Traumatic stress and professional quality of life. Personality and social support as moderators

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Abstract: The aim of the present study is to investigate the relation between secondary traumatic stress and compassion satisfaction among Romania hospital nurses and physicians. Moreover, we aimed to investigate the moderating effect of core personality traits and social support on the secondary traumatic stress – compassion satisfaction relationship. A sample of 190 hospital medical staff participated at this study. Data were collected using a set of questionnaires that included the measures of traumatic stress, personality traits, different forms of social support, compassion satisfaction and the demographics. Our results showed that all forms of social support and all personality traits, excepting neuroticism, were positively associated with a high level of compassion satisfaction. On the contrary, neuroticism and secondary traumatic stress were negatively associated with compassion satisfaction. Moreover, our regression analysis showed that the relation between secondary traumatic stress and compassion satisfaction is moderated by both personality traits (agreeability and openness) and social support (emotional/ informational support). The results are discussed from the perspective of ways of promoting resilience in context of secondary exposure to traumatic life events. Implications of these results for stress management are also discussed.
Keywords: secondary traumatic stress, compassion satisfaction, social support, personality traits

Introduction

Secondary traumatic stress is described as a syndrome of symptoms that might follow indirect traumatic exposure (Figley, 1995). It has the same symptoms (e.g. avoidance, intrusions, arousal) resulting from direct exposure to trauma life events (Bride, Robinson, Yegidis, & Figley, 2004; Shoji, Jock, Cieslak, Zukowska, Luszczynska, & Benight, 2014) but results from vicariously experiencing a trauma through interactions with persons who are directly confronting with the stressor (Figley, 1995). Over the last years, the effects of secondary traumatic stress in various professional groups have been extensively reported, especially at healthcare providers (Dominguez-Gomez & Rutledge, 2009; Duffy, Avalos, & Dowling, 2014). The study of this professional category is of particular interest because these peoples have to deal with different stressful events in their daily duty, such as seeing patients dying or being exposed to patients who have open wounds

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(Laposa & Alden, 2003; Mealer, Shelton, Berg, Rothbaum, & Moss, 2007; O'Connor & Jeavons, 2003). Previous studies linked this indirect exposure to trauma life events with many negative consequences such as higher compassion fatigue (Coetzee & Klopper, 2010), increased negative cognitions about the self and the world (Mairean & Turliuc, 2013; Pearlman &Mac Ian, 1995), higher job burnout (Ballenger-Browning, Schmitz, Rothacker, Hammer, Webb-Murphy, & Johnson, 2011; McManus, Keeling, & Paice, 2004), and lower job satisfaction (Devilly, Wright, & Varker, 2009). Nevertheless, the relation between secondary exposure to trauma and job satisfaction, in context of healthcare, have been less studied before. In order to bring some evidence for o better understanding of this relation, the first goal of the present study is to asses the nature of relation between stress generated by vicariously exposure to trauma and job satisfaction. Because previous research on the causes of job satisfaction showed that it is, in part, dispositionally based but it is also determined by situational factors (e.g. Staw & Cohen-Charash, 2005), a second aim of the present research is to assess personality traits and social support as moderators of the relation between stress and job satisfaction.

Secondary traumatic stress and job satisfaction

Job satisfaction can be defined as a global attitude that a person has towards different dimensions of her job, like job conditions, workload, co-workers and supervision (Williams, 2009). It depends on the interaction of personal characteristics of employees, interpersonal factors and work environment (Hamaideh, 2011). In this study, the focus is on a specific dimension of job satisfaction, called compassion satisfaction. It is the satisfaction of witnessing clients/ patients growth and healing, the satisfaction derived from the fact that by her work a person contributes to others well-being and health (Stamm, 2009). Compassion satisfaction was conceptualized as an important dimension of professional quality of life (Stamm, 2009).

Previous studies in context of healthcare report that many peoples working in the field of patient care are not satisfied with their job (Bergin, Johansson, & Bergin, 2004). For example, a study showed that a low level of job satisfaction is associated with the fact that a growing number of physicians practicing in hospitals (up to 40%) would not take up this profession again. Moreover, even a higher proportion of the participants reported that they did not want that their children to become physicians (Zuger, 2004). Previous studies identified many sources of medical staff' job dissatisfaction (Lu, While, & Barriball, 2005). High workload seems to be the primary cause of this dissatisfaction. However, other factors may have an important influence on people' attitude toward their job. For example, traumatic stress, that may be generated by daily workload, play a significant

role in daily practice and can result in a decrease of job satisfaction (Ko & Yom, 2003; Siu, 2002; Wards & Cowman, 2007). Nevertheless, some resilient factors were identified in previous research, like interindividual differences in terms of personality traits, as well as perceived social support (Leipold & Greve, 2009; Judge, Heller, & Mount, 2002).

The role of personality and job satisfaction

Personality traits influence how well a person cope with different adverse situations at work, being an important predictor of different work outcomes, including job satisfaction (Levy, Richardson, Lounsbury, Stewart, Gibson, & Drost, 2011). The dispositional nature of job satisfaction is supported by previous studies that showed that there is a temporal stability of job satisfaction across different jobs (Staw & Ross, 1985). Moreover, studies found significant relations among job satisfaction and specific personality traits (Connolly & Viswesvaran, 2000; Judge et al., 2002; Templer, 2012). For example, in a meta-analytic approach, Judge et al. (2002) studied the relationship between interindividual differences and job satisfaction. Using the Big Five model of personality, comprised of Neuroticism, Extraversion, Openness to Experience, Agreeability, and Conscientiousness (Goldberg, 1990), they found support for the fact that there are strong and significant correlation between extraversion, neuroticism, conscientiousness and job satisfaction. More recent research regarding the dispositional nature of job satisfaction confirms the existence of these associations (Levy et al., 2011; McManus et al., 2004). Moreover, the associations between job satisfaction and other personality traits, like optimism, work drive, assertiveness, agreeability, customer service orientation, and openness, were also identified (Levy et al., 2011).

The relations between Big Five personality traits and job satisfaction are supported by the following arguments. Extraverts, being characterized as energetic, active, assertive, and sociable, tend to experience more positive affective reactions in different situations (Goldberg, 1990). Judge et al. (2002) reported that extraversion is a significant predictor of job satisfaction. Neuroticism is defined through anxiety and insecurity (Goldberg, 1992) and it is, in general, a predictor of overall work performance (Barrick & Mount, 2005). Neurotic individuals would have less fulfilling interactions at work that emotionally stable person. In some studies (Judge et al., 2002; Piccolo, Judge, Takahashi, Watanabe, & Locke, 2005) employees with higher neuroticism reported lower job satisfaction. Openness to new experiences is defined by the interest in new situations and new experiences, as well as by the ability to manage the uncertainty of life effectively and to develop with change (Costa & McCrae, 1985). Moreover, studies showed that persons high in openness are able to deal better with traumatic situations and are more willing to think deliberately about the impact of these situations on

their lives (Tedeschi & Calhoun, 1996). Although Judge et al. (2002) found that this factor is not significantly associated with job satisfaction, other studies bring support for this relation (Levy et al., 2011). Further, individuals high in agreeability are described by warmth, trust, flexibility, courtesy, and cooperativeness (Costa & McCrae, 1992). Previous studies found that agreeability entails sensitivity to others needs (Taras, Kirkman, & Steel, 2010), as well as involvement in pleasant and satisfying relationships with others (Organ & Lingl, 1995). The last factor, conscientiousness, defined by organization, responsibility, and hardworking (Goldberg, 1992), is a general predictor of overall work performance (Barrick & Mount, 2005) but it can be assumed that a better performance increase job satisfaction (Judge et al., 2001b). Judge et al. (2002) found that conscientiousness was a significant predictor of job satisfaction.

Social support and job satisfaction

Social support is a complex construct which include the existence of aiding resources provided by others (i.e., received social support) or the perception of availability of these resources (i.e., perceived social support; Lin, 1986). Both received and perceived social support can have different forms, like emotional support (e.g., reassuring companionship), informational support (i.e., providing advice about daily care), and instrumental support (Schulz & Schwarzer, 2004) and can be drawn from a variety of sources (e.g., family, friends, colleagues, community). Previous studies showed that social support is a resilience factor (Bonanno, Galea, Bucciarelli, & Vlahov, 2007), being associated with many benefits to the overall health and well-being, like a greater ability to cope with stress and trauma (Brewin, Andrews, & Valentine, 2000; Jonsson & Segesten, 2004), lower posttraumatic stress (Griffith, 2012) and higher positive changes after a trauma such as posttraumatic growth (Cieslak, Benight, Schmidt, Luszczynska, Curtin, Clark, & Kissinger, 2009; Prati & Piertrantoni, 2009).

In context of professional quality of life, studies linked social support with reduced level of burnout (Fradelos, Mpelegrinos, Mparo, Vassilopoulou, Argyrou, Tsironi, Zyga & Theofilou, 2014; Sherring & Knight, 2009; Sundin, Hochwalder, Bildt, & Lisspers, 2007) and low level of stress (Sundin et al., 2007). Previous research in the field of healthcare also showed the importance medical staff placed on social support, for coping with the strong emotions experienced after exposure to a traumatic event at workplace (Adriaenssens, De Gucht, Van Der Doef, & Maes, 2011; Adriaenssens, de Gucht, & Maes, 2012; Duffy et al., 2014; Laposa, Alden, & Fullerton, 2003; Lavoie et al., 2011; Van der Ploeg & Kleber, 2003). The relationship between social support and job satisfaction has also been discussed. Social support has proved to be one of the most important factor in promoting job satisfaction (Cortese, Colombo, & Ghislieri, 2010;

Hamaideh, Mrayyan, Mudallal, Faouri, & Khasawneh, 2008; Hamaideh, 2011; Kawada & Otsuka, 2011; Sundin et al., 2007). It affects health by regulating thoughts, feelings, and behaviors in order to reduce stress, to promote sense of meaning in life and to facilitate adaptive behaviors (Hayes, Bach, & Boyd, 2010; Sundin et al., 2007). However, contradictory findings have also been reported. For example, Ko and Yom (2003) found, in a sample of 602 nurses, that social support have no moderating effect for the negative effects of job stress on job satisfaction.

The present study

By now, little empirical work has been published using the concept of compassion satisfaction in the health care field. Although there are almost three decades of secondary traumatic stress study, research into the relationship between secondary traumatic stress and compassion satisfaction in hospitals is still at an early stage. Moreover, the moderating effect of personality and social support on the stress–satisfaction relationship among medical staff has rarely been studied. To our knowledge, there is no existing study to date that has explicitly examined the relationship between secondary traumatic stress, personality dimensions, social support, and compassion satisfaction at medical staff. Therefore, thus far, research has provided few answers as to how traumatic stress relates to satisfaction in those who work with trauma survivors. Apart from the fact that little studies have been conducted regarding the relations between these variables, there is a limited number of studies in Romanian healthcare context (Bria, Ratiu, Băban, & Dumitrascu, 2011). The Romanian healthcare sector is of particular importance due to overwhelming workload, under-financing, poor management of the health workforce, and the immigration process of healthcare professionals (Bria, Băban, Andreica, & Dumitrascu, 2013). As a result of the importance of the topic, more research on the moderating effects of personality and social support on the stress–satisfaction relationship are needed. In order to fill this gap, the goals of this study were (a) to identify the relationship between secondary traumatic stress and compassion satisfaction, in a sample of Romania hospital nurses and physicians (b) to identify if personality traits moderate the relation between traumatic stress and compassion satisfaction, and (c) to identify if social support moderate the relation between traumatic stress and compassion satisfaction.

Method

Participants

A convenience sample that consisted of medical staff from several hospitals in Romania participated at this study. The participants who provided incomplete data were excluded from the analysis. The sample

consisted of 190 participants (26.9% physicians and 72.1% nurses) from the Intensive Care, Emergency, Neurology, Surgery, Urology, Cardiology, and Oncology units. The ages ranged from 20 to 65 years old (M=33.27; S=10.71). From the total sample, 87.4% were female and 12.6% were male. The experience in the healthcare field ranges from 1 to 40 years (M = 8.18 years, SD = 7.81) and they work with patients between 15 and 50 hours per week (M=33.99, SD=8.49). The participants volunteered to take part in the research of their own accord.

Measures

The *Secondary Traumatic Stress Scale* (STSS; Bride et al., 2004) is a scale designed to measure three dimensions of secondary traumatic stress: intrusion, avoidance and arousal. On a five-point Likert scale, the respondents indicate their agreement with 17 items that reflect specific responses related to their work with victims of trauma life events. For the purpose of this research, the total score were used and the Cronbach alpha was .90. A higher total score indicates a higher secondary traumatic stress.

Professional Quality of Life Scale (ProQOL; Stamm, 2009) is a 30-item scale designed to measure professional quality of life on two dimensions: compassion satisfaction and compassion fatigue. For the purpose of this research only compassion satisfaction scale (10 items) was used and the Cronbach alpha was 0.86.

Five Factor Model Rating Form (FFMRF; Mullins-Sweatt, Jamerson, Samuel, Olson, & Widiger, 2006) is a brief instrument for collecting ratings of the Five Factor Model domains. It consists on 30 items that are anchored at both the low and high ends by a set of 2-3 adjectives. The 30 items measure five major areas of personality: Neuroticism, Extraversion, Openness, Agreeability and Conscientiousness. Cronbach alphas for the current sample raged between 0.70 and 0.76, for the five scales.

The Medical Outcomes Study Social Support Survey (MOS; Sherbourne & Stewart, 1991) was selected to assess perceived social support. We used two dimensions of this instrument: emotional/ informational support (8 items) and positive social interaction (the availability of other persons to talk and do fun things with you; 3 items). Chronbach's Alphas for this current sample were 0.92 for emotional informational support subscale and 0.91 for positive social interaction subscale.

Demographic variables were collected via a questionnaire that covered age, gender, occupation, unit, work experience, and number of hours of work with patients per week.

Procedure

Informed consent was obtained from all the participants. The participants were informed that their participation was voluntary, and that the information would be kept confidential. To ensure the confidentiality, the participants completed all measures anonymously. Because the workload in the hospitals is very high, each respondent was asked to fill in their questionnaire individually in his leisure time. One week was offered for completing the instruments. No incentives were offered to the participants in this study.

Results

Preliminary analysis

Means, standard deviations and correlation coefficients for all scales are reported in Table 1. Neuroticism was negatively associated with compassion satisfaction (r = -.26; $p < 0.001$), while extraversion (r = .28; $p < 0.001$), agreeability (r = .30; $p < 0.001$), openness (r = .23; $p < 0.001$), and consciousness (r = .39; $p < 0.001$) were positively associated with compassion satisfaction. Moreover, the results showed that compassion satisfaction positively correlated with emotional/ informational support (r = .33; $p < 0.001$) and with positive social interactions (r = .25; $p < 0.001$). There were no significant associations between professional experience or hours of work with patients per week and all the studied variables. There were no problems with multicolinearity, giving the fact that none of the correlation coefficients for the relations among the variables exceeded 0.80, (Tabachnik & Fidell, 2007).

Correlation between secondary traumatic stress and compassion satisfaction

In this study, secondary traumatic stress was negatively related to compassion satisfaction (r=-.32; p<0.001).

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1. STS	.90										
2. CS	-.32**	.86									
3.N	.56**	-.26**	.73								
4. E	-.30**	.28**	-.23**	.76							
5. A	-.32**	.30**	-.35**	.24**	.72						
6. O	-.22**	.23**	-.18*	.25**	.25**	.70					
7. C	-.49**	.39**	-.53**	.44**	.39**	.38**	.78				
8. SSe/i	-.10	.33**	-.09	.26**	.23**	.26**	.22**	.92			
9. SSint	-.17*	.25**	-.15*	.26**	.17*	.15*	.22**	.53**	.91		
10.Exp	-.13	-.02	-.02	.01	-.01	.01	.01	.02	.08	-	
11.HW	-.10	.08	-.02	-.06	.10	.06	.09	-.06	-.01	.17*	-
M	36.23	39.15	22.24	23.63	34.24	25.23	48.14	32.06	12.41	7.72	34.02
SD	11.70	6.23	5.65	3.51	4.50	3.83	6.27	6.39	2.71	8.17	8.06

Table 1. Means, standard deviations, and bivariate correlations for all study variables. Cronbach's alphas are reported in the diagonals for each respective scale. *Note*: STS – secondary traumatic stress, CS – compassion satisfaction, N – neuroticism, E – extraversion, O – openness, A – agreeability, C – consciousness; SSe/i – emotional/ informational social support; SSint – positive social interactions; Exp – professional experience; HW - hours per week; N=190; *p<.05; **p<.01; ***p<.001

Testing for moderation

We conducted hierarchical regression models for compassion satisfaction, with secondary traumatic stress, neuroticism, extraversion, openness, agreeability, consciousness, emotional support and positive social interactions main effects in step one; interaction between secondary traumatic stress and personality factors, on the one hand, and between secondary traumatic stress and social support, on the other hand, were entered in step two. The main and interaction effects were centered to minimize multicollinearity. The results are depicted in Table 2.

	Compassion satisfaction			
	β	t	ΔR^2	ΔF
Step 1			0.22***	7.60***
STS	-.26**	-2.87		
Neuroticism	.07	.77		
Extraversion	.06	.76		
Openness	.06	.80		
Agreeability	.17*	2.23		
Consciousness	.13	1.51		
SS_em/info	.14	1.69		
SSpos.int	.07	0.93		
Step 2			0.26***	5.46***
STSxNeuroticism	-.07	-.70		
STSxExtraversion	-.06	-.69		
STSxOpenness	-.14*	-2.01		
STSxAgreeability	-.19*	-2.10		
STSxConsciousness	-.01	.01		
STSx SS_em/info	.17*	2.20		
STSx SSpos.int	-.10	-1.17		

Table 2. Hierarchical regression models of secondary traumatic stress, personality factors, and social support on compassion satisfaction; *Note*: STS – secondary traumatic stress; SS_em/info – emotional support; SSpos.int – positive social interactions; N=190; *p<.05; **p<.01; ***p<.001

Secondary traumatic stress and agreeability were significant predictors of compassion satisfaction. The STS x openness, STS x agreeability, and STS x emotional/ informational support were significant in predicting

compassion satisfaction. The nature of these interactions is illustrated in Figures 1, 2 and 3. We explored the moderating effect of the personality factors and social support by calculating mean satisfaction values for low, medium and high levels of personality factors, social support and secondary traumatic stress. Medium values are based on the mean and low and high levels of the variable are one standard deviation below and above the mean, respectively (Aiken & West, 1991).

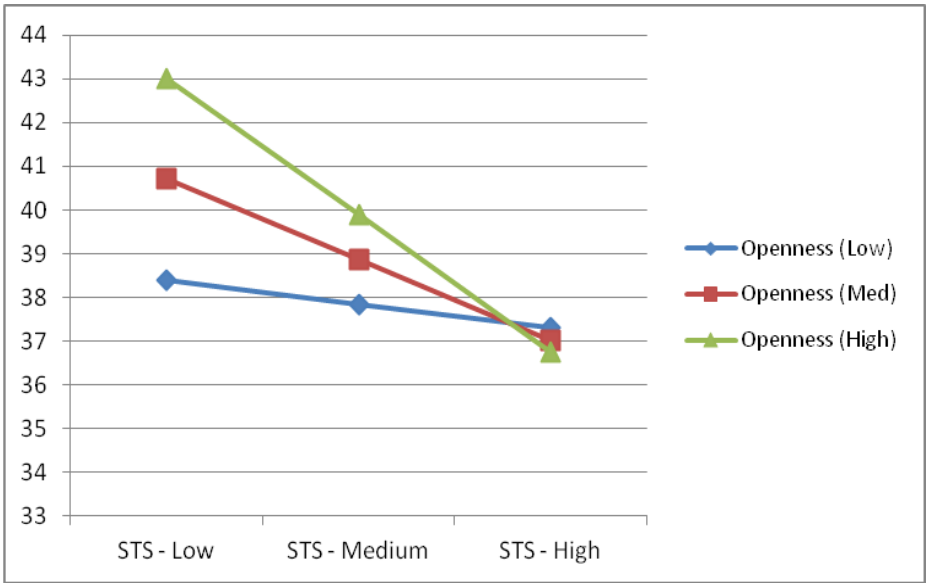

Figure 1. Presence of compassion satisfaction as a function of secondary traumatic stress and Openness. Notes: STS – secondary traumatic stress. Simple effects were represented with secondary traumatic stress symptoms and openness defined as at least +1 and -1 standard deviations from the mean, respectively.

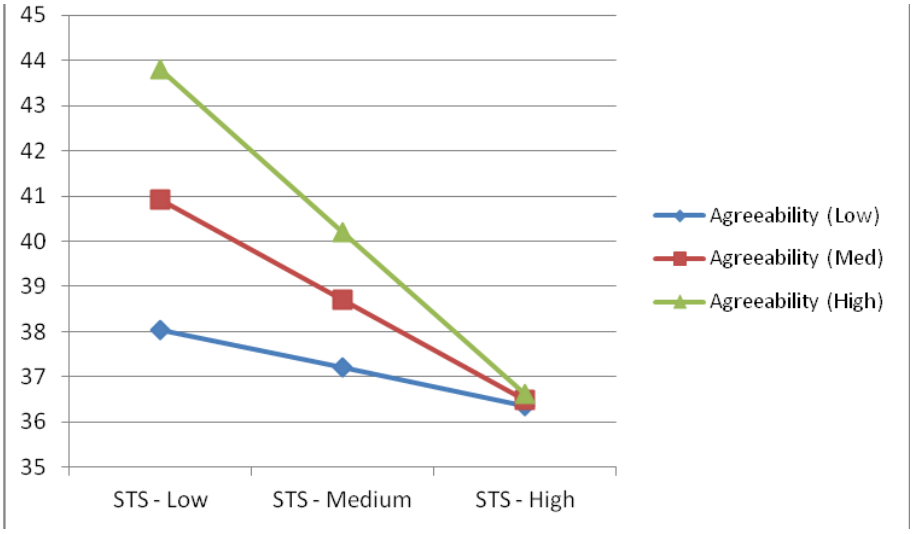

Figure 2. Presence of compassion satisfaction as a function of secondary traumatic stress and Agreeability. Notes: STS – secondary traumatic stress. Simple effects were represented with secondary traumatic stress symptoms and agreeability defined as at least +1 and -1 standard deviations from the mean, respectively.

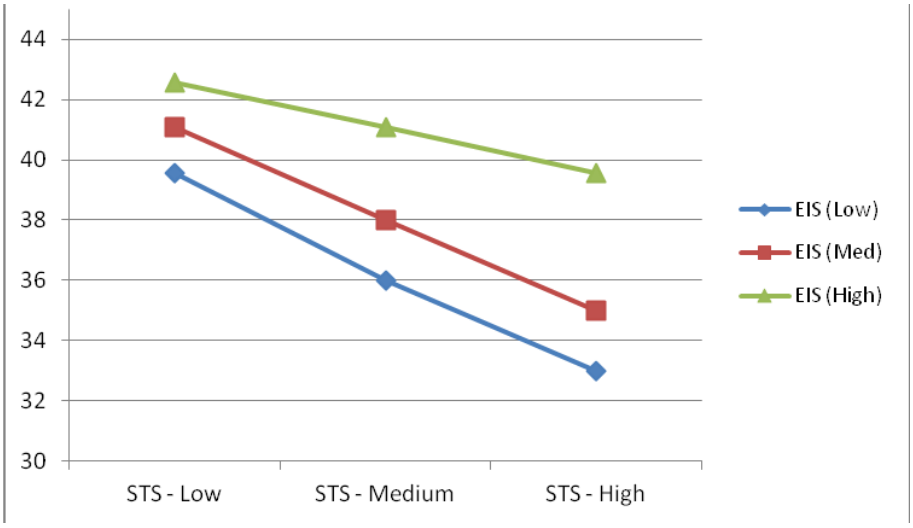

Figure 3. Presence of compassion satisfaction as a function of secondary traumatic stress and Emotional/ informational support. Notes: STS – secondary traumatic stress; EIS – emotional/ informational support. Simple effects were represented with secondary traumatic stress symptoms and emotional/ informational support defined as at least +1 and -1 standard deviations from the mean, respectively.

Discussion

The first goal of this study was to examine the associations between secondary traumatic stress and compassion satisfaction among nurses and physicians. Results revealed that high levels of secondary traumatic stress are associated with a low level of compassion satisfaction. Results of this study are congruent with the results of most previous studies, that also showed negative associations between job stress and job satisfaction (Ko & Yom, 2003; Siu, 2002; Wards & Cowman, 2007). Moreover, these results expand previous results by that fact that they confirm the relation between traumatic stress and a specific, recent defined, dimension of job satisfaction, namely compassion satisfaction.

The second goal of this study was to investigate whether the relationship among secondary traumatic stress and job satisfaction is moderated by personality traits. The results confirmed previous findings showing that personality can partly explain job satisfaction (Templer, 2012). In this study, the relationship among secondary traumatic stress and job satisfaction is moderated by two personality traits, openness and agreeability. Specifically, our result showed that peoples with a low level of secondary traumatic stress are more satisfied for their work, compared with people with a high level of secondary traumatic stress, only when they also present a high or medium level of openness and agreeability. It is recognized that individual with a high level of openness also present a high ability to manage different life situations, both positive and negative, and to find meaning in what they are doing, despite the adversity (Costa & McCrae, 1985). This study confirms the fact that a high level of openness promotes finding meaning and satisfaction for being able to do the job well and to save lives. Further, the positive role that agreeability plays in promoting job satisfaction can be explained by the particular traits that describe a person high in this factor, such as warmth, tolerance, helpful, cooperativeness, and sensitivity to others needs (Costa & McCrae, 1992; Taras et al., 2010). Contrary to our expectations, the present study failed to confirm that neuroticism, extraversion, and conscientiousness are promoting factors of compassion satisfaction. Although there were significant associations between these factors and compassion satisfaction, they did not proved to be significant predictors. These results may be explained by the specific dimensions of job satisfaction that we measured and that is focused on empathy, altruism, and compassion. These traits are represented by agreeability, therefore is not surprising that this factor proved to be the stronger predictor of job satisfaction, in our study. It is possible that other personality factors to be associated with other specific dimensions of job satisfaction, like satisfaction with colleagues and superiors relationships, workload, or other specific work conditions.

The third goal of this study was to investigate whether the relationship among secondary traumatic stress and job satisfaction is moderated by two dimensions of social support: emotional/ informational support and positive social interactions. Our results showed that when the level of emotional/ informational support is low or medium, persons with a high level of secondary traumatic stress present a lower level of compassion satisfaction compared with persons with a low level of secondary traumatic stress. When the level of emotional/ informational support is high, it seems that about the same level of compassion satisfaction is reported, regardless of the level of secondary traumatic stress. It seems that having access to emotional and informational social support in stressful situations facilitates adaptive outcomes (Hamaideh, 2011; Hayes et al., 2010; Sundin et al., 2007). Quite unexpectedly, having positive social interaction did not proved to be a significant predictor of compassion satisfaction, in our study. It seems that just having positive relationships with others is not enough to gain satisfaction for one job. Rather, perceived emotional and informational support play a more adaptive role.

Limitations and future research directions

Some limitations of the present study should be noted. First, external validity of the results is potentially limited as the sample was a convenience one. Secondly, because the study used self-administrative instruments, the results might be contaminated by common method variance or self-report bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Participants may have underestimated or overestimated their level of secondary traumatic stress or job satisfaction. Despite these limitations, this study provides valuable information about the relation between secondary trauma and job satisfaction study among Romanian medical staff. This research advances the literature in at least three important ways. First, this study extends prior research of resilience promoting factors in the healthcare field by examining the relationship between secondary traumatic stress, personality traits, social support and compassion satisfaction among medical staff. Second, there is a dearth of studies that have used direct measures of compassion satisfaction for studying the secondary traumatic stress – job satisfaction relationship. Thirdly, unlike most studies on this topic conducted in Western contexts, this study was conducted in a less studied context – Romanian health care field.

To summarize our results, participants with a high level of secondary traumatic stress reported significantly lower scores on job satisfaction. Moreover, this relation is moderated by agreeability, openness and emotional/ informational support. As it is well known that treating other people leads to a higher risk of secondary traumatic stress (Bride et al., 2004; Shoji et al., 2014), it is important to know what personal and situational factors may be involved in promoting positive outcomes (e.g. compassion

satisfaction) despite the specific of services that they provide. These findings may contribute to the theoretical understanding of compassion satisfaction in clinicians, with implications for training and supervision. Healthcare workers should be offered education about the role of social support in order to increase their ability to manage stressful situations. Moreover, specific training for reducing stress should be adapted based on specific individual differences. For example, the importance of openness and of other specific traits that define agreeability should be highlighted in training as beneficial for professional quality of life.

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