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The Effects of Traumatic Situations on Emergency Medicine Practitioners

Cornelia MAIREAN¹, Diana CIMPOESU², Maria Nicoleta TURLIUC³

Abstract

The physicians, the nurses and the paramedics who work in Emergency Medicine are exposed to events that involve human pain. They work to rescue individuals and they have to deal with stressful events, some of which could have a lasting impact. Vicarious trauma, as described in 1996, is a concept used to describe the experience of health workers who develop symptoms of traumatic stress as a consequence of working with traumatized individuals. The purpose of this study was to investigate secondary trauma, in the context of treating human pain. A total of 52 medical staff participated in the study. Scales for measuring vicarious trauma beliefs and secondary traumatic stress were administered to all the participants. The results emphasized the differences between nurses and physicians regarding the symptoms of traumatic stress and the associations between traumatic stress and vicarious trauma dysfunctional beliefs. The results are discussed from the perspective of the impact of work environment on personal well being.

Keywords: vicarious trauma beliefs; secondary traumatic stress; emergency department.

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Introduction

Psychological trauma can result from direct exposure to a traumatic event (whether natural or man-made) or from indirect or *secondary* exposure, for instance, while assisting traumatized persons. In line with this idea, providing social and health services could be the source of psychological trauma (Chaufan & Isa, 2011). The pathological mental condition associated with trauma can therefore be transmitted in a vicarious way from the victim to the rescue worker who therefore will be called indirect victim (Argentero & Setti, 2011; Hatcher, Bride, Oh, King, & Catrett, 2011). Two constructs are mostly used to describe trauma-like responses in people who are in close contact with traumatized individuals: secondary traumatic stress (STS; Figley, 1983) and vicarious trauma (VT; Pearlman & Saakvitne, 1995). The indirect effect of trauma can be manifested either as secondary trauma, which includes the emotional response to the traumatic event, or vicarious trauma, which causes long-term cognitive changes in beliefs and attitudes (Sabin-Farrell & Turpin, 2003). VT is a more complex construct that describes disruptive and painful psychological effects that can persist for months or years if left untreated. It means the transformation in someone's inner experiences resulting from the cumulative empathic engagement with traumatic material of others. Although most of the literature on vicarious trauma and secondary trauma is based on opinions of trauma therapists (Schauben & Frazier, 1995; Pearlman & Maclan, 1995; Pearlman & Saakvitne, 1995; Way, VanDuessen, Martin, Applegate, & Jandle, 2004), there is also empirical support for the presence of this phenomena in various professional groups, including medical and nursing staff (Lundin & Bodegard, 1993; Argentero & Setti, 2011; Berger & Gelkopf, 2011; Shiri, Wexler, Schwartz, Kadari, & Kreitler, 2010; Costa Maia & Ribeiro, 2010; Wagner, McFee, & Martin, 2009; Goldblatt, 2009; Laurvud, Nonstad, Palmstierna, 2009; Dominguez-Gomez, Rutledge, Hemet, & Fullerton, 2009; Robins, Melt, & Zelikovsky, 2009; Richter, & Berger, 2006; Jonsson, & Halabi, 2006; Warren, Lee, & Saunders, 2003). The origins of the vicarious trauma construct root within the Constructivist Self-Development Theory (CSDT) (McCann & Pearlman, 1990). According to this theory, people construct their reality through the development of cognitive structures and these cognitions are then used to interpret events. VT is associated with disruptions of this schema in five areas. These areas are: safety (feeling safe from harm from oneself or others), trust/ dependency (being able to depend on or trust others and oneself), esteem (to feel valued by others and oneself and to value others), control (the need to be able to manage one's own or other people's feelings and behaviour), and intimacy (feeling connected to others or to oneself), each representing a psychological need (Dukley & Whelan, 2006). Each need/schema is experienced in relation to oneself and the other. Even if an individual who is exposed secondarily to a traumatic event presents no immediate threat, this exposure does affect psychological health (Luster, 2005).

Secondary trauma is defined as “the natural, consequent behaviors and emotions resulting from knowledge about a traumatizing event experienced by a significant other. It is the stress resulting from helping or wanting to help a traumatized or suffering person” (Figley, 1995). The term “secondary traumatic stress” (STS) has been used to refer to the observation that those who come into continued close contact with trauma survivors may experience considerable emotional disruption and may become indirect victims of the trauma themselves. VT’s intensity can increase over time through repeated contact with traumatized patients and can produce STS symptoms to the practitioner. STS is defined as a form of posttraumatic stress disorder where the symptoms are the same but the etiology is located in the empathic relationship with traumatized patients. Secondary trauma of clinicians has been hypothesized to include symptoms parallel to those observed in persons directly exposed to trauma, such as intrusive imagery related to the patient’s traumatic disclosures (McCann & Pearlman, 1990), avoidant responses, physiological arousal, distressing emotions and functional impairment (Figley, 1995; McCann & Pearlman, 1990). Thus, secondary traumatic stress is defined as a syndrome of symptoms nearly identical to those of post-traumatic stress disorder (PTSD). According to the American Psychiatric Association (APA, 2000), intrusion/ re-experiencing symptoms (Criterion B) include recurrent and intrusive images, thoughts or perceptions connected to the event, or recurrent distressing dreams during which the event is replayed; intense psychological distress or reactivity when exposed to internal or external cues or reminders of the event. Avoidance symptoms (Criterion C) involve persistent evading of stimuli associated with the trauma, including numbing of responsiveness. This avoidance may take the form of making efforts to elude thoughts, feelings, conversations, places or people that are associated with the traumatic event or are reminders of it. Avoidance symptoms also include loss of interest or participation in significant activities, detachment or estrangement from others and a sense of foreshortened future. Arousal symptoms (Criterion D) include persistent symptoms of anxiety or increased arousal that do not predate the trauma, such as difficulty falling or staying asleep, irritability, difficulty concentrating or hyper-vigilance.

Vicarious trauma highlights the cognitive changes as the defining characteristic, although it is also possible that these persons develop symptoms more consistent with PTSD criteria.

Objectives

The purpose of this study is to document quantitatively the occurrence of vicarious trauma experienced by health professionals, in the context of emergency work in the Emergency Department. Through the nature of their work, the medical staff was typically identified as being both indirectly and directly exposed to

traumatic events more frequently than it normally occurs with the general population. Dealing with patient emergencies and crises can be very stressful. Although these events are part of the nurses' and physicians' daily routine, some of them occur unexpectedly and can cause stress. They work to rescue individuals and, although they learn to deal with many stressful events that could have a lasting impact. Changes in cognitive schemas are an indicator of vicarious trauma and consist of disruptions in beliefs about self and the others in five areas: safety, intimacy, trust, control, and esteem. For the purpose of this study, cognitive schemas will be considered along with symptoms of traumatic stress: avoidance, arousal and intrusions.

Material and Method

Participants

The research was conducted in the ED (including a mobile intensive care unit) of the University Emergency Hospital of Iasi, Romania, in which more than 50.000 patients/year are attended. The sample of 52 participants consisted of 59.6% physicians, 23.1% resident physicians and 17.3% nurses. Our research sample was largely comprised of women (67.3% women and 32.7% men). Ages ranged from 26 to 55 years of age, with a mean age of 33.41 years, $S = 6.63$. Participants experience in emergency department range from 1 year to 22 years ($M = 4.82$ years, $S = 4.07$).

Instruments

The Trauma Attachment and Belief Scale (TABS). The Trauma Attachment and Belief Scale (TABS; Pearlman, 2003) is designed to assess the impact of directly and indirectly experienced trauma. The TABS has 84 items that are rated on a 6-point Likert scale (1- strongly disagree, 6- strongly agree). Negative items are reversely scored. It measures disruptions in beliefs related to five need areas that are sensitive to the effects of trauma: safety, trust, esteem, intimacy and control. Within each of these need areas, separate sets of items tap into beliefs about oneself and others yielding ten subscale scores and a total score; higher scores represent a greater disruption. Although the TABS was originally designed to measure the impact of trauma upon victims, some researchers have used the TABS to assess the impact of indirectly experienced trauma. Cronbach alpha for the current sample were .88.

Secondary Traumatic Stress Scale (STSS); Bride *et al.* 2004) is a 17-item self-report instrument comprised of three subscales (Intrusion, Avoidance and Arousal) that are congruent with the PTSD symptom clusters as noted in the Diagnostic

and Statistical Manual of Mental Disorders, 4th ed., Text Rev. (DSM-IV-TR; APA, 2000). Respondents indicated how frequently they experienced each of the 17 symptoms during the previous week using a 5-point scale (1 = never; 5 = very often) that provides scores for intrusion (example item “I thought about my work with victims when I didn’t intend to”), avoidance (example item “I wanted to avoid working with some victims”) and arousal (example item “I was easily annoyed”). A total score may also be computed and it may range from 17 (least likelihood of STS) to 85 (most likelihood of STS). A higher score indicated a higher level of traumatic stress. The STSS demonstrated evidence of convergent, discriminant and factor validity, as well as internal validity. Cronbach alpha for the current sample were .75. Demographic variables were collected via a questionnaire that covered age, gender, occupation and work experience.

Procedure

Participants were informed that their participation was voluntary and then they were asked to complete a questionnaire battery on a confidential basis. Participants completed all measures in the following (fixed) order: STSS, TABS and Demographics. The importance of answering truthfully was emphasized.

Results

Preliminary analyses

The vicarious trauma beliefs and secondary traumatic stress symptoms scores were *normally* distributed (the Kolmogorov-Smirnov Z were between 0.53 and 1.33, $p > .05$ for all variables). A test analysis was conducted to examine the differences between women and men and the results revealed that there were no statistically significant differences in the ratings of dysfunctional beliefs or secondary traumatic stress symptoms. Because no differences were found, all participants were considered as one group.

A. One Way Anova analysis of variance was conducted to examine the differences between resident physicians, physicians and nurses from the emergency department. The results showed that there are significant differences between resident physicians, physicians and nurses regarding the scores on avoidance ($F = 14.17$; $p = 0.002$), arousal ($F = 4.02$; $p = 0.056$), and secondary traumatic stress total score ($F = 7.78$; $p = 0.011$). The results are presented in *Table 1*.

Table 1. *One Way Anova analysis of variance*

	resident physician		physician		nurse		F	p
	M	SD	M	SD	M	SD		
Self safety	32.50	3.75	31.25	6.35	32.00	6.83	.20	.816
Other safety	24.66	4.73	25.22	4.25	26.22	3.63	.34	.710
Self esteem	25.25	2.49	25.12	3.86	25.88	3.10	.16	.846
Other esteem	27.33	5.66	26.22	4.27	27.33	3.87	.36	.693
Self trust	26.66	2.26	26.22	2.87	26.66	2.44	.16	.845
Other trust	25.33	4.14	25.70	5.40	29.00	6.63	1.50	.232
Self intimacy	15.41	2.02	16.06	2.43	16.22	2.04	.42	.654
Other intimacy	21.08	4.18	23.09	4.43	23.11	3.44	1.04	.359
Self control	28.00	4.55	28.58	6.67	31.44	5.81	.94	.394
Other control	20.16	3.92	19.61	5.28	21.33	3.70	.45	.635
Tabstot	246.83	23.69	249.25	33.38	261.44	23.22	.71	.494
intrusion	10.58	2.99	10.25	2.11	10.77	3.56	.16	.846
avoidance	18.50	4.94	9.16	1.94	13.25	.50	14.17	.002*
arousal	11.50	3.53	6.33	1.96	7.50	2.08	4.02	.056 [†]
ststot	43.00	7.07	29.83	4.02	36.50	3.51	7.78	.011*

Notes: ** $p < .01$, * $p < .05$.

Ststot- secondary traumatic stress total score

Resident physicians reported higher scores on avoidance (M=18.50, SD=4.94), arousal (M=11.50, SD=3.534) and secondary traumatic stress total score (M=43.00, SD=7.07) compared to physicians (M=9.16, SD=1.94; M=6.33, SD=1.96; M=29.83, SD=4.02) and nurses (M=13.25, SD=0.05; M=7.50, SD=2.08; M=36.50, SD=3.51) as demonstrated by the Bonfferoni's post hoc test.

Primary results

Further analyses for dysfunctional beliefs and for secondary traumatic stress symptoms will be conducted using data from the entire sample. In order to examine potential associations between age and experience in emergency department with symptoms of secondary traumatic stress and vicarious trauma beliefs, bivariate correlations were examined using Pearson Correlation. Means, standard deviations and correlation coefficients for all scales are reported in *Table 2*.

Table 2. Correlations, means and SDs of analysed variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. self safety	1																
2. other safety	.24	1															
3. self esteem	.37**	.21	1														
4. other esteem	.30*	.56**	.43**	1													
5. self trust	.12	.26	.32*	.40**	1												
6. other trust	.41**	.25	.35**	.42**	.37**	1											
7. self intimacy	.13	.29*	.22	.32*	.40**	.25	1										
8. other intimacy	.28*	.39**	.37**	.44**	.14	.23	.18	1									
9. self control	.49**	.29*	.45**	.45**	.36**	.48**	.23	.56**	1								
10. other control	.55**	.26	.47**	.40**	.31*	.55**	.26	.35**	.73**	1							
11. Tabstot	.65**	.56**	.63**	.71**	.49**	.69**	.42**	.61**	.82**	.79**	1						
12. intrusion	-.04	.03	.06	.22	-.09	-.03	.05	.09	.11	.04	.09	1					
13. avoidance	.47	.19	.24	.69*	.20	.70*	-.01	.22	.65*	.75**	.62*	.16	1				
14. arousal	.06	-.03	-.01	.42	-.19	.52	-.18	-.25	.23	.51	.22	.001	.75**	1			
15. sttot	.24	.15	.07	.67*	.02	.59*	.08	.22	.50	.57	.48	.49	.92**	.74**	1		
16. experience	.06	-.02	-.01	-.09	.03	.27	.06	.36**	.18	.03	.13	.06	.10	.12	.25	1	
17. age	.13	.01	.001	-.11	.01	.26*	.06	.25*	.14	.11	.15	.03	.06	-.04	-.03	.73**	1
Mean	31.67	25.26	25.28	26.67	26.40	26.19	15.94	22.63	28.94	20.03	250.80	10.42	12.08	7.58	34.25	4.82	33.41
Std dev	5.86	4.22	3.42	4.505	2.63	5.43	2.26	4.23	6.11	4.72	29.77	2.56	4.07	2.77	6.45	4.07	6.63

Notes: ** $p < .01$, * $p < .05$.

The participants' scores on fieldwork experiences were positively and significantly correlated with other-intimacy beliefs ($r=.36$, $p=.008$). A greater experience is associated with a higher level of dysfunctional beliefs concerning other-intimacy. Moreover, correlations showed that other trust beliefs ($r=.26$, $p=.050$) and other intimacy beliefs ($r=.25$, $p=.074$) were positively related with the participants' age. There were no significant correlations between participants' age and experience in emergency and their scores on intrusions, avoidance, arousal and secondary traumatic stress total score. A significant positive relationship was found between avoidance scores and altered perceptions of other esteem ($r=.69$, $p=.012$), other trust ($r=.70$, $p=.011$), self control ($r=.65$, $p=.021$), other control ($r=.75$, $p=.005$), and total score on dysfunctional beliefs ($r=.62$, $p=.029$). Additionally, a positive relationship was obtained between traumatic stress total score and altered perceptions of other esteem ($r=.67$, $p=.017$), other trust ($r=.59$, $p=.039$).

Discussions

Vicarious trauma is a form of occupational stress that may affect a person who is exposed to someone recovering from a traumatic event. Previous studies showed that it can result in lowered job satisfaction, increased job turnover, absenteeism, and the deterioration of patient/ patient service or care (Baird & Jenkins, 2003, Gavrilovici, Gavrilescu, & Miron 2013). The effects of vicarious trauma can

include multiple affective symptoms, changes in cognitive schemas, disruptions in various life areas and altered perceptions of self, others and the world.

Our results suggest that repeated exposures to patients' traumatic material may be related to significant disruptions in beliefs about other intimacy. *In other words*, a person's beliefs about intimacy become increasingly negative as a result of being exposed to a patient's traumatic experiences. Intimacy needs are defined as "the need to feel connected to oneself and others" (Pearlman, & Saakvitne, 1995). and consequences of disruptions in this area are feelings of emptiness when alone, difficulty enjoying time alone, an intense need to fill alone time and avoidance and withdrawal from others (Trippany, White Kress, & Allen Wilcoxon, 2004). Also, VT may cause a person to push away or become increasingly dependent on significant persons in his or her life. Another result of our study showed that increasing age is associated with disruption in beliefs about other-intimacy and other-trust. The possible consequences of disruption in other intimacy beliefs were discussed above. According to CSDT, trust needs refer to a form of attachment or a "healthy dependency" (Pearlman, & Saakvitne, 1995). The exposure to repeated patient trauma shakes the trusting foundations upon which the person's world rests and can cause suspicious of others. This suspiciousness may even transcend previously trustworthy interpersonal relationships.

Contrary to the expectations, the study did not find a relationship between experience in emergency and the disruption in other vicarious trauma beliefs or secondary traumatic stress symptoms (Boeriu, Cimpoesu, & Arafat, 2013). Probably, appropriate coping strategies can mitigate the psychological impact of this exposure. An area of research has focused on ways to ameliorate the effects of vicarious trauma and, in particular, studies have examined the coping strategies of those who work with trauma patients. Contrary to studies that assert gender as one of the best predictors of vicarious trauma (Brewin, Andrews, & Valentine, 2000), this study failed to find differences between men and women when confronted with potentially traumatic events.

Overall, our results are in accordance with constructivist self-development theory that sustains that vicarious trauma results from cumulative exposure to traumatized patients over time, although previous research showed that increased age and years of service correlates with decreased disruption in beliefs. Further research is needed to clarify these aspects.

It is interesting to note that previous studies (Shiri *et al.*, 2008b) showed that greater VT is associated with posttraumatic growth. One of the explanations can be based on the model of posttraumatic growth developed by Janoff-Bulman (2004), who suggested that after experiencing trauma there is a shattering of an individual's basic assumptions about oneself and the world. The individual then needs to reconstruct cognitive schemata that are better adapted to the changed reality generated by the experienced trauma. Janoff-Bulman posits that as a result

of this reconstruction there is positive growth because the new schemata are based on enhanced spirituality and better interactions with others, which are essential components of posttraumatic growth. According to Tedeschi and Calhoun (2004), post-traumatic growth can coexist with distress.

This study has some limitations. One is related to the fact that all variables were measured using self-reports. Another limitation of the present study concerns the generalization of the findings. Because there were a small number of participants in our sample, the results are most applicable to this sample and our hypotheses need replication for a greater confidence in these results. Further work is needed to replicate these findings in still larger samples. Additionally, we suggest the need for a longitudinal study to clarify the cumulative effects of vicarious trauma.

Conclusions

The results support the hypothesis that the stressful events at the workplace lead to changes in how people think, feel and behave in relation to others and themselves. Resident physicians with less experience reported higher scores on avoidance, arousal and secondary traumatic stress total score compared to physicians and nurses. There were no significant correlations between participants' age and experience in emergency and their scores on intrusions, avoidance, arousal and secondary traumatic stress total score but other trust beliefs and other intimacy beliefs were positively related with participants' age. Gender was not found as a factor interfering with the stress perception. Empirical data from our study could provide direction for further studies in order to formulate prevention and treatment regimens for VT. The present findings may guide future prospective research on individual differences in physicians' and nurses' vulnerability of vicarious trauma over time. Thus, it appears that the CSDT needs to be expanded to incorporate the wide variety of potential effects. In order to study a large variety of effects of secondary trauma, including the positive effects and the implication of this model in context of indirect trauma, further studies are needed.

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References

- Argentero, P., & Setti, I. (2011). Engagement and Vicarious Traumatization in rescue workers. *International Archives of Occupational and Environmental Health*, 84, 67–75.
- Baird, S., & Jenkins, S. R. (2003). Vicarious traumatization, secondary traumatic stress and burnout in sexual assault and domestic violence agency staff. *Violence and Victims*, 18, 71–86.
- Berger, R., & Gelkopf, M. (2011). An intervention for reducing secondary traumatization and improving professional self-efficacy in well baby clinic nurses following war and terror: A random control group trial. *International Journal of Nursing Studies*, 48, 601–610.
- Brewin, C.R., Andrews, B.A., & Valentine, J.D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *J Consult Clin Psychol*, 68, 748–766.
- Bride, B., E. (2004). The impact of providing psychosocial services to traumatized populations. *Stress, Trauma, and Crisis*, 7, 29–46.
- Buurman, B. M., Mank, A.P.M., Beijer, H.J.M., & Olf, M. (2011). Coping With Serious Events at Work: A Study of Traumatic Stress Among Nurses. *Journal of the American Psychiatric Nurses Association*, 17, 321-329.
- Boeriu, C., Cimpoesu, D., & Arafat, R. (2013). Emergency medical system in Mongolia: a professional perspective. *Revista Romana de Bioetica*, 11(4), 48-62.
- Chaufan, C., & Isa, K. (2011). Heal thyself: Dealing with trauma work—Gaza 2008/2009. *Health*, 15(1), 22-37.
- Costa Maia, A. & Ribeiro, E. (2010). The psychological impact of motor vehicle accidents on emergency service workers. *European Journal of Emergency Medicine*.
- Cunningham, M. (2003). Impact of trauma work on social work clinicians: Empirical findings. *Social Work*, 48(4), 451-459.
- Dominguez-Gomez, E., & Rutledge, D.N. (2009). Prevalence of secondary traumatic stress among emergency nurses. *Journal of Emergency Nursing*, 35(3), 199-204.
- Dunkley, J., & Whelan, T. A. (2006). Vicarious traumatization in telephone counsellors: Internal and external influences. *British Journal of Guidance and Counselling*, 34, 451-469.
- Figley, C.R. (Ed.) (1995). *Compassion Fatigue: Secondary Traumatic Stress Disorders from Treating the Traumatized*. New York: Brunner/Mazel. (Review).
- Figley, C. R. (1999). Compassion fatigue: Toward a new understanding of the costs of caring. In B. H. Stamm (Ed.), *Secondary traumatic stress: Self-care issues for clinicians, researchers, & educators* (2nd ed., pp. 3–28). Lutherville, MD: Sidran Press.
- Figley, C. R. (1983). Catastrophes: An overview of family reactions. In C. R. Figley, & I.H. I. McCubbin (Eds.), *Stress and the family: volume II: Coping with catastrophe* (pp. 3–20). New York: Brunner/Mazel.
- Gavrilovici, C., Gavrilesu, S., & Miron, L. (2013). Pleading for the quality of health care: ethics - from the bedside to health institutions. *Revista Romana de Bioetica*, 11(4), 3-6

- Goldblatt, H. (2009). Caring for abused women: impact on nurses' professional and personal life experiences. *Journal of Advanced Nursing*, 65(8), 1645–1654.
- Hatcher, S. S., Bride, B. E., Oh, H., King, D. M., Catrett, J. F. (2011). An Assessment of Secondary Traumatic Stress in Juvenile Justice Education Workers. *Journal of Correctional Health Care*, 17(3), 208-217.
- Janoff-Bulman, R. (2004). Post-traumatic growth: Three explanatory models. *Psychological Inquiry*, 15, 30-34.
- Jonsson, A., Halabi, J. (2006). Work related post-traumatic stress as described by Jordanian emergency nurses. *Accident and Emergency Nursing*, 14, 89–96.
- Lauvrud, C., Nonstad, K., & Palmstierna, T. (2009). Occurrence of post traumatic stress symptoms and their relationship to professional quality of life (ProQoL) in nursing staff at a forensic psychiatric security unit: a cross-sectional study. *Health and Quality of Life Outcomes*, 7: 31.
- Luster, R. J. (2005). An analysis of the effects of vicarious trauma as measured by the ProQOLR III test dissertation Capella University. Retrieved from <http://wwwlib.umi.com/dissertations/fullcit/3162618>.
- Lundin, T., & Bodegard, M. (1993). The psychological impact of an earthquake on rescue workers: a follow up study of the Swedish group of rescue workers in Armenia. *Journal of Traumatic Stress*, 6, 129–139.
- McCann, I. L., Pearlman, L. A. (1990). Vicarious traumatization: a framework for understanding the psychological effects of working with victims. *Journal of Traumatic Stress*, 3, 131–149.
- Pearlman, L. (2003). *The Trauma Attachment Belief Scale Manual*. Los Angeles, CA: Western Psychological Services, Inc.
- Pearlman, L. A., & Maclan, P. S. (1995). Vicarious traumatization: an empirical study of the effects of trauma work on trauma therapists. *Professional Psychology Research and Practice*, 26(6), 558-565.
- Pearlman, L. A., & Saakvitne, K. W. (1995). *Trauma and the therapist: counter-transference and vicarious traumatization in psychotherapy with incest survivors*. New York: W.W. Norton.
- Robins, P., Melt, L., & Zelikovsky, N. (2009). The Experience of Secondary Traumatic Stress Upon Care Providers Working Within a Children's Hospital. *Journal of Pediatric Nursing*, 24(4), 270-279.
- Romila A. (coord.) *Manual de diagnostic și statistică a tulburărilor mentale- DSM-IV revizuit* (2003), *Ediția a IVa revizuită* Asociația psihiatrilor liberi din România, București.
- Richter, D., Berger, K. (2006). Post-traumatic stress disorder following patient assaults among staff members of mental health hospitals: a prospective longitudinal study. *BMC Psychiatry*, 6, 15.
- Sabin-Farrell, R., Turpin, G. (2003). Vicarious traumatization: implication for the mental health of health workers. *Clinical Psychology Review*, 23, 449–480.
- Schauben, L. J., Frazier, P. A. (1995). Vicarious trauma: the effects on female counselors of working with sexual violence survivors. *Psychology of Women Quarterly*, 19, 49–64.

- Shiri, S., Wexler, I. D., Alkalay, Y., Meiner, Z., Kreitler, S. (2008). Positive psychological impact of treating victims of politically motivated violence among hospital-based health care providers. *Psychotherapy and Psychosomatics*, 77, 315–318.
- Shiri, S., Wexler, I.D., Schwartz, I., Kadari, M., Kreitler, S. (2010). The association between reality-based beliefs and indirectly experienced traumatization. *International Journal Psychology*, 45(6), 469-76.
- Tedeschi, R.G., Calhoun, L.G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry*, 15, 1-18
- Trippany, R. L., White Kress, V. E., Allen Wilcoxon, S. (2004). Preventing vicarious trauma: what counselors should know when working with trauma survivors. *Journal of Counseling and Development*, 82, 31–37.
- VanDeusen, K.M., Way, I. (2006). Vicarious trauma: An exploratory study of the impact of providing sexual abuse treatment on clinicians' trust and intimacy. *Journal of Child Sexual Abuse*, 15, 69-85.
- Wagner, S. L., McFee, J. A., Martin, C. A. (2009). Effects of traumatic stress on firefighters' world assumptions. *Traumatology*, 15, 75 – 84.
- Warren, T., Lee, S. C., Saunders, S. M. (2003). Factors influencing experienced distress and attitude toward trauma by emergency medicine practitioners. *Journal of Clinical Psychology in Medical Settings*, 10(4), 293-296.
- Way, I., VanDeusen, K. M., Martin, G., Applegate, B., Jandle, D. (2004). A comparison of clinicians who treat survivors of sexual abuse and sexual offenders. *Journal of Interpersonal Violence*, 19, 49-71.