

Personal factors related to compassion fatigue in health professionals

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This study examines the role of some personal and professional factors in compassion fatigue among health-care professionals. Research participants included 182 (89 mental and 93 medical) health-care professionals who completed an assessment battery measuring compassion fatigue, emotion management, trait emotional intelligence, situation-specific coping strategies, and negative affect. Major findings indicate that both self-report “trait” emotional intelligence and ability-based emotion management are inversely associated with compassion fatigue; adaptive coping is inversely related to compassion fatigue; and differences exist between mental and medical professions in emotional intelligence, coping strategies, and negative affect. Furthermore, problem-focused coping appears to mediate the association between trait emotional intelligence and compassion fatigue. These findings shed light on the role of emotional factors in compassion fatigue among health-care professionals. Beyond enhancing our knowledge of practitioners’ professional quality of life, the current study serves as a basis for the early identification of groups of practitioners at risk for compassion fatigue.

Keywords: compassion fatigue; secondary traumatization; emotional intelligence; empathy; coping

Compassion fatigue is a quite newly defined phenomenon, characterized by depressed mood, feelings of fatigue, disillusionment, and worthlessness, related to the provision of care to people who have experienced some form of trauma or severe stress (Figley, 1995; Stamm, 2010). Compassion fatigue affects those who work with persons who have been traumatized, including, physicians, emergency room nurses, psychologists, psychiatrists, clinical social workers, ambulance crew, emergency rescue teams, firefighters, genetic counselors, pastoral care workers, and hotline workers (Dutton & Rubinstein, 1995; Figley & Kleber, 1995; Injeyan et al., 2011). Close to 50% of professionals working with traumatized individuals may be at high risk (Injeyan et al., 2011; Wee & Myers, 2002), although reliable data on prevalence of compassion fatigue are lacking.

To clarify the sometimes confusing nomenclature in the field (Craig & Sprang, 2010), compassion fatigue has recently been conceptualized as a multi-component construct, comprised of both *secondary traumatic stress* and *burnout* (Stamm, 2010). Secondary traumatic stress has been construed as the risk a helper incurs when engaged empathically with a significant other, who has been traumatized (Figley,

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1995). Thus, this construct refers to the stress resulting from knowledge about a traumatizing event experienced by another and from wanting to help the suffering person. *Vicarious traumatization*, a term closely related to secondary traumatization, refers to the impact on a caregiver of repeated emotionally intimate contact with trauma survivors (McCann & Pearlman, 1990). As a result of a clinician's empathic engagement with survivors of traumatic experiences, there is thought to be a transformation in cognitive schemas and belief systems resulting in disruption to the clinician's sense of meaning, identity, and world view. Professional burnout, by comparison, refers to a state of mental, emotional, and physical exhaustion caused by excessive and prolonged emotional stress on the job, often leading to the gradual deterioration and depletion of the helper's personal resources (Brady, Guy, Poelstra, & Brokaw, 1999). The continued empathic engagement of a helper working with traumatized clients along with the exhaustion involved in working with suffering persons may lead to compassion fatigue.

Two major theoretical perspectives have been put forth to account for the origins of compassion fatigue in professional helpers (Figley & Kleber, 1995). The *resource depletion* perspective suggests that helpers become worn out, physically and mentally, by exposure to traumatized victims. By contrast, the *emotional contagion* perspective refers to the affective process in which a helper, observing traumatized persons, experiences emotional responses parallel to that person's actual or anticipated emotions (Hatfield, Cacioppo, & Rapson, 1993).

Emotional intelligence and compassion fatigue

Emotional intelligence may be a pivotal factor for determining how a person handles stress in daily life, particularly how one regulates and impairs negative emotions (e.g., Zeidner, Matthews, & Roberts, 2009). If emotionally intelligent individuals are more in touch with their emotions and are able to better regulate them, they should experience lower levels of distress and stress-related emotions, including compassion fatigue (Salovey, Bedell, Detweiler, & Mayer, 1999). Potentially, emotional intelligence might influence both the resource depletion and emotion contagion mechanisms described in theories of compassion fatigue (Figley & Kleber, 1995; Hatfield et al., 1993). For example, in Hobfoll's (2011) conservation of resources theory, stress may work through the depletion of resources to impact upon coping strategies. While resource depletion may lead to ineffective coping, the person's choice of coping strategy may support husbanding of scarce resources. In particular, individuals high in emotional intelligence may use mood-regulation strategies that maintain energy and engagement in demanding circumstances (Matthews & Fellner, 2012), while those low in emotional intelligence may favor avoidance strategies that exacerbate fatigue and resource depletion (Samaha, Lal, Samaha, & Wyndham, 2007). Effective coping may reduce the intensity of compassion fatigue.

Alternatively, emotional intelligence might influence emotion contagion via the clinician engaging in implicit social comparison processes (Hatfield et al., 1993). In general practitioners, susceptibility to contagion is associated with higher levels of burnout (Bakker, Schaufeli, Sixma, & Bosveld, 2001). These authors argue that contagion may operate explicitly as well as implicitly, through conscious appraisal of the misery of others. In this case, the styles of emotion regulation and coping typical

of high emotional intelligence may help to mitigate negative emotions (e.g., through constructive reappraisal).

In general, researchers differentiate two emotional intelligence constructs – trait and ability emotional intelligence (e.g., Zeidner et al., 2009). Trait emotional intelligence has been defined as a constellation of emotional self-perceptions, located at the lower levels of personality hierarchies, measured via self-report (Petrides, Pita, & Kokkinaki, 2007). By contrast, ability-based emotional intelligence is defined as a set of abilities designed to help a person perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth (Mayer & Salovey, 1997). It should be measured using cognitive tests with “right or wrong” answers (Mayer, Salovey, & Caruso, 2002).

Both versions of the construct are associated with good mental health and use of adaptive coping strategies, and negatively associated with negative affect, stress, and self-reports of health issues (Zeidner, Matthews, & Roberts, 2012). Consistent with this general picture, emotional intelligence has been shown to be inversely related to burnout among nurses (Gerits, Derksen, Verbruggen, & Katzko, 2005) and internists (Weng et al., 2011).

Choosing the optimal measure of emotional intelligence for stress research is challenging. Alternate trait measures are typically substantially intercorrelated, suggesting a general factor (Zeidner et al., 2009). Subfactors of general trait emotional intelligence have been identified (e.g., Petrides et al., 2007), but there is no consensus on the optimal factor structure (Zeidner et al., 2009), and it is difficult to identify any specific trait subfactor that is of special importance in predicting stress criteria (Zeidner et al., 2012). There is also a general factor for ability emotional intelligence, as well as four distinct “branches” or subfactors (Mayer & Salovey, 1997; Mayer et al., 2002). Several studies (reviewed by Matthews, Zeidner & Roberts, 2012) suggest that the emotion management branch is the one typically the most predictive of relevant criteria including coping, symptoms of emotional disorder, and quality of interpersonal interaction.

The present study included both a trait and an ability measure, given that the two types of measure are typically only weakly correlated, if at all (Zeidner et al., 2009). We used a general self-report trait measure (Schutte et al., 1998) which has been shown to relate previously to coping and adaptive health outcomes in several studies (Zeidner et al., 2012). We also administered Mayer et al.’s (2002) test for emotion management, because of its criterion validity (Matthews et al., 2012), and because managing the negative emotions experienced during therapy appears to be the most salient challenge for the therapist.

In addition to testing whether emotional intelligence correlates with compassion fatigue, we also tested for possible mediating processes. Theories of compassion fatigue suggest that coping may mediate the impact of emotional intelligence. Resource depletion theory (Figley & Kleber, 1995; Hobfoll, 2011) implicates effective coping as a mechanism that counters depletion. Emotionally intelligent therapists may make more use of protective strategies such as problem focused and constructive reappraisal, as previously discussed. Similarly, the emotional contagion theory (Hatfield et al., 1993) suggests that as negative emotions are an inevitable element of the therapist’s work experience, effective coping with emotion transmitted from others will mitigate both negative emotion and compassion fatigue. Few studies have

tested relevant mediation hypotheses directly, although analyses of this kind are starting to appear. For example, Mikolajczak, Menil, and Luminet (2007) reported that associations between trait emotional intelligence and occupational stress were mediated by strategies for coping with emotional labor. Also, the ability to regulate negative emotions, which correlates with adaptive coping, partially mediated associations between trait emotional intelligence and various negative emotions (Mikolajczak, Nelis, Hansenne, & Quoidbach, 2008).

Research hypotheses

Based on the preceding review we hypothesized that:

(1) Trait emotional intelligence would be inversely related to compassion fatigue (**H₁**); (2) emotional management (as a key component of ability emotional intelligence) would also be inversely related to compassion fatigue (**H₂**); (3) problem-focused coping would be negatively related to compassion fatigue (**H₃**); (4) less adaptive forms of coping (i.e., emotion focused and avoidance coping) would be positively related to compassion fatigue (**H₄**); (5) negative affect would be positively associated with compassion fatigue (**H₅**); and (6) effective coping strategies (i.e., problem-focused coping) would mediate the relationship between emotional intelligence and compassion fatigue (**H₆**).

Method

Participants

Participants were 89 mental health practitioners and 93 medical practitioners (physicians only). They were drawn from seven major hospitals and six private clinics in Northern and Central Israel. The mental health-care group consisted of 25 clinical psychologists, 55 clinical social workers, and 9 psychiatrists (who we classified as mental health professionals for the purpose of this study). The medical practitioners were drawn from a range of medical units (e.g., emergency medicine, general surgery, pediatrics, neurology, anesthesia, etc.). Each of the participants was certified and actively engaged in providing psychological, psychiatric, or medical care to individuals who had experienced adverse physical and/or psychological traumatization. Of note, medical professionals (e.g., a pediatrician vs. emergency room doctor) may vary in their proximity to the patient, as well as in the proportion of trauma patients under their care.

Professional groups differed significantly in their gender distribution, $\chi^2(1) = 23.13$, $p < .001$, with women comprising about three quarters (73%) of the mental health-care group, but only slightly over a third (37%) of the medical care group. Compared to mental health providers, the medical health-care professionals were older, on average, $47.95 > 41.76$, $t(180) = -3.85$, $p < .001$, had more years of professional experience, $19.00 > 13.2$, $t(180) = -3.90$, $p < .001$, reported a significantly greater weekly caseload, $52.55 > 16.21$, $t(1) = 5.51$, $p < .001$, and had significantly more years of experience treating trauma patients, $18.41 > 11.48$, $t(179) = 4.46$, $p < .001$. Also, 1% of the mental health workers self-identified as being of Arab extraction, compared to 15% of the medical health workers.

Procedure

Following initial contacts via phone and mail with the administration officers of all major hospitals and private health-care centers in Central and Northern Israel, seven large hospitals and three private clinics agreed to participate in this research. Following the approval of the research protocol by each hospital's internal review board, potential health-care participants were identified by way of recommendation through members of the hospital/clinic administration. Inclusionary criteria included mental health clinicians or physicians who had experience working with trauma patients. Potential candidates were contacted in advance, and informed about the study. For those who agreed to participate following the approval of the hospital administration, a date was set for data collection. Following written consent by participants, the assessment packets were administered during an assessment session mainly during work hours (hospital or clinic lasting anywhere from 60 to 80 minutes). Participants were not compensated for their participation.

Measures

A brief, capsule description of the various instruments employed in this study follows. As a rule, the original English versions of scales employed in this study were translated in Hebrew by a bilingual psychologist and then back-translated to English by a second bilingual psychologist to assure the correspondence between the English and Hebrew versions. All measures were pretested prior to this study on a pilot sample ($n=20$) of health practitioners. In addition, all measures were piloted on a group ($n=20$) for the compassion fatigue scale were pretested on a variety of Israeli samples in the past.

(1) *Schutte self-report inventory* (SSRI; Schutte et al., 1998). This 33 item inventory assessed trait emotional intelligence. Participants were asked to endorse statements describing aspects of emotional life, on a scale ranging from "1" (strongly agree) to "5" (strongly disagree). For example: "I know why my emotions change." Total scale scores only were employed in the analyses ($\alpha = .89$ in the present sample).

(2) *Emotion-management subscale of the Mayer-Salovey-Caruso emotional intelligence test* (MSCEIT, Mayer et al., 2002). This measure is comprised of various cognitive tasks designed to tap emotion management as a cognitive ability. Participants were presented with a series of eight vignettes describing emotion-laden situations, and judged actions that were likely to affect the personal feelings of the individual in a given story. Respondents then rated the effectiveness ("1" = very ineffective and "5" = very effective) of each of the four alternative courses of action varying across vignettes. This measure was scored via the proportion consensus approach, with consensus weights determined from the answers of the current sample of health practitioners. Specifically, the consensus scores we employed in this study reflect the proportion of participants in this study who endorsed each of the MSCEIT subtest items. Responses were tallied and participants were given credit for responses to the extent that their answers matched those provided by the sample. Under this scoring technique, a participant who chose "4" in the present investigation, for example, would receive a score of 0.42 for that item if 42% of the participants answered that that emotion was definitely present. If the participant reported that that emotion was definitely not present ("1"), and this matched only

4% of the entire sample, then the person would receive a score of 0.04 for that item, and so forth. Participants were given credit for responses to the extent that their answers matched those provided by the sample ($\alpha = .78$).

(3) *Coping inventory for stressful situations – situation specific coping* (CISS-SSC, Endler & Parker, 1990). This inventory is a short (21 item) scale that measures three broad, situation-specific coping dimensions: (1) *Task-focused coping* ($\alpha = .81$; e.g., “Determine a course of action and follow it”), (2) *Emotion-focused coping* ($\alpha = .86$; e.g., “Blame myself for not knowing what to do”), and (3) *Avoidance* ($\alpha = .76$; e.g., “Take time off and get away from the situation”). Respondents were asked to rate the extent to which they employ each strategy when confronted with stress related to providing care to patients or clients along a 5-point Likert scale (1 = not at all and 5 = very much).

(4) *Mood subscales of the Dundee stress state questionnaire* (Matthews et al., 2002). Participants were presented with 25 words representing negative stress-related affective states (e.g., anger, fear) and asked to indicate how well each word describes how they felt in the context of providing health care to their patients or clients (“1” = definitely not and “5” = definitely). Although the scale assesses multiple dimensions of mood, the focus of the present study was on compassion fatigue, which integrates multiple affective symptoms, including various negative emotions and tiredness, so a single index was used ($\alpha = .96$).

(5) *Professional quality of life-compassion satisfaction/fatigue subscales revision III* (ProQOL-RIII, Stamm, 2009, http://www.proqol.org/ProQol_Test.html). Two subscales of the ProQOL-RIII, namely, *Secondary traumatic stress* (e.g., “I find it difficult to separate my private life from my life as a helper”) and *Burnout* (“Because of my work as a helper, I feel exhausted”) were employed to assess compassion fatigue in this study. Each subscale was comprised of 10 Likert-type items, with respondents asked to rate the frequency of each item on a 6-point Likert scale (“0” = never and “5” = very often). The two subscales were linearly combined to form a composite *compassion fatigue* score ($k = 20$, $\alpha = .83$), which served as the key dependent variable in this study.

Statistical analyses

Missing values for key variables were imputed via “Hot Deck” imputation procedures (Myers, 2011). Because medical health professionals differed in age and professional experience, we controlled for age, where appropriate, in our analyses. Age and professional experience were strongly correlated in the sample ($r = .89$), so this control serves also as a proxy for professional experience.

Results

Group differences

Table 1 presents summary statistics, by gender and professional group, for key variables. We conducted a multivariate analysis of covariance (MANCOVA), testing for the effects of professional and gender group on key variables in this study (emotional intelligence, emotion regulation, negative affect, coping strategies, and compassion fatigue), controlling for age as covariate. Data met the basic assumptions

Table 1. Key variables by professional group and gender.

Key variables	Mental health practitioners				Medical health practitioners				Hedge's <i>d</i> Score
	Male (<i>N</i> = 24)		Female (<i>N</i> = 65)		Male (<i>N</i> = 58)		Female (<i>N</i> = 35)		(Professional group difference)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>d</i> -score
1. Compassion fatigue	33.54	10.11	39.17	10.42	34.51	12.80	37.14	12.04	.18
2. Secondary traumatization	13.38	4.96	17.60	6.76	14.44	7.70	14.91	6.10	.26
3. Burnout	20.17	5.77	22.06	4.90	20.07	6.75	22.23	7.64	.11
2. Emotional intelligence	3.79	.38	3.81	.38	3.63	.41	3.74	.46	.32
3. Emotion management	.41	.06	.42	.07	.38	.08	.41	.06	.40
4. Problem-focused coping	3.87	.51	3.85	.72	4.00	.69	4.11	.53	–.28
5. Emotion-focused coping	2.19	.82	2.39	.75	2.07	.74	2.30	.87	.23
6. Avoidance	2.36	.83	2.61	.73	1.85	.65	2.19	.71	.80
7. Negative affect	2.68	1.10	2.49	.94	1.66	.97	2.07	.83	.76

of MANCOVA, namely, multivariate normality of the data, homogeneity of variance–covariance matrices, linearity, and low multicollinearity among variables (Tabachnick & Fidell, 2001). Inspection of variable distributions showed no more than moderate skewness; when skewness was present it was similar for variables in the different subgroups. Gender was dummy-coded as 0 = males, 1 = females; professional group was dummy-coded as 0 = mental health, 1 = physicians. The MANCOVA showed significant effects for professional group, Wilk's Lambda = .83, $F(7, 171) = 4.90$, $p < .001$, $\eta^2 = .17$, and gender, Wilk's Lambda = .91, $F(7, 171) = 2.11$, $p < .05$, $\eta^2 = .09$; the interaction effect was not statistically significant.

Post hoc univariate analyses of covariance (ANCOVAs) for the effects of professional group, controlling for age, showed significant effects for trait emotional intelligence, $F(1, 177) = 3.99$, $p < .05$, partial $\eta^2 = .02$, avoidance coping, $F(1, 177) = 12.29$, $p < .001$, partial $\eta^2 = .07$, and negative emotions $F(1, 177) = 14.83$, $p < .001$, partial $\eta^2 = .08$. Mental health professionals reported significantly higher trait emotional intelligence, more avoidance coping, and also more negative affect when compared to medical health practitioners. The corresponding ANCOVAs for the effects of gender showed significant effects for avoidance coping, $F(1, 177) = 7.02$, $p < .01$, partial $\eta^2 = .04$, and compassion fatigue, $F(1, 177) = 5.22$, $p < .05$, partial $\eta^2 = .03$. Overall, women health professionals, compared to men health professionals, reported significantly higher levels of avoidance coping and compassion fatigue.

Table 2 presents intercorrelations of the principal study variables, by professional group. Pairwise correlations among the key variables were highly similar and not reliably different among medical and mental health-care professionals, except for the significantly higher correlation between compassion fatigue and emotion-focused coping among medical health care than among mental health-care professionals, $z = -2.07$, $p < .05$.

Test of key hypotheses

First, we performed a hierarchical linear regression analysis on compassion fatigue to test for effects of trait emotional intelligence, emotion management, and negative affect. Predictor variables were entered via forced entry procedures in three steps: (1) age, gender, and professional group, as control variables, (2) trait emotional intelligence and emotion management, and (3) negative affect. At the first step, the model, $F(3, 178) = 4.74$, $p < .01$, accounted for 7% of the compassion fatigue variance, $R^2 = .07$, $SE = 11.29$. Entry of emotional intelligence and emotion management measures into the equation added an additional 8% to the variance explained, $F(2, 176) = 8.61$, $p < .001$, with both trait emotional intelligence, $B = -.18$, $t = -2.29$, $p < .05$, and emotion management, $B = -.18$, $t = -2.35$, $p < .01$, recording significant effects. These data support H_1 and H_2 predicting that trait emotional intelligence and emotion management, respectively, are negatively related to compassion fatigue, even after controlling for demographic variables. The entry of negative affect into the regression analysis in step 3 showed significant effects, $B = .43$, $t = 6.16$, $p < .01$, adding 15% to the variance explained, $F(1, 175) = 8.61$, $p < .01$. This finding supports H_5 predicting that negative affect is positively related to compassion fatigue. The effects of trait emotional intelligence, $B = -.19$, $t = -2.78$, $p < .01$, and emotion management, $B = -.17$, $t = -2.45$, $p < .01$, remained significant at the final step.

Table 2. Intercorrelations among variables by the two professional subgroups (mental health: below diagonal, physicians: above diagonal).

Variable	1	2	3	4	5	6	7	8	9
1. Compassion fatigue	1	.88**	.89**	-.22*	-.30**	-.31**	.69**	.27*	.48**
2. Secondary traumatization	.90**	1	.55**	-.04	-.25*	-.18	.57**	.16	.42**
3. Burnout	.89**	.69**	1	-.34**	-.28**	-.36**	.65**	.32**	.43**
4. Trait emotional intelligence	.28**	-.13	-.39**	1	.38**	.46**	-.14	.03	.09
5. Emotion management	-.13	-.04	-.20	.39**	1	.26**	-.28*	-.14	.08
6. Problem-focused coping	-.13	-.05	-.12	.48**	.25*	1	-.09	-.16	-.09
7. Emotion-focused coping	.49**	.39**	.48**	-.17	.00	-.08	1	.40**	.39**
8. Avoidance	.30**	.23*	.26*	.10.	.09	.07	.40**	1	.22*
9. Negative affect	.37**	.34**	.31**	-.07	-.10	-.18	.31**	.31**	1

* $p < .05$. ** $p < .01$ level.

An additional hierarchical regression tested for the unique incremental effects of coping on compassion fatigue. With occupational group, gender, and age entered into the analysis at step 1, the model, as stated above, accounted for 7% of the compassion fatigue variance. After entry of the three coping measures (i.e., problem-focused, emotion-focused, avoidance) into the equation at step 2, the additional variance explained by the model was significant, $F(3, 175) = 32.58, p < .01, \Delta R^2 = .41, SE = 11.29$. Problem-focused coping, $B = -.17, t = -2.75, p < .01$, and emotion-focused coping, $B = .56, t = 8.52, p < .01$, but not avoidance coping, recorded significant effects. These data support H_3 predicting that problem-focused coping would be inversely related to compassion fatigue. Furthermore, these data partly support H_4 predicting that less adaptive forms of coping would be positively related to compassion fatigue, even after controlling for demographic variables.

In order to test H_6 , we tested for the mediating effects of problem-focused coping in the association of trait emotional intelligence and compassion fatigue via contemporary bootstrap procedures (Hayes, 2009). Total effects (symbolized as c) were estimated, with $c = -6.37, SE = 2.07, t = -3.08, p < .01$. These effects were further partitioned into direct effects, $-4.29, SE = 2.28, z = -1.89, p > .05$, and significant indirect effects, $-2.08, SE = 1.03, z = -2.01, p < .05$. The significant statistic for indirect effects attests to the significant mediating effects of problem-focused coping in the relationship between trait emotional intelligence and compassion fatigue, thus supporting hypothesis H_6 .

Discussion

This study examined the role of emotional intelligence (specifically trait emotional intelligence and emotion management), negative affect, and coping, as they relate to compassion fatigue among health-care professionals. Findings substantiate the potential importance of trait emotional intelligence and emotion management for health practitioners, since each was found to be inversely associated with compassion fatigue, even with negative affect statistically controlled. In addition, adaptive coping was inversely related to compassion fatigue. Problem-focused coping mediated the association between trait emotional intelligence and compassion fatigue.

Overall, no significant compassion fatigue differences were found between mental health care and primary medical health-care practitioners, although groups differed on other study variables. Our data match Creamer and Liddle's (2005) finding that professional discipline is not a significant predictor of compassion fatigue. The lack of a group difference may seem surprising given that mental health-care practitioners reported higher levels of negative affect and avoidance coping, as well as lower problem-focused coping scores, factors that appear to increase vulnerability to compassion fatigue. The higher trait emotional intelligence and emotion management of mental health practitioners may have buffered against harmful effects of negative emotion and coping style, to some extent.

Consistent with some prior findings in samples of practitioners (e.g., Craig & Sprang, 2010; Hojat et al., 2002) gender differences in compassion fatigue were non-significant. However, female physicians did report more negative affect than their male physician counterparts. Finally, the small sex differences on emotional competencies are consistent with the emotional intelligence literature showing only

marginal gender differences, in favor of females, on the relevant emotional intelligence-related competencies (Zeidner et al., 2009).

Research hypotheses

In keeping with H_1 and H_2 the data show that trait emotional intelligence and emotion management are inversely related to compassion fatigue. The regression analysis suggested these were independent effects that were maintained with negative mood controlled. Also, both these variables were positively related to higher levels of problem-focus, consistent with the notion that adaptive coping might reflect emotional intelligence in action (Keefer, Parker, & Saklofske, 2009). Broadly, individuals who understand the nature and causes of their feelings and who are proficient in emotion-management abilities are resilient under stress and take proactive steps toward restoring their emotional balance and regulating negative emotion. Consistent with our predictions, lower usage of problem-focused coping in handling work-related stress (H_3) and higher employment of emotion-focused coping (H_4) were related to compassion fatigue. According to the transactional theory of stress (Lazarus, 1991), when something can be done to control and alter the person–environment transaction, problem-focused coping is considered to be effective whereas emotion-focused coping is prone to be maladaptive.

Surprisingly, we failed to find the negative associations between emotional intelligence and emotion-focused coping typically reported in the literature (Zeidner et al., 2012), although we confirmed that emotion-focused coping is associated with higher levels of compassion fatigue. Emotion-focused coping may have a different character in mental health professionals than in the general public. These are individuals with acquired skills in processing and regulating emotion in self and others, and thus emotion-focus may be less deleterious for them. Flexible use of coping strategies and effectiveness of strategy use may be more important influences on affect than simple level of usage of strategies (Davis & Humphrey, 2012). Perhaps therapists have special skills in using emotion-focus flexibly and effectively, in which case broad-based coping measures may not pick up the subtleties of emotion-focused coping in this population. In both practitioner samples, trait emotional intelligence and emotion management were more strongly correlated (r s of .38 and .39) than is typical; for example Brackett and Mayer (2003) reported an r value of .22. Therapists' self-reports of affective functioning may have greater validity than those of other groups, supporting the view that they are a special population.

The data supported H_5 stating that negative affect would be significantly correlated with compassion fatigue. These data are consistent with Keefer et al.'s (2009) suggestion that the inability to regulate strong negative emotions in health contexts exacerbates the negative impact of stress on health through ineffective and potentially harmful coping behaviors. We confirmed that negative affect is associated with emotion-focused coping. Thus, negative affect may exacerbate compassion fatigue in health practitioners, which in turn, feeds back into elevated negative stress states. Also, negative affect may be a consequence of the broad personality variable of neuroticism (N) and other traits linked to negative affectivity (Matthews, Deary, & Whiteman, 2009), although we cannot identify the causal bases for the compassion fatigue – negative affect association from the present data.

The data were partially consistent with H₆, predicting that problem-focused coping would mediate the relationship between emotional intelligence and compassion fatigue, supporting the claim that emotional intelligence supports more effective coping (Mikolajczak et al., 2008; Salovey et al., 1999). Of note, problem-focused coping mediated the effects of trait emotional intelligence, but not emotion management, on compassion fatigue. Similarly, Davis and Humphrey (2012) suggested that trait emotional intelligence is more closely related to the selection of coping strategies and their emotional consequences, whereas ability emotional intelligence relates more to effectiveness of use of whatever strategy is chosen.

Differing roles for trait and emotion-management ability may also be suggested by the resource management and emotional contagion theories of compassion fatigue (Figley & Kleber, 1995; Hatfield et al., 1993). Resource management may depend on explicit appraisal of oneself as taxed by the emotional demands of work, leading to selection of a coping strategy as specified in transactional theory (Lazarus, 1991). Our data suggest that practitioners high in trait emotional intelligence are more likely to select problem-focused strategies for conserving resources and maintaining work engagement that do indeed lessen compassion fatigue. By contrast, emotion management confers resilience to compassion fatigue over and above any effect of problem-focused coping. The scale may pick up skills for resource management, such as constructive appraisal of negative emotion, that are not well assessed by the Endler and Parker (1990)'s coping measure. Another possible mechanism comes from emotional contagion theory. Negative emotion that is acquired through implicit contagion (Bakker et al., 2001) may be difficult to cope with because conscious appraisal will not readily determine its source or suggest means for controlling it. Even though ability emotion management was related to higher problem-focus, this coping style may not protect against implicit contagion. A tentative alternative explanation for the impact of ability emotion management on compassion fatigue is that high emotion management supports the practitioner in regulating the emotions of patients and co-workers so that they feel and express less negative emotion, thus reducing the potential for contagion. Consistent with this suggestion, emotion management correlates with a range of indicators of superior social functioning (Matthews et al., 2012; Zeidner et al., 2012).

Limitations

There are limitations to our study relating to the sample, measures, and design. First, there is considerable diversity of the samples used, not only between mental and medical professionals, but within the group of medical health professionals. Furthermore, given that the medical practitioners came from so many different specialties, the results may not apply equally to all of them, raising the issue of generalizability of our findings. Various differences between the two groups may have influenced findings. For example, while only 1% of the mental health-care professionals identified themselves as "Arab," 15% of the physical health-care professionals were of Arab ethnicity. Given the topic at hand (stress and burnout) and the geocultural location of the study (Israel), this is an interesting ethnicity difference. The discrepancy in the proportion of married versus single participants in the two samples raises the issue of differences in social support across the groups. Further research is required to determine if our results would replicate across samples of different demographic qualities.

Second, due to time limitations in our sample, we could administer only one trait measure (SSRI), and a test of the branch of the MSCEIT most strongly implicated in affective functioning (Zeidner et al., 2009), i.e., emotion management. A more comprehensive assessment of different facets of emotional intelligence would require using the full MSCEIT, as well as measures of possible subfactors of trait emotional intelligence (e.g., Petrides et al., 2007). Also, a wider range of measures of potential mediators would have been desirable, including measures of appraisal as well as coping, measures of coping effectiveness as well as strategy preference (cf., Davis & Humphrey, 2012), and measures of the social interaction processes we discussed in relation to emotion management and emotional contagion. Also, we did not include any measures of social desirability in our set of measures.

Third, because of the cross-sectional nature of the data, we cannot really disentangle the causal ordering of emotional intelligence, negative affect, situational coping, and compassion fatigue. The tests of mediation place some constraints on possible causal mechanisms, but the study was not designed to address the possible dynamic relationships between negative emotional states, stress, and compassion fatigue. Only experimental and longitudinal data and further theoretical work can adequately address these issues. With these caveats in mind, we still believe this study has provided useful data on a number of personal factors related to compassion fatigue.

In conclusion, the scientific value of this study lies in its contribution to advancing the comprehensive examination of the nexus of variables involving trait emotional intelligence, emotional management, coping and negative affect, and compassion fatigue among two groups of health practitioners. Emotionally intelligent practitioners may manage their coping resources more effectively, and they may be more adept at avoiding emotional contagion, perhaps through exercising emotion-management skills that regulate the negative emotions of others effectively. Beyond enhancing our knowledge of practitioners' professional quality of life, the current study may also serve as a basis for the early identification of practitioners vulnerable to compassion fatigue. Vulnerable practitioners may benefit from primary prevention programs that support effective coping, and constructive reappraisal and regulation of the negative emotions of self and others. Specifically, the data suggest that interventions that enhance problem-focused coping may be more effective than stress management programs whose aim is to reduce levels of negative affect. Future studies of individual difference factors in compassion fatigue may further delineate the professional hazards of healing professions, supporting the development of better preventative or palliative measure to address compassion fatigue.

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