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Emotion Regulation Strategies, Secondary Traumatic Stress, and Compassion Satisfaction in Healthcare Providers

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ABSTRACT

The aim of the present study is to examine the relationships between two emotion regulation strategies (cognitive reappraisal and expressive suppression), secondary traumatic stress, and compassion satisfaction in a sample of 190 healthcare providers. Another aim of this study is to examine if the relations between emotion regulation strategies and traumatic stress symptoms are moderated by compassion satisfaction. The respondents volunteered to take part in the research and completed self-reporting measures describing the use of emotional regulation strategies, the symptoms of secondary traumatic stress, and the compassion satisfaction. The results revealed negative associations between cognitive reappraisal and secondary traumatic stress, while expressive suppression is positively associated with arousal. Moreover, cognitive reappraisal is positively related to compassion satisfaction, while secondary traumatic stress symptoms are negatively correlated with compassion satisfaction. Furthermore, the relationship between expressive suppression and intrusions is moderated by compassion satisfaction. The implications of these results for enhancing professional quality of life in the context of secondary exposure to traumatic life events are discussed.

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compassion satisfaction;
expressive reappraisal;
moderation; traumatic stress

Introduction

In the context of healthcare, stressful life events do not occur in isolation from each other. It is well-documented that continuous exposure to traumatic life events predicts maladjustment, emotional exhaustion, feelings of distress, dissatisfaction, and secondary traumatic stress (Jeon & Ha, 2012; Măirean, 2016; Van der Wath, van Wyk, & Janse van Rensburg, 2013). These manifestations have been documented in different samples, including nurses and physicians from various fields (Duffy, Avalos, & Dowling, 2015; Măirean, 2016; Măirean & Turliuc, 2013; Young, Derr, Cicchillo, & Bressler, 2011). Concerning the secondary traumatic stress, the percentage of nurses affected vary from 21.42% (Măirean, 2016) to 82% of the sample (Duffy et al., 2015). Among physicians, previous studies report that considerable percentage of the samples (e.g., 35.2%) are at extremely high risk for secondary traumatization (El-bar, Levy, Wald, & Biderman, 2013).

Since continuous exposure to human pain and trauma, overload and emergency situations lead to a variety of negative emotions, people often try to control the way they feel or

express different emotional states (Tschan, Rochat, & Zapf, 2005). Emotion regulation is defined as a process through which a person modulates his/her emotions elicited by daily events, consciously and unconsciously, in order to reduce their intensity and to respond appropriately to different environmental demands (Campbell-Sills & Barlow, 2007; Gratz & Roemer, 2004; Rottenberg & Gross, 2003). There are different emotional regulation strategies, considered either adaptive or maladaptive, especially based on their relationships to psychopathology (see reviews in Aldao, Nolen-Hoeksema, & Schweizer, 2010; Nolen-Hoeksema & Watkins, 2011). However, despite important progress in this field, a minimal amount of research was conducted to identify the relationship between emotion regulation strategies and specific outcomes in the context of secondary exposure to trauma. This study seeks to advance a better understanding of the relationship among emotion regulation, secondary traumatic stress, and compassion satisfaction, defined as the pleasure derived from being able to do the work well, in a sample of healthcare providers. Moreover, the interaction between emotion regulation and compassion satisfaction in predicting secondary traumatic stress is addressed. Two emotion regulation strategies, cognitive reappraisal and expressive suppression, were examined.

Reappraisal, Suppression, and Secondary Traumatic Stress

Gross (1998) identified two types of emotion regulation strategies: antecedent-focused strategies (regulatory efforts to control the emotional response tendencies, before they have become fully activated) and response-focused strategies (regulatory efforts to control the emotional responses, after they have been generated). Cognitive Reappraisal (CR) is an antecedent-focused emotion regulation strategy that involves thinking differently about a situation in order to change its meaning and emotional impact (Gross, 1998). Expressive suppression (ES) is a response-focused emotion regulation strategy that involves efforts attempting to actively inhibit the observable ongoing expression of emotional experience (Gross & Thompson, 2007) as a way of reducing distress (Gross, 1998). There is empirical evidence supporting the assumption that there are relatively stable tendencies that determine an individual to systematically use a particular emotion regulation strategy in different emotion eliciting situations (e.g., John & Gross, 2004; Liu, Prati, Perrewé, & Brymer, 2010).

Cognitive reappraisal and expressive suppression are considered as coping mechanisms and have been studied in association with different psychological outcomes. Previous studies showed that reappraisal appears to be effective across a variety of contexts, being associated with low levels of psychopathology (Aldao et al., 2010), with reduced negative affectivity (e.g., Goldin, McRae, Ramel, & Gross, 2008), increased pain tolerance (Hayes et al., 1999), greater self-esteem (Gross & John, 2003), increased levels of psychological well-being (Matta, Erol-Korkmaz, Johnson, & Bıçaksız, 2014), and even diminished cardiac reactivity (e.g., Campbell-Sills, Barlow, Brown, & Hofmann, 2006). On the other hand, the use of suppression has been linked to reduced positive affect and life satisfaction, low quality of life (Ciuluvica, Amerio, & Fulcheri, 2014), higher depression (e.g., Langner, Epel, Matthews, Moskowitz, & Adler, 2012), anxiety (Lemaire, El-Hage & Frangou, 2014), eating disorders (e.g., Evers, Stok, & De Ridder, 2010), and borderline personality disorder (e.g., Dixon-Gordon, Chapman, Lovasz, & Walters, 2011).

Several studies suggest a relationship between emotion regulation and posttraumatic stress symptoms (Bardeen, Kumpula, & Orcutt, 2013; Bonn-Miller, Vujanovic, Boden, &

Gross, 2011; Vujanovic, Bonn-Miller, Potter, Marshall, & Zvolensky, 2011). Specifically, cognitive reappraisal is generally associated with a low level of traumatic stress, whereas expressive suppression is associated with a high level of traumatic stress symptoms (e.g. Boden et al., 2013; Ehring & Quack, 2010; Moore, Zoellner, & Mollenholt, 2008). Although the previous studies mainly analyzed the relationship between emotion regulation and posttraumatic stress symptoms in persons directly exposed to traumatic life events, similar relationships may be identified between emotion regulation and secondary traumatic stress symptoms, as these symptoms are the same as those of PTSD experienced in persons directly exposed to the traumatic event (Beck & Gable, 2012). Moreover, a recent study confirmed the negative association between thoughts suppression and intrusions, symptoms of secondary traumatic stress, in a sample of medical workers (Turliuc, Măirean, & Turliuc, 2015). Another study documented the relationship between emotional regulation difficulties and stress, for persons indirectly exposed to traumas (psychologists). In this study, stress is operationalized as symptoms of arousal, a specific component of secondary traumatic stress (Finlay-Jones, Rees, & Kane, 2015). However, additional empirical evidence is needed to clearly confirm these patterns of results, in the context of secondary trauma exposure. Therefore, the first aim of the present research is to assess the relationship between cognitive reappraisal, expressive suppression, and the symptoms of secondary traumatic stress, after secondary exposure to trauma.

Role of Compassion Satisfaction

Compassion satisfaction is a component of the healthcare providers' professional quality of life and describes the orientation that a person has towards his/her jobs, in the field of working with persons that are in a critical situation and need the others' help to survive (Duarte, Pinto-Gouveia, & Cruz, 2016; Sansó et al., 2015). Moreover, compassion satisfaction has been defined as the pleasure derived from being able to do the work well, the pleasure that an employee has by helping others through his/her work, by contributing to others' well-being or even to the greater good of society (Larsen & Stamm, 2008; Stamm, 2010). Therefore, compassion satisfaction includes the ability to receive joy, gratification, and sense of purpose derived from providing care (Mangoulia, Koukia, Alevizopoulos, Fildissis, & Katostaras, 2015).

In the context of emotions generated by the work environment, some studies attempted to link emotion regulation with different work outcomes. Some previous studies with mixed samples comprised from persons that work in service industry and frequently require interaction with bosses, co-workers, and customers, showed that the persons who use reappraisal frequently experience greater satisfaction from their job, because they are better at dealing with stressful work situations and are able to maintain a positive affective state in spite of aversive situations. In contrast, the persons who use suppression report a more negative affect, lower job satisfaction, and a higher intention to quit compared to individuals who rarely use this emotion regulation strategy (Cote & Morgan, 2002). These results can be explained by the fact that emotion suppression leads to an emotional dissonance described as a lack of authenticity and a discrepancy between public displays of emotions and internal experiences of emotions (Heuven, Bakker, Schaufeli, & Huisman, 2006; Morris & Feldman, 1997). This psychological state may give rise to negative emotional experiences and emotional exhaustion, which further lead to low satisfaction (Morris & Feldman, 1997). Suppressed, but not eliminated, displays of unpleasant emotions are unlikely to improve social

interaction and emotional states (Cote & Morgan, 2002). On the other hand, in a sample of employees in a hospice, a study showed that suppression was not significantly linked to one's emotional state at work (Liu et al., 2010). Although few studies have analyzed the association between emotion regulation and satisfaction with the workplace demands, we can assume that there is a link between these variables based on the previous studies that largely supported the fact that reappraisal has generally more favorable implications for psychological wellbeing and life satisfaction than suppression (John & Gross, 2004). However, future studies are needed in order to understand the relationship between emotional regulation strategies and satisfaction delivered from a secondary exposure to human pain and suffering. Therefore, the second goal of the present study is to assess the relationship between cognitive reappraisal, expressive suppression, and compassion satisfaction, in persons indirectly exposed to traumatic life events.

Among the positive outcomes associated with compassion satisfaction is the fact that it can balance the negative effects of caring, buffering the effects of stressful emotional states (Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010; Poulin, Brown, Dillard, & Smith, 2013). Previous studies showed that healthcare providers with higher levels of compassion satisfaction have healthy coping mechanisms and resources to process and prevent the development of secondary traumatic events (Makic, 2015). Consequently, these persons report lower levels of secondary trauma (Berger, Polivka, Ann Smoot, & Owens, 2015; Hinderer et al., 2014; Sodeke-Gregson, Holttum, & Billings, 2013). Studying the relationship between compassion satisfaction and secondary traumatic stress represents the third aim of the present study. Moreover, given the fact that compassion satisfaction can prevent the development of secondary traumatic stress, we can assume that the relationship between emotion regulation and secondary traumatic stress is moderated by compassion satisfaction. According to Dutton and Rubinstein's (1995) theoretical model, both strategies for coping with stressful situations and compassion satisfaction are predictive of the development of secondary traumatic stress among healthcare providers. However, it was not examined how emotion regulation strategies, as coping strategies, and compassion satisfaction work together in accounting for variations in secondary trauma; therefore, the fourth aim of the present study is to assess the interaction between emotional regulation strategies and compassion satisfaction in predicting secondary traumatic stress.

Based on previous studies and extending previous results in the field, we propose the following hypotheses: (a) cognitive reappraisal will be negatively associated with secondary traumatic stress, whereas expressive suppression will be positively associated with secondary traumatic stress; (b) cognitive reappraisal will be positively associated with compassion satisfaction, whereas expressive suppression will be negatively associated with compassion satisfaction; (c) compassion satisfaction will be negatively associated with traumatic stress symptoms; and (d) the relationship between emotion regulation and traumatic stress symptoms will be moderated by compassion satisfaction.

Method

Participants

A number of 207 questionnaires were distributed to nurses and physicians from several hospitals in Romania. Participants who provided incomplete data were not included in the analysis. In total, 190 employees (87.4% female) participated in this study (72.1% nurses). The

Table 1. Demographic and professional characteristics of participants.

	<i>N</i>	%	<i>M</i>	<i>SD</i>
Age			33.27	10.71
Experience (years)			9.81	8.18
Hours per week			33.99	8.49
Gender				
Female	166	87.4%		
Male	24	12.6%		
Profession				
Physicians	53	27.9%		
Nurses	137	72.1%		

Note. *N* = 190.

ages of the participants varied between 20 and 65 years ($M = 33.27$, $SD = 10.71$). The experience in the healthcare field ranges from 1 to 40 years ($M = 9.81$ years, $SD = 8.18$), and the participants work with patients between 15 and 50 hours per week ($M = 33.99$, $SD = 8.49$) (see Table 1). The participants were selected from different hospital sections, including intensive care, cardiology, oncology, neurology, surgery, and urology.

Measures

The instruments were translated into Romanian using the forward-backward translation design, taking into account the guidelines recommended for adapting scales (Hambleton, 2005). No major discrepancies between the originals and the back-translated versions were identified. In order to verify the factorial validity of the scale, we used confirmatory factor analysis (CFA). For the model fit we applied the maximum-likelihood estimation and reported the following fit indexes: Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker-Lewis Index (TLI) (Hu & Bentler, 1999). The results are presented below, for each scale.

The *Emotion Regulation Questionnaire* (ERQ; Gross & John, 2003) is a 10-item self-reporting scale designed to measure an individual's tendency to use cognitive reappraisal (six items: e.g. *When I want to feel less negative emotions (such as sadness or anger), I change what I'm thinking about.*) and expressive suppression (four items: e.g. *I control my emotions by not expressing them.*) to regulate emotions. Each item consists of a seven-point Likert scale (1—strongly disagree; 7—strongly agree). In the present study, the Cronbach Alphas for both cognitive reappraisal (.71) and expressive suppression subscales (.72) were acceptable. Confirmatory factor analysis (CFA) revealed the fact that one item (*I keep my emotions to myself.*) measuring expressive suppression has a squared multiple correlation lower than the recommended threshold of .20 (.177). After removing it, the model fit results were: $\chi^2(23) = 24.94$, $p = .353$; RMSEA = .02, 90% CI: [.01, .07]; CFI = .99; GFI = .97; TLI = .98). Taking into account the recommended thresholds for these values, we consider this model to fit the data to a satisfactory degree. Previous studies showed that ERQ has good reliability in samples comprised of trauma-exposed participants (Moore et al., 2008) or employees secondary exposed to trauma (e.g. Liu et al., 2010).

The *Professional Quality of Life Scale* (ProQOL; Stamm, 2010) is a 30-item scale designed to measure one's professional quality of life on two dimensions: compassion satisfaction and compassion fatigue. For the purpose of this research only the compassion satisfaction scale (10 items: e.g. *I am pleased with how I am able to keep up with [helping] techniques and*

protocols.) was used. The Cronbach Alpha for this current sample is 0.86. The model fit results were satisfactory: $\chi^2(18) = 34.33, p = .011$; RMSEA = .06, 90% CI: [.03, .10]; CFI = .97; GFI = .95; TLI = .92). The instrument has been tested extensively and found to be reliable and valid as a measure of the three separate concepts, in samples comprised of nurses (Berger et al., 2015; Hooper et al., 2010; Young et al., 2011) and therapists who work with adult trauma clients (Sodeke-Gregson et al., 2013).

The *Secondary Traumatic Stress Scale* (STSS; Bride, Robinson, Yegidis, & Figley, 2004) is a 17-item scale designed to measure secondary trauma on three dimensions: intrusion (e.g., *Reminders of my work with clients upset me*), avoidance (e.g., *I had little interest in being around others*), and arousal (e.g., *I had trouble sleeping*). On a 5-point Likert scale, the respondents indicated their agreement with items that reflect specific responses related to their work with victims of traumatic life events. A higher total score indicates a higher level of secondary traumatic stress. The Cronbach Alphas for this current sample were 0.70 (intrusion), 0.79 (avoidance), respectively 0.77 (arousal). The model fits the data well: $\chi^2(96) = 149.17, p = .002$; RMSEA = .05, 90% CI: [.03, .07]; CFI = .96; GFI = .91; TLI = .94). Many published studies using the STSS demonstrated evidence for the scale's internal consistency, as well as convergent and discriminant validity in different samples of persons indirectly exposed to trauma, like hospital social workers (Badger, Royse, & Craig, 2008), interviewers of abused children (Perron & Hiltz, 2006), nurses, and physicians (Dominguez-Gomez & Rutledge, 2009; Duffy et al., 2015; Turliuc et al., 2015).

Demographic variables were collected via a questionnaire that covered age, gender, hospital unit, hours of work per week as well as work experience in the field.

Procedure

The participants volunteered to take part in the research of their own accord. Informed consent was obtained from all the participants. The participants were informed that their participation was voluntary, that the information would be kept confidential and would not become part of their evaluation. They were not remunerated for the participation. Since the workload in the workplace is high, the participants had one week to complete the survey and to leave it in a box placed within each unit. The participants completed all measures anonymously to protect their confidentiality, in the following order: demographics, ERQ, PROQ, and STSS. The importance of giving truthful answers was emphasized.

Overview of the Statistical Analyses

A preliminary analysis was conducted in order to investigate whether the profession (physicians vs. nurses), the professional experience, and the hours of work per week were related to reappraisal, suppression, compassion satisfaction, and secondary traumatic stress. Next, the correlation among the main study variables is presented. Then, it was tested whether the relationship between cognitive reappraisal, expressive suppression and secondary traumatic stress symptoms is moderated by compassion satisfaction. Hierarchical regression models for secondary traumatic stress symptoms were conducted, with professional experience as a covariate in step one, cognitive reappraisal, expressive suppression, and compassion satisfaction in step two; interactions between emotional regulation strategies and compassion satisfaction were entered in the final step. The variables were centered to minimize multicollinearity.

Results

Preliminary Analyses

The independent samples *t*-tests indicated no significant differences between physicians and nurses on reappraisal, suppression, compassion satisfaction, and secondary traumatic stress symptoms (all $p > .05$). Moreover, the results showed that there were no significant correlations between professional experience and hours of work per week, on the one hand, and reappraisal, suppression, and compassion satisfaction, on the other hand (all $p > .05$). The number of years of professional experience is negatively related to intrusions ($r = -.20, p < .001$).

Association Among the Main Study Variables

Descriptive statistics and intercorrelations for all variables included in the study are presented in Table 2. The results revealed negative correlations between cognitive reappraisal and intrusions ($r = -.19; p < .001$), avoidance ($r = -.34; p < .001$), and arousal ($r = -.39; p < .001$). Expressive suppression is positively associated with arousal ($r = .16; p = .049$). Moreover, cognitive reappraisal is positively associated with compassion satisfaction ($r = .27; p < .001$), while expressive suppression is only marginally negatively associated with compassion satisfaction ($r = -.13; p = .073$). Compassion satisfaction was negatively correlated with intrusions ($r = -.17, p = .017$), avoidance ($r = -.36, p < .001$) and arousal ($r = -.33, p < .001$). Based on Cohen's (2013) criteria for magnitude of effect sizes, all the above relationships are small to medium. None of the correlation coefficients for the relationships between the variables exceeded .80, suggesting no problems with multicollinearity (Tabachnik & Fidell, 2007).

Testing for Moderation

Hierarchical regression analysis was used to assess if compassion satisfaction interact with emotion regulation strategies in predicting secondary traumatic stress symptoms.

Cognitive reappraisal is a negative predictor of intrusions ($\beta = -0.19, t = -2.36, p = .019$), avoidance ($\beta = -0.31, t = -4.15, p < .001$) and arousal ($\beta = -0.38, t = -5.06, p < .001$). Moreover, compassion satisfaction is a negative predictor of all three symptoms of secondary traumatic stress: intrusions ($\beta = -0.13, t = -1.59, p = .011$), avoidance ($\beta = -0.28,$

Table 2. Pearson correlations, means, and SDs of analysed variables.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Reappraisal	27.16	4.01	.71							
2. Suppression	14.03	4.05	.14	.72						
3. Intrusions	11.08	3.68	-.19**	.13 [†]	.70					
4. Avoidance	14.74	5.01	-.34**	.12 [†]	.68**	.79				
5. Arousal	10.40	4.07	-.39**	.16*	.69**	.79**	.77			
6. Compassion satisfaction	39.15	6.18	.27**	-.13 [†]	-.17*	-.36**	-.33**	.86		
7. Prof. experience	7.81	8.18	-.01	-.04	-.20**	-.06	-.12	-.03		
8. Hours per week	33.99	8.49	.01	-.03	-.02	-.13	-.12	.07	.19**	

Note. Cronbach's alphas are reported in the diagonals for each respective scale.

** $p < .001$. * $p < .05$. $N = 190$; [†] = the relations are marginally significant.

Table 3. Hierarchical regression models of emotional regulation strategies and compassion satisfaction on secondary traumatic stress symptoms (intrusions, avoidance, and arousal).

	β	t	ΔR^2	ΔF
Intrusions				
Step 1			0.05***	9.61**
Professional experience	−0.25**	−3.10		
Step 2			0.12***	4.23**
Reappraisal	−0.19*	−2.36		
Suppression	0.12	1.45		
CS	−0.13*	−1.59		
Step 3			0.13***	1.40*
CRxCS	−0.49	−0.83		
ESxCS	0.72*	1.43		
Avoidance				
Step 1			0.01	0.70
Professional experience	−0.04	−0.35		
Step 2			0.22***	14.18***
Reappraisal	−0.31***	−4.15		
Suppression	0.11	1.50		
CS	−0.28***	−3.66		
Step 3			0.23***	1.28
CRxCS	−0.25	−0.42		
ESxCS	0.70	0.17		
Arousal				
Step 1			0.01	2.97
Professional experience	−0.08	−0.64		
Step 2			0.23***	14.63***
Reappraisal	−0.38***	−5.06		
Suppression	0.13	1.67		
CS	−0.20**	−2.63		
Step 3			0.23***	0.33
CRxCS	0.10	0.16		
ESxCS	0.31	0.62		

Note. CR = cognitive reappraisal; ES = expressive suppression; CS = compassion satisfaction; $N = 190$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

$t = -3.66$, $p < .001$), arousal ($\beta = -0.20$, $t = -2.63$, $p = .008$). Furthermore, the interaction between expressive suppression and compassion satisfaction was significant in predicting intrusions ($\beta = 0.72$, $t = 1.43$, $p = .043$). The results are shown in Table 3.

We explored the moderating role of compassion satisfaction by calculating mean intrusions values for low, medium and high levels of cognitive reappraisal and compassion satisfaction. Medium values are based on the mean and the low and high levels of the variable are one standard deviation below and above the mean, respectively (Aiken, West, & Reno, 1991). The results showed that for the participants with a high tendency to use expressive suppression, there are no significant differences in the level of intrusions, according to their level of compassion satisfaction. However, the participants with a low tendency to use suppression show a lower level of intrusions when they have a high level of compassion satisfaction. Figure 1 displays the plot of the moderation effect.

Discussion

The goal of this present study was to enhance our understanding of the relationship between emotion regulation strategies, compassion satisfaction, and secondary traumatic stress in the context of secondary trauma exposure. The results shed light on (a) the direct relationships

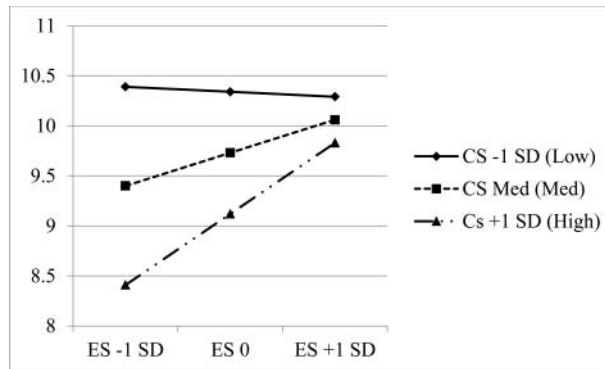


Figure 1. Presence of intrusions as a function of expressive suppression and compassion satisfaction. *Notes.* ES = expressive suppression, CS = compassion satisfaction. Simple effects were represented with expressive suppression and compassion satisfaction defined as at least +1 and –1 standard deviations from the mean, respectively.

between the above presented variables and (b) the interaction between emotional regulation strategies and compassion satisfaction in predicting secondary traumatic stress.

First, as expected, the results showed negative associations between cognitive reappraisal and all three symptoms of secondary traumatic stress—intrusions, avoidance, and arousal. Expressive suppression is positively associated with arousal and it is only marginally positively associated with intrusions and avoidance. Specifically, a high level of cognitive reappraisal is associated with a low level of intrusions, avoidance, and arousal, caused by secondary exposure to human pain, while a higher tendency to use expressive suppression is associated with a high level of arousal. This pattern of results offers an empirical support for the fact that the relationship among cognitive reappraisal, expressive suppression, and traumatic stress is highly similar in persons directly and indirectly exposed to traumatic life events (Boden et al., 2013; Moore et al., 2008).

Furthermore, we aimed to explore the associations between emotion regulation strategies and compassion satisfaction. The results showed that cognitive reappraisal was positively associated with compassion satisfaction. Therefore, these findings may suggest that the employees who use cognitive reappraisal of different situations may be more able to find meaning in their professional activities. These results are in line with previous studies, confirming the fact that cognitive reappraisal is a strategy that promotes increased levels of quality of life and psychological well-being (Gross & John, 2003; Matta et al., 2014). Moreover, it expands the previous results, by examining the relationship between cognitive reappraisal and compassion satisfaction, a less studied relation in the context of healthcare.

Quite unexpectedly, there were no significant correlations between expressive suppression and compassion satisfaction. Although we found a previous study that led to the same result (Liu et al., 2010), the relationship that we found between suppression of emotions generated by the work environment and work outcomes is different from what had been found in most of the previous research (e.g., Cote & Morgan, 2002; Gross & John, 2003). The expected negative relationship between expressive suppression of unpleasant emotions and compassion satisfaction was not supported by the current study. There are several possible reasons why the suppression of unpleasant emotions might not be associated with compassion satisfaction. One possible explanation may involve the context where this research took place. In

the context of healthcare, especially in hospitals, daily situations that generate negative emotions are more frequent than in everyday life. As a consequence, the workers may use the expressive suppression of emotions more frequently and more intensely than other people, in order to deal with daily critical situations. Moreover, a person may prefer expressive suppression, in order to demonstrate to others the ability to deal with stressful situations, by not showing the negative emotions the person feels. Therefore, its negative consequences may be overshadowed. It is well-known that the rules that guide these professional experiences, in terms of emotional labour, are often substantially different from those governing emotions elicited by daily events, in other contexts. Specifically, the work environment that involves interactions with customers or patients implies displaying the required emotions, by controlling and not showing negative emotional states. According to previous research, emotional labor is required every day in different fields, like daycare workers, nursing, and healthcare, being documented in both nurses and physicians. It includes suppression of negative emotions, which are felt but not expressed (Hochschild, 2012). Therefore, it is possible that the habitual suppression of unwanted emotions does actually reduce the intensity with which these emotions are experienced. However, suppressed, but not eliminated, negative emotions, may not be consistently associated with compassion satisfaction, as it was expected.

Concerning the relationship between compassion satisfaction and secondary traumatic stress symptoms, as we expected, the results showed that a low level of compassion satisfaction is associated with high levels of intrusions, avoidance, and arousal. The results are in line with the results of previous studies that showed negative associations between compassion satisfaction and stress (Berger et al., 2015; Hinderer et al., 2014; Sodeke-Gregson et al., 2013). Moreover, the current results showed that compassion satisfaction moderates the relation between expressive suppression and intrusions. A lower level of intrusions is reported by the participants with a low tendency to use suppression and a high level of compassion satisfaction. These results may suggest that the relationship between expressive suppression and traumatic stress is not presented in all individuals, but may be dependent on other personal characteristics. Compassion satisfaction proved to be a variable that interacts with suppression in predicting intrusions. The fact that interaction appears only in connection with intrusions can be explained through previous studies that support the ironic character of suppression, that is, the suppressed emotions determine a higher level of intrusions following exposure to a trauma (Beck, Gudmundsdottir, Palyo, Miller, & Grant, 2006).

Several limitations of this study should be noted. Firstly, the current sample was predominantly comprised of Caucasian women. A replication of the current findings among men is needed, because previous work suggests that the relationship between emotion regulation strategies and symptoms of distress might be moderated by gender (Zlomke & Hahn, 2010). Secondly, medical workers are routinely exposed to trauma as part of their job and may use emotion regulation strategies more frequently, in order to cope with critical or emergency situations at work. The use of this sample may limit the generalization of the current findings to other secondary trauma populations. Thirdly, the sample was largely comprised of nurses, with a small proportion of physicians, from different specialties. This convenience sample was used given the fact that the number of medical staff from a single hospital department who agree to take part in a study is too low to form a sample. Thus, the data from all the participants who agreed to complete the scales were analyzed as a single group, after comparing nurses and physicians in terms of the study variables. The nonsignificant differences allowed the analysis of the data as a single group. However, future studies with more homogeneous

samples in terms of daily activities are needed. Moreover, the present study is limited because the relationships among emotion regulation, secondary traumatic stress, and compassion satisfaction were analyzed at a single moment in time. Therefore, it is not possible to notice causal relationships. Future research needs to examine in more detail the nature of the relationship between these variables.

Despite the aforementioned limitations, the findings of this study add to the previous literature confirming specific relationships among emotion regulation, compassion satisfaction, and secondary traumatic stress. Moreover, it expands the previous findings by highlighting the interaction between emotion regulations and compassion satisfaction in predicting secondary traumatic stress, in a sample of Romanian healthcare workers. This work environment is of particular interest due to the fact that it is characterized by a high level of stress and overload (Spânu, Baban, Bria, & Dumitrascu, 2013). Intervention and training should focus on teaching cognitive reappraisal skills, in order to improve one's professional quality of life. Employees should learn to reappraise the unpleasant emotions rather than suppress them, because the reduction of negative emotions and the amplification of pleasant emotions can increase the employees' satisfaction and reduce traumatic stress.

Author Note

Cornelia Măirean, PhD, is an assistant professor at the Alexandru Ioan Cuza University, Department of Psychology. Her principal research interests are traumatic stress, personal growth, emotional adjustment, and transportation research.

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