promoting compassionate care (Gustin and Wagner, 2013).

Although recent review papers argued for the importance of exploring self-compassion in healthcare professionals (Mills et al., 2015; Raab, 2014), so far no empirical studies have been published.

#### 1.5. Compassion fatigue

The concept of compassion fatigue was first introduced by Jonson (1992) to describe a state of reduced capacity for compassion as a consequence of being exhausted from dealing with the suffering of others (Figley, 2002, 2012; Sabo, 2006). The term compassion fatigue has been used interchangeably with secondary traumatic stress. It has been suggested that empathy for patients may be at the

very root of compassion fatigue (Figley, 2002; Schulz et al., 2007). Nurses may be at particular risk for compassion fatigue because compassion and empathy are at the core of their work (Figley, 1995; Stebnicki, 2002).

Although healthcare providers are at risk of developing compassion fatigue, many do not. Rather, some healthcare providers are motivated by a sense of satisfaction derived from helping others also known as compassion satisfaction (Stamm, 2010), which enables them to engage in meaningful interactions with patients rather than withdrawing from them. Compassion fatigue and compassion satisfaction are opposite results from helping others and are intrinsic properties of healthcare providers' professional quality of life.

#### 1.6. Objectives

In this study we aim to address issues and gaps in previous research by exploring the relations between self-compassion and empathy, and three aspects of quality of life: compassion satisfaction, burnout and compassion fatigue. The literature has been pointing that empathy is vital for the work of healthcare professionals. However, it has also been suggested that empathy may also be a vulnerability factor for the development of compassion fatigue. Thus, we hypothesize that empathic feelings will be negatively associated with burnout but positively associated with compassion fatigue and compassion satisfaction (Hypothesis 1a). Regarding the other empathy components, we hypothesize that perspective taking will be positively associated with compassion satisfaction and negatively associated with burnout and compassion fatigue (Hypothesis 1b), and personal distress will be negatively associated with compassion satisfaction and positively associated with burnout and compassion fatigue (Hypothesis 1c). Based on previous research on the relation between self-compassion and mental health, it is hypothesized that self-compassionate individuals (i.e., high levels of self-kindness, mindfulness and common humanity, and low levels of self-judgment, over-identification and isolation) experience less burnout and compassion fatigue symptoms and more compassion satisfaction (Hypothesis 2). Finally, we wanted to explore the finding that empathic emotions are associated with compassion fatigue, and the role of self-compassion in this relationship. We hypothesize that self-compassion may mediate and/or moderate the relationship between empathy and compassion fatigue (Hypothesis 3). We used a cross-sectional design to test these hypotheses.

## 2. Methods

### 2.1. Participants and procedures

Participants were recruited from four public hospitals from Portugal's north and center regions, between February 2014 and February 2015. This was a convenience sample of hospitals. After approval of the hospitals' ethics committees, department chief nurses were directly contacted by the researcher who explained the study aims and the importance of participation. Department chief nurses

were asked to advertise the study among the nurses in their services and to deliver and receive the questionnaire pack from those who agreed to participate. Around 46% of the questionnaires delivered were completed and returned to the researcher. The questionnaires were self-administered and were preceded by an information sheet about the study aims, the importance of participation, and confidentiality. In line with the ethical requirements, it was emphasized that participants' cooperation was voluntary and that their answers were confidential and would be used only for the purpose of this study. All participants provided their written informed consent. Permission was obtained to use the scales. This study is part of a larger study exploring the role of psychological factors on professional quality of life (see Acknowledgments). The second part of this study explores the impact of an intervention to reduce burnout and compassion fatigue. The Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans was followed.

## 2.2. Measures

### 2.2.1. Interpersonal Reactivity Index (IRI; Davis, 1983)

This scale measures several components of empathy, namely perspective taking (7 items; "I try to look at everybody's side of a disagreement before I make a decision"), empathic concern (7 items; "I often have tender, concerned feelings for people less fortunate than me"), personal distress (7 items; "I sometimes feel helpless when I am in the middle of a very emotional situation") and fantasy (6 items; "I really get involved with the feelings of the characters in a novel."). Perspective taking is considered a cognitive component of empathy, while empathic concern and personal distress are considered the affective component. These subscales should be used separately since the instrument is not intended to measure global empathy. Respondents are instructed to rate how well each statement describes them on a 5-point Likert scale (from 0 = Not well to 4 = Very well). The scale was found reliable in past research (Davis, 1983) and reliabilities for the scales in the Portuguese version were adequate: empathetic concern  $\alpha = .77$ ; perspective taking  $\alpha = .74$ ; and personal distress  $\alpha = .81$  and fantasy  $\alpha = .83$  (Limpo et al., 2010). Cronbach's alphas in this study were .67 for empathic concern .74 for personal distress and .71 for perspective taking. The subscale "fantasy" was not included as it was not relevant to the current study.

### 2.2.2. Self-Compassion Scale (SCS; Neff, 2003b)

The SCS is a widely used self-report measure developed to assess six components of self-compassion: self-kindness (5 items; "I try to be understanding and patient toward those aspects of my personality I don't like"); self-judgment (5 items; "I'm disapproving and judgmental about my own flaws and inadequacies"); common humanity (4 items; "I try to see my failings as part of the human condition"); isolation (4 items; "When I think about my inadequacies it tends to make me feel more separate and cut off from the rest of the world"); mindfulness (4 items; "When something painful happens

I try to take a balanced view of the situation"); and over-identification (4 items; "When I'm feeling down I tend to obsess and fixate on everything that's wrong"). Items are rated on a 5-point scale (e.g., 1 = almost never to 5 = almost always). Scores of the six subscales can be summed (after reverse-coding negative items) to create an overall self-compassion score. However, recent psychometric studies do not support the use of a SCS total score as a measure of self-compassion (López et al., 2015). In this study, we use the six factors separately. The SCS has adequate construct and convergent validity (Neff, 2003b). The Portuguese version of the scale also showed good internal consistency and validity (Castilho et al., 2015). SCS scores are presented so that higher scores indicate greater self-compassion. Cronbach's alphas for this study were: self-kindness = .79; self-judgment = .79; mindfulness = .78; over-identification = .80; common humanity = .70; isolation = .80; and total scale = .91.

### 2.2.3. The Professional Quality of Life Scale, version 5 (ProQOL-5; Stamm, 2009)

The ProQOL is a 30-item self-report measure comprised of three discrete subscales. The first subscale measures Compassion Satisfaction, defined as the pleasure derived from being able to do one's work (helping others) well (10 items; "I get satisfaction from being able to help people"). Higher scores on this scale represent greater satisfaction related to one's ability to be an effective caregiver. The second subscale measures burnout, or feelings of hopelessness and difficulties in dealing with work or in doing one's job effectively (10 items; "I feel worn out because of my work as a health care provider"). The third subscale measures secondary traumatic stress, defined as work-related, secondary exposure to people who have experienced extremely or traumatically stressful events (10 items; "I feel depressed because of the traumatic experiences of the people I help"). Given that the terms 'compassion fatigue' and 'secondary traumatic stress' have been used interchangeably in the literature, we will use the term 'compassion fatigue' to refer to this factor. Higher scores on these two subscales indicate greater levels of burnout and compassion fatigue, respectively. Respondents are instructed to indicate how frequently each item was experienced in the previous 30 days, on a 5-item Likert scale (from 1 = never to 5 = very often). Scoring requires summing the item responses for each 10-item subscale. Cronbach's alphas for the subscales are reported as .88 for the compassion satisfaction scale, .75 for the burnout scale, and .81 for the compassion fatigue/secondary trauma scale (Stamm, 2010). The Portuguese version also showed good internal consistency ( $\alpha = .86$  for the compassion satisfaction scale,  $\alpha = .71$  for the burnout scale, and  $\alpha = .83$  for the compassion fatigue/secondary trauma scale; Carvalho, 2011). In this study Cronbach's alphas were .85 for compassion satisfaction, .74 for burnout and .73 for compassion fatigue.

## 2.3. Statistical analysis

Descriptive statistics of the variables in study included means, standard deviations, minimum and maximum

scores, and skewness and kurtosis values. The association between the variables was initially explored using Pearson's coefficient correlations. Hierarchical multiple regressions were undertaken to explore the predictive power of empathy and self-compassion variables on professional quality of life (Hypotheses 1 and 2). Empathy variables were included in the first step of the regression and self-compassion variables were entered in the second step. The unstandardized coefficient ( $B$ ), standard error ( $SE$ ), standardized coefficient ( $\beta$ ),  $t$  statistic,  $p$ -value and 95% confidence intervals are reported. The strength of each predictor variable was based on its standardized beta value ( $\beta$ ), which represents to what degree each predictor affects the outcome. To test Hypothesis 3, the Hayes PROCESS macro was used for moderator and mediator analyses (Hayes, 2013). For moderation, this macro runs a series of ordinary least squares regressions with the centered product term representing the interaction of empathy  $\times$  self-compassion as a predictor of the outcome (compassion fatigue). Regarding mediation, direct and indirect effects were computed using a series of ordinary least squares regressions and the bootstrapping procedure (Preacher and Hayes, 2004, 2008). The significance of the indirect effect, based on the 95% confidence interval (CI) derived from 1000 bootstrap resamples, is indicated when the CI values do not cross zero. The Bootstrap is helpful because total and indirect effects are often not multivariate normally distributed (Preacher and Hayes, 2008). We report the unstandardized coefficient ( $B$ ) and standard error ( $SE$ ) for each regression equation to indicate the predicted change in the dependent variable given a one-unit change in the independent variable, while controlling for the other variables in the equation. We also report  $t$  statistic,  $p$ -value and 95% confidence intervals. Statistical significance was set at .05 and IBM SPSS version 22 was used for all analyses.

### 3. Results

#### 3.1. Sample profile

A total of 280 registered nurses from different clinical services in Portugal participated in the study. This sample had a mean age of 37.66 ( $SD = 9.34$ ), ranging between 22

and 60; the majority of participants were female ( $n = 227$ ; 81.1%) and married ( $n = 160$ ; 57.1%). Also, the mean years of schooling was 15.90 ( $SD = 2.14$ ) indicating that the average education level is university. Participants reported a mean years of practice of 14.74 ( $SD = 9.30$ ).

#### 3.2. Descriptive statistics

Descriptive statistics for the study variables are presented in Table 1. As the table reveals, nurses reported self-compassion scores that were slightly above the midpoint (3.22, by dividing the self-compassion score by the number of items) which is in accordance with previous studies (e.g., Neff and Pommier, 2013). Mean values for professional quality of life scales were also similar to previous studies with nurses (e.g., Sekol and Kim, 2014), as were mean values for the empathy components (e.g., Gleichgerrcht and Decety, 2013).

#### 3.3. Correlational analysis

Pearson's coefficient correlations are presented in Table 2. As expected, compassion satisfaction was positively associated with empathic concern and perspective taking and negatively associated with personal distress. More compassion satisfaction was also associated with higher levels of self-kindness, mindfulness and common humanity and lower levels of self-judgment and isolation. In contrast, burnout was positively associated with personal distress and negatively associated with empathic concern and perspective taking. More burnout was also associated with lower levels of self-kindness, mindfulness and common humanity, and higher levels of self-judgment, over-identification and isolation. Compassion fatigue was positively associated with personal distress and empathic concern. More compassion fatigue was associated with lower levels of mindfulness and higher levels of self-judgment, over-identification and isolation. We also found significant associations between empathy and self-compassion. Specifically, we found that perspective taking was positively associated with self-kindness, mindfulness and common humanity but there were no significant associations with the negative components of self-compassion. Personal distress was negatively associated

**Table 1**  
Means, standard deviations, minimum, maximum, skewness and kurtosis of the study variables ( $N = 280$ ).

	$M$	$SD$	$Min$	$Max$	Skew	Kurtosis
Compassion Satisfaction (ProQOL)	38.11	5.09	22	49	-.22	.20
Burnout (ProQOL)	25.01	5.12	12	44	.17	.43
Compassion Fatigue (ProQOL)	25.31	4.84	14	42	.30	.21
Empathic Concern (IRI)	17.34	3.50	6	24	-.08	-.28
Personal Distress (IRI)	9.24	4.19	0	20	-.08	-.32
Perspective Taking (IRI)	16.70	3.31	6	24	-.15	.07
Self-kindness (SCS)	15.10	3.25	5	25	-.03	.75
Self-judgment (SCS)	13.96	3.51	5	25	.15	.60
Mindfulness (SCS)	13.17	2.50	4	20	.02	.89
Over-identification (SCS)	10.95	3.03	4	20	.26	-.05
Common Humanity (SCS)	12.99	2.61	4	20	-.15	.24
Isolation (SCS)	10.61	2.96	4	20	.23	.36
Total score (SCS)	83.74	13.12	32	125	-.30	1.42

Note. ProQOL = Professional Quality of Life; SCS = Self-compassion Scale; IRI = Interpersonal Reactivity Index.

**Table 2**

Correlations between compassion satisfaction, burnout, compassion fatigue, self-compassion and empathy (N = 280).

	1	2	3	4	5	6	7	8	9	10	11	12
1. Compassion Satisfaction (ProQOL)	–											
2. Burnout (ProQOL)	–.58**	–										
3. Compassion Fatigue (ProQOL)	–.04	–.58**	–									
4. Self-kindness (SCS)	.34**	–.34**	–.09	–								
5. Self-judgment (SCS)	–.16**	.38**	.36**	–.38**	–							
6. Mindfulness (SCS)	.37**	–.35**	–.14**	.67**	–.33**	–						
7. Over-identification (SCS)	–.11	.30**	.36**	–.36**	.72**	–.43**	–					
8. Common Humanity (SCS)	.30**	–.19**	.04	.48**	–.07	.59**	–.09	–				
9. Isolation (SCS)	–.18**	.37**	.34**	–.38**	.70**	–.44**	.80**	–.17**	–			
10. Self-compassion Total (SCS)	.32**	–.44**	–.30**	.74**	–.76**	.76**	–.79**	.51**	–.81**	–		
11. Empathic concern (IRI)	.41**	–.19**	.18**	–.01	.15*	.01	.24**	.13*	.13*	–.08	–	
12. Personal distress (IRI)	–.22**	.18**	.21**	–.29**	.26**	–.35**	.37**	–.12*	.35**	–.39**	.12	–
13. Perspective taking (IRI)	.32**	–.15*	–.03	.24**	.01	.35**	.02	.34**	–.02	.19**	.41**	–.10

Note. ProQOL = Professional Quality of Life; SCS = Self-compassion Scale; IRI = Interpersonal Reactivity Index.

\*  $p \leq .05$ .

\*\*  $p < .01$ .

with the positive components of self-compassion and positively associated with the negative components. Empathic concern showed a more mixed pattern. We found positive associations with self-judgment, over-identification, isolation and with common humanity.

### 3.4. Regression analysis

Several hierarchical multiple regression models were tested to explore the predictive power of empathy and self-compassion variables on compassion satisfaction, compassion fatigue and burnout. Results are presented in Table 3.

Empathy variables explained 26% of the variance of compassion satisfaction,  $F(3, 276) = 31.64$ ,  $p < .001$ , and the best predictor was empathic concern, based on  $\beta$  values. For compassion fatigue, empathy variables explained 8% of the variance,  $F(3, 276) = 7.76$ ,  $p < .001$ , and the best predictor was also empathic concern. Finally, empathy variables explained 8% of the variance of burnout,  $F(3, 276) = 8.21$ ,  $p < .001$ , which was predicted equally by

empathic concern (negatively) and personal distress (positively). These results generally support Hypotheses 1a, 1b and 1c, and suggest that empathy variables seem to have a more evident contribution for compassion satisfaction.

Self-compassion variables explained 17% of the variance of compassion satisfaction,  $F(6, 276) = 9.30$ ,  $p < .001$ , and the only significant predictor was mindfulness. Self-compassion variables explained 22% of the variance of burnout,  $F(6, 276) = 12.71$ ,  $p < .001$ , and self-judgment, isolation and mindfulness (negatively) were significant predictors. Self-compassion variables explained 16% of the variance of compassion fatigue,  $F(6, 276) = 8.80$ ,  $p < .001$ , and the only significant predictor from all the other variables considered was self-judgment. These results support Hypothesis 2.

### 3.5. Mediation and moderation analyses

Results so far suggest that eliciting empathic emotions toward others and trying to understand their thoughts and

**Table 3**

Multiple regression analysis summary for empathy and self-compassion variables predicting compassion satisfaction, compassion fatigue and burnout (N = 280).

	B	SE	$\beta$	t	p	95% CI
Compassion Satisfaction (ProQOL)						
Perspective Taking (IRI)	0.21	0.09	.13	2.32	.021	[0.03, 0.38]
Empathic Concern (IRI)	0.56	0.08	.39	6.69	<.001	[0.40, 0.73]
Personal Distress (IRI)	–0.30	0.06	–.25	–4.70	<.001	[0.43, 0.18]
Mindfulness (SCS)	0.48	0.18	.24	2.72	.006	[0.13, 0.83]
Compassion Fatigue (ProQOL)						
Empathic Concern (IRI)	0.27	0.09	.20	3.08	.002	[0.10, 0.45]
Personal Distress (IRI)	0.21	0.07	.18	3.10	.002	[0.08, 0.35]
Self-judgment (SCS)	0.26	0.12	.19	2.25	.025	[0.03, 0.50]
Burnout (ProQOL)						
Empathic Concern (IRI)	–0.29	0.09	–.20	–3.05	.003	[0.47, 0.10]
Personal Distress (IRI)	0.24	0.07	.20	3.38	.001	[0.10, 0.39]
Self-judgment (SCS)	0.35	0.12	.24	2.95	.003	[0.12, 0.59]
Isolation (SCS)	0.33	0.16	.19	2.02	.043	[0.01, 0.66]
Mindfulness (SCS)	–0.38	0.17	–.19	–2.20	.028	[–0.72, –0.04]

Note. Only significant results are presented; CI = confidence intervals for B; ProQOL = Professional Quality of Life; SCS = Self-compassion Scale; IRI = Interpersonal Reactivity Index.

feelings seem to be beneficial as they lead to compassion satisfaction. How is it that these feelings may also lead to severe negative consequences, such as compassion fatigue? This question was addressed by examining nurses' trait self-compassion as a possible mediator/moderator between affective empathy and compassion fatigue.

To test Hypothesis 3, we ran several models in which empathic concern/personal distress were the dependent variables, compassion fatigue the outcome variable, and self-compassion components as the proposed mediators and/or moderators.

### 3.5.1. Empathic concern

**3.5.1.1. Model 1.** Results suggested that the negative components of self-compassion significantly mediated the relation between empathic concern and compassion fatigue. Specifically, we found significant indirect effects for self-judgment,  $B = 0.07$ ,  $BootSE = 0.04$ ,  $BootCI [0.01–0.15]$ , isolation,  $B = 0.06$ ,  $BootSE = 0.04$ ,  $BootCI [0.03–0.15]$ , and over-identification,  $B = 0.11$ ,  $BootSE = 0.04$ ,  $BootCI [0.05–0.21]$ .

**3.5.1.2. Model 2.** Results supported our hypothesis and indicated that self-kindness was a significant moderator between empathic concern and compassion fatigue,  $B = -0.05$ ,  $SE = 0.02$ ;  $t = -2.20$ ,  $p = .029$ ,  $CI [-0.10 \text{ to } -0.01]$ . An analysis of the conditional effect of empathic concern on compassion fatigue at different levels of the moderator (self-kindness) suggests that at higher levels of self-kindness the relation between empathic concern and compassion fatigue was non-significant,  $B = 0.07$ ,  $SE = 0.12$ ;  $t = 0.60$ ,  $p = .552$ ,  $CI [-0.16 \text{ to } 0.30]$ , but was significant at lower levels,  $B = 0.40$ ,  $SE = 0.10$ ;  $t = 3.80$ ,  $p < .001$ ,  $CI [0.19–0.60]$ .

Similar results were found for common humanity. Results indicated that common humanity was a significant moderator between empathic concern and compassion fatigue,  $B = -0.05$ ,  $SE = 0.03$ ;  $t = -1.94$ ,  $p = .050$ ,  $CI [-0.10 \text{ to } -0.00]$ . At higher levels of common humanity the relation between empathic concern and compassion fatigue was non-significant,  $B = 0.12$ ,  $SE = 0.11$ ;  $t = 1.17$ ,  $p = .243$ ,  $CI [-0.09 \text{ to } 0.33]$ , but was significant at lower levels,  $B = 0.38$ ,  $SE = 0.11$ ;  $t = 3.59$ ,  $p < .001$ ,  $CI [0.17–0.59]$ .

### 3.5.2. Personal distress

**3.5.2.1. Model 3.** Results suggested that the negative components of self-compassion significantly mediated the relation between personal distress and compassion fatigue. We found significant indirect effects for self-judgment,  $B = 0.10$ ,  $BootSE = 0.03$ ,  $BootCI [0.05–0.17]$ , isolation,  $B = 0.12$ ,  $BootSE = 0.04$ ,  $BootCI [0.06–0.20]$ , and over-identification,  $B = 0.14$ ,  $BootSE = 0.04$ ,  $BootCI [0.07–0.23]$ .

**3.5.2.2. Model 4.** Results indicated that common humanity was a significant moderator between personal distress and compassion fatigue,  $B = -0.05$ ,  $SE = 0.02$ ;  $t = -2.22$ ,  $p = .027$ ,  $CI [-0.10 \text{ to } -0.01]$ . At higher levels of common humanity the relation between personal distress and compassion fatigue was non-significant,  $B = 0.11$ ,  $SE = 0.09$ ;  $t = 1.19$ ,

$p = .235$ ,  $CI [-0.07–0.30]$ , but was significant at lower levels,  $B = 0.39$ ,  $SE = 0.09$ ;  $t = 4.31$ ,  $p < .001$ ,  $CI [0.21–0.57]$ .

## 4. Discussion

Repeated exposure to the suffering of others in healthcare professionals may be associated with the adverse consequences of personal distress, burnout and compassion fatigue, which are detrimental to their well-being. By the very nature of their work, healthcare professionals encounter people with various injuries and suffering in their everyday practice. In this case, being overly sensitive to others' suffering and pain may be detrimental and cause several negative effects, such as compassion fatigue (Figley, 2002, 2012). Although the potentially negative effects of being empathic have been previously described in the literature, few studies directly tested this hypothesis. Furthermore, components of empathy are rarely examined in applied research. In addition, despite the proven benefits of compassion for self and others, there were no studies to our knowledge exploring self-compassion in healthcare professionals, and particularly nurses.

In line with Hypotheses 1 and 2, results from hierarchical multiple regressions suggested that empathy and self-compassion components significantly predicted changes in compassion satisfaction, compassion fatigue and burnout.

Specifically, we found that perspective taking (positively), empathic concern (positively), personal distress (negatively) and mindfulness (positively) were closely associated with compassion satisfaction. In a previous study similar results were found for the empathy variables (Gleichgerrcht and Decety, 2013). This indicates that empathic feelings of concern for others in distress, with an understanding that those feelings are different from one's own, and the ability to hold negative experiences in mindful awareness, seem to contribute to the positive experiences that come from caring for others. This is an interesting finding, which is in accord with the literature on the benefits of caregiving (e.g., Brown and Brown, 2006). Also, it stresses the importance of certain minimum levels of empathy, given that by not having them nurses may be losing the positive outcome of helping their patients, namely, compassion satisfaction.

On the contrary, we found that personal distress (positively), empathic concern (negatively), self-judgment, isolation and over-identification (positively), were associated with burnout. Personal distress (positively), empathic concern (positively), and self-judgment (positively) were also associated with compassion fatigue. In other words, negative self-oriented emotions elicited by others' distress, a tendency to be self-critical and to feel cut off from others when in distress and over-identification with negative experiences can lead to burnout and compassion fatigue. These results are in line with a previous study on the association between empathy and negative aspects of professional quality of life (Gleichgerrcht and Decety, 2013), and with the literature on the effects of self-compassion on well-being (e.g., MacBeth and Gumley, 2012).

In line with Hypothesis 1a, empathic concern predicted more compassion satisfaction and more compassion fatigue, and less burnout. This is an interesting finding and supports previous literature that beyond a certain level empathic feelings and sensibility to others' suffering may be a vulnerability factor for the development of compassion fatigue (Figley, 2002, 2012), but not burnout (Lamothe et al., 2014), but at the same time may promote positive clinical outcomes (Gleichgerrcht and Decety, 2013).

Perspective taking only predicted compassion satisfaction, but not compassion fatigue or burnout. In a previous study with general practitioners, perspective taking was found to be negatively associated with burnout (Lamothe et al., 2014).

Results so far seem to support the idea that nurses may be at particular risk of developing compassion fatigue, perhaps because they constantly witness the suffering and pain of others. Thus, nurses and healthcare professionals in general may need to regulate their capacity to empathize with their patients so that their emotional reaction does not interfere with their treatment nor impact their well-being. Without regulatory mechanisms it is likely that healthcare professionals would experience personal distress when facing other people in pain which can impact on their ability to treat (Decety et al., 2010). We hypothesized that self-compassionate individuals would be more able to regulate their negative states and thus experience less compassion fatigue. Results from mediation and moderation models generally confirmed Hypothesis 3. We found that all negative components of self-compassion (self-judgment, isolation and over-identification) were significant mediators of the relation between empathic concern/personal distress and compassion fatigue. These results suggest that individuals that are particularly harsh and critical of themselves, who feel isolated and cut off from others when considering their own struggles and failures, and who feel overwhelmed and carried away by their negative emotional reactions and thoughts may be more vulnerable to develop compassion fatigue when they experience empathic and distressing feelings. Also, we found that the positive components of self-compassion (self-kindness and common humanity) significantly moderated the relation between empathic concern/personal distress and compassion fatigue. That is, for individuals who are able to be caring, supportive and understanding toward themselves, particularly when faced with suffering or failure, and who feel interconnected with other people, there is no link between their empathic and distress feelings and compassion fatigue. Several mechanisms may help explain such findings. On one hand, self-compassionate people may have psychological characteristics that make them more able to regulate their emotions. In previous studies it was found that self-compassion was associated with less rumination (Johnson and O'Brien, 2013; Odou and Brinker, 2014; Raes, 2010), avoidance (Krieger et al., 2013) and suppression (Leary et al., 2007) and with more emotion validation (Leary et al., 2007; Neff et al., 2005, 2007a, 2007b). So, it may be that these psychological characteristics that have been associated with self-compassion may render individuals more

resilient and less vulnerable to the potential negative impact of empathic feelings. Thus, when witnessing others' suffering or in pain self-compassionate nurses seem to be able to regulate their empathic feelings in a way that reduces its negative impact, presumably by accepting distressful feelings with kindness and holding negative experiences in mindful awareness rather than judging and identifying with them.

On the other hand, self-compassionate people may be more other-focused when witnessing others in pain and suffering. In previous studies it was found that self-compassion was associated with compassion for others (Lindsay and Creswell, 2014; Neff and Pommier, 2013; Welp and Brown, 2014). Klimecki and Singer (2012) argue that compassion for others can protect against the risk of burnout and compassion fatigue. The authors propose that the other-oriented focus of the compassionate response prevents identification with the suffering of others and allows for regulation of negative feelings caused by the empathic response. In this case, the healthcare professional responds with feelings of love and concern and is motivated to provide care and assistance. However, empathy can also lead to personal or empathic distress. In this case, the empathizer is overwhelmed by the experience of negative emotions because there is an identification with the suffering of others. As a consequence, the empathizer will be motivated not to provide help but instead to try to reduce these negative feelings and withdraw from the distressful situation. These findings have been supported by data from cognitive neuroscience (Klimecki et al., 2013; Lamm et al., 2007) and other empirical studies (e.g., Batson et al., 1987). This distinction has led Klimecki and Singer (2012) to propose that 'compassion fatigue' could more helpfully be thought of as 'empathetic distress fatigue', because compassion as defined in this context can actually be protective of burnout and compassion fatigue. Thus, when witnessing others' suffering or pain self-compassionate nurses may be more able to adopt an other-focused perspective which prevents their empathic feelings from turning into personal distress and compassion fatigue.

In sum, several important findings can be drawn from this study. First, this is the first study reporting a positive association between empathic feelings and compassion fatigue in nurses, although this hypothesis has been described in the literature. Second, this is also the first study to explore how trait self-compassion relates to different aspects of professional quality of life. Finally, although suggested previously (Raab, 2014) this study offers the first empirical evidence that self-compassion may be an essential skill to prevent nurses from developing burnout and compassion fatigue.

#### 4.1. Implications

Although empathy is a key component in nurse–patient relationship, results from this study suggest that being overly sensitive to others' pain and suffering may have deleterious effects on caregivers' mental health, which can limit their ability to provide effective care. This is particularly so when nurses lack self-compassionate

abilities. This suggests that training in self-compassion might be valuable to avoid compassion fatigue and to promote compassion satisfaction. Given the close link between self-compassion and compassion for others, such training could also promote compassionate care which has been shown to have a great impact not only on professionals' well-being but also on patients' health outcomes. Mindfulness-based interventions have been shown to be an effective way not only develop self-compassion (e.g., Birnie et al., 2010; Tirth, 2010), but also compassion for others (Wallmark et al., 2013). A recent review suggests that mindfulness-based interventions can increase self-compassion and other-focused concern in healthcare professionals (Boellinghaus et al., 2012). Also, some studies have provided evidence that such interventions may be particularly effective to reduce burnout in nurses (e.g., Cohen-Katz et al., 2005; Mackenzie et al., 2006).

#### 4.2. Limitations

Although these findings are notable, several limitations should be taken into account. First, the cross-sectional nature of this study does not allow causality inferences to be drawn between empathy and self-compassion and professional quality of life. Also, in the mediation and moderation models there were still significant direct effects between empathy and compassion fatigue suggesting that other variables may have a potential role in this relationship. The sample size was small and participants were mainly women, which limits the generalizability of these findings. In addition, we used a convenience sample of hospitals and nurses which, by being a nonprobability sampling method, may not adequately represent the population. Finally, the data was derived entirely through self-report measures and thus is subject to the limitations associated with this type of methodology (e.g., social desirability). Research that is not solely based on self-report measures (e.g., experimental manipulations) would further enhance the understanding of the complex relations between empathy, self-compassion and professional quality of life. Reliability and validity of such measures was assessed only with Cronbach's alpha. Although this is a widely used estimate of internal consistency, it suffers from several limitations (e.g., Sijtsma, 2009). The lack of other reliability/validity estimates is a limitation of this study.

#### 5. Conclusion

Nurses face the challenge of finding the balance that allows them to resonate with patients' suffering without becoming emotionally overinvolved in a way that might lead to burnout and compassion fatigue. This study's findings suggest that teaching self-compassion and self-care skills, i.e., a tendency to be kind and understanding toward oneself, to feel interconnected with other people and to hold negative experiences with mindful awareness, may be an important feature in nursing educational interventions that aim to reduce burnout and compassion fatigue.

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