

Summary

Trauma among Rescue Workers: Do Coping Strategies Moderate the Relationship between Traumas, Burnout and Life Satisfaction among Ambulance Personnel?

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Rescue and emergency service worker, and especially ambulance personnel encounter with various traumatic situations like severe accidents, explosions, injured people or corpses when they are working. They frequently face with stressors that have physical, psychological and social affects (Yavuzylmaz et al., 2007; Jonsson, Segesten, & Mattson, 2003). It can be asserted that employees working as ambulance personnel are at a high risk of developing trauma as a result of the continuous exposure to negative and traumatic events (Brough, 2005).

APA defines (2000), trauma as an emotional response to unexpected and negative events that exceeds the coping strategies of the victims such as; an accident, an explosion, a rape or a natural disaster. Shock and denial can be seen after the traumatic events; and in the long term flashbacks, unpredictable emotions, strain, difficulties in close relationships and psychosomatic problems might reveal.

In general, work stress in ambulance personnel is naturally common as they are responsible for serving the traumatized people and their close others. It can also be said that they are exposed to secondary trauma or vicarious trauma (Jonsson & Segesten, 2003). In addition to the victims' problems and health issues occasionally they have to face with the grief and worries of patient's acquaintances and sometimes these acquaintances might show their emotional pain as outbreaks and aggression towards the rescue employees as well (Kaya et al., 2007). These extra negative conditions intensify the adversities of the situation and make the working conditions even more difficult. Studies conducted on ambulance personnel and rescue workers have shown the severity of the problem. Bennett and colleagues' (2005) research on 617 ambulance personnel revealed that organizational stress, frequency of encountering traumatic events and the time spend in the service were the basic predictors

of post traumatic stress disorder (PTSD) symptoms on rescue workers. Similar studies (e.g., Gross et al., 2004; Jonsson & Halabi, 2006; Jonsson & Segesten, 2004) emphasize the importance of taking necessary precautions for minimizing the negative psychological effects of rescue work on ambulance personnel (Alexander & Klein, 2001).

Related with work stress and traumatic events witnessed, burnout syndrome is also an expected problem on medical staff. Primarily that risk is higher for the first aid workers as they are the first line employees that encounter the worst conditions and alleviate the situation of the victims until they reach to the medical care centers and hospitals (Maslach, Schaufeli, & Leiter, 2001). Maslach and Jackson (1981) denoted burnout as a syndrome that arose from the psychological, physical and social demands of the jobs that bring about constant stress and strain. Burnout reveals through emotional exhaustion and then combined with the cynicism (depersonalization while dealing with customers and other people. As a result of emotional exhaustion and cynicism the employees also might also suffer from negative self evaluation with decreased professional efficacy (Maslach & Jackson, 1981).

Various former studies dealt with the relationship between stress and burnout for health care professionals (e.g., Aasa et al., 2005; Alexander & Klein, 2001; Kaya et al., 2007; Potter, 2006). In a study on Scottish ambulance personnel, Alexander and Klein (2001) studied the relationship between emergency incidents and mental health issues. Their results showed that almost one third of their sample noted burnout and PTSD symptoms. Long working hours, less recovery intervals between the cases, and lower levels of job satisfaction was associated with higher levels of burnout. Further more they reported that the severity of the incidents the employees face with might be a predictor of burnout.

Other concepts related to trauma and burnout are job satisfaction and general *life satisfaction*. Several studies revealed that trauma and burnout are inclined to be negatively related with life satisfaction (e.g., Alexopoulos et al., 2014; Anke & Meyer, 2003; Besser & Neira, 2009; Bria et al., 2013; Rupert et al., 2009; Wilkinson, 2014). Anke and Meyer (2003) studied the general life satisfaction among people that experienced multiple traumas in their lifespan and showed that life satisfaction decreases both in general life and specific areas (relations with friends, sex life, spare time activities) after experiencing traumas.

One of the constructs related with employees' ways of buffering the negativity of the stressful events on their lives is coping and coping strategies. According to Lazarus and Folkman stress is a result of individuals' perception of the condition in such a way that the external demands and threats created by the condition exceeds the limits and resources of the individual (Güllüce, 2006). Although stress can be related with health issues and emotional problems, not every individual dealing with stressful events show the similar reactions and symptoms (Coyne, Aldwin, & Lazarus, 1981). People differ how they cope with the demands of the stressful conditions. In Folkman and Lazarus's (1979) Transactional Model of Stress the individual can alleviate the effects of stressful conditions by using cognitive, emotional and behavioral strategies that are called coping strategies. Basically and theoretically coping can be classified into two as 'problem-focused coping' and 'emotion-focused coping' (Lazarus & Folkman, 1985). Problem-focused coping points out active strategies for handling or eliminating the sources of stress, on the other hand emotion-focused coping refers to individual's attempts to regulate or control the feelings and emotions that are caused by the stress sources. Dirkzwager and colleagues (2003) mentioned that emotion based coping can cause difficulties while coping with traumatic experiences. The results of the various studies showed that emotion based coping after traumatic events, increases the psychopathology on individuals; but problem based coping decreases the risk of PTSD (Green, Lindy, & Grace, 1988; Benotsh et al., 2000; Sutker et al., 1995; Fairbank et al., 1991; Sharkansky et al., 2000).

The aim of this study is to investigate the burnout and life satisfaction levels of the ambulance personnel and to understand the coping strategies they use as they witness traumatic events on daily basis. They really work on difficult and stringent conditions and unfortunately they are not provided with the psychological support which seems to be highly required in their tough conditions. First of all our main object is to reveal how burnout among ambulance personnel is related with the trauma they encounter. The literature on stress, trauma,

burnout and life satisfaction shed light on us to form our moderation model; we expected a positive relationship with the personal experience of traumatic events and burnout levels and negative relationship with the general life satisfaction. In those relationships the coping strategies are evaluated and tested as the moderating variable, in such a way that problem focused coping strategies will alleviate the positive relationship between trauma and burn out and negative relationship with trauma and life satisfaction. The research model can be seen in Figure 1.

Method

Sample

The participants were 121 volunteer ambulance personnel working in İstanbul. They were recruited for participating the study from the emergency stations that were randomly selected from 112 Emergency Services Stations of İstanbul. 71 of the participants were female (58.6%) and 50 of them were male (41.4%). The mean age of all the participants were 27.52. The demographic characteristics of the participants are exhibited in Table 1.

Materials

Demographic Information Form & Traumatic Event History. Participants filled a demographic information form including working hours and resting hours. They also wrote a short story about the most traumatic event that they encountered at work in the last 1 year.

The Satisfaction With Life Scale. The original of the scale was developed by Diener, Emmons, Larsen and Griffin in 1985; and the Turkish version was adapted by Köker and Yetim in 1991. Scale is ranging between 1 (strongly disagree) and 6 (strongly agree).

Impact of Event Scale. The original form of the scale was prepared by Horowitz et al. in 1979 to measure the symptoms of PTSD and it is re-organized in 1997 by Weiss and Marmar according to APA's PTSD criterion. The scale has 22 questions ranging between 0 (not at all) and 4 (extremely).

Maslach Burnout Inventory. The scale was developed by Maslach and Jackson in 1981 and the Turkish version was adapted by Ergin (1993). There are 22 items including three sub-dimensions called "emotional exhaustion", personal accomplishment" and "depersonalization". The scale ranges between 0 (never) and 4 (every day).

Ways of Coping Questionnaire. The scale was developed by Folkman and Lazarus in 1985 and adapted to Turkish by Siva in 1988. There are 30 items including five sub-dimensions and scaled between 0% (does not applied or not used) and 100% (used a great deal).

Procedure

After authorization of the research from the concerned institutions first author visited the randomly selected 112 Emergency Services Stations and contacted the participants. The participants voluntarily attended to the research and signed the informed consent forms before filling out the questionnaires and demographic information form.

Data Analysis

First of all demographic information were classified and distributions were estimated; afterwards Cronbach α reliabilities were measured for all measurement tools (both sub dimensions and total scales). After the normality distribution was applied to the sample, all the sub dimensions of trauma and burnout scales were included in multiple regression analysis and moderator analysis were conducted to assess the moderating role of coping ways. Lastly, content analysis was applied to the short traumatic event stories, they were indexed by titles.

Results

First of all Pearson r Correlation analyses were conducted including all the subdimensions of the scales measuring the constructs in the research model. The results revealed the existence of a positive relationship between trauma and burnout; a negative correlation between problem based coping and burnout and a positive correlation between emotion based coping and burnout. Also a positive correlation was found between hyperarousal sub-dimension of trauma and emotional exhaustion ($r = .54, p < .01$) and depersonalization ($r = .35, p < .01$).

To test the hypothesis concerning the “*positive relationship between trauma and burnout*” first the general trauma and burnout scores, afterwards all the sub-dimensions of trauma and burnout were included into the regression analyses. Results revealed that trauma predicts burnout and general trauma scores can explain the 40% of the variation on burnout scores. When the regression analyses were conducted by using the three sub-dimensions of trauma as independent variables and emotional exhaustion subdimension of burnout as dependent variable the result was significant ($F = 17.34, p < .01$). Hyperarousal found to be explaining the 29% of the variance on emotional exhaustion ($\beta = .65, p < .01$). Moreover another regression analysis displayed that intrusion dimension of trauma ($\beta = -.29, p < .05$) was negatively and hyperarousal dimension of trauma was ($\beta = .59, p < .01$) positively affected the depersonalization dimension of burnout ($F = 7.20, p < .01$).

After the regression analysis, moderator analyses were conducted by using the coping strategies as mod-

erator variables abiding by the proposals of Aiken and West (1992). Unfortunately the moderation analysis of coping strategies were insignificant. Neither problem based nor emotion based coping strategies had moderated the relationships between trauma and burnout, and trauma and life satisfaction.

A content analysis was conducted to the the traumatic experiences the participants narrated, and it was concluded that the aggressive acts and assaults of the patients’ relatives traumatised the participants the most. Another frequently mentioned condition related with workplace trauma was cases including child deaths.

Discussion

When the results of the trauma in general and burnout scores are taken into account a significant positive relationship can be seen between trauma and burnout. Emotional exhaustion seems to be much more related to the hyperarousal dimension of trauma which signifies that the anxiety and shock related affects of trauma cause especially emotional problems. A previous study conducted on 7-14 aged children also emphasized the same finding showing that hyperarousal dimension trauma was highly related with emotional exhaustion even 1 year after the traumatic event. (Weems et al., 2003). Moreover hyperarousal and depersonalization levels were also positively related as we estimated.

Intrusion and depersonalization were found to be negatively related; the reason for this result might be related with the unique characteristics of the sample and the target population. Employees working as ambulance personnel frequently witness traumatic events. The ambulance personnel might use depersonalization as a defence mechanism to protect themselves emotionally from the negative affects of the events that the victims experience. In addition, experiencing or witnessing traumatic events might be subjective depending on the resiliency of the employees witnessing it.

The total burnout score for the sample was (39.17) approximately similar with other studies conducted on different samples in Health and Service Sector in Turkey. A medical staff study in Turkey resulted 43 mean score in Maslach Burnout Inventory (Keskin, Çınar, Alparslan, & Özmercan, 2010). Another study conducted in dialysis center showed that doctors have 43.69 and nurses have 47.46 burnout scores (Ayraller, Yavuz, Bakım, & Karamustafalıoğlu, 2011). Our study once again showed that the burnout levels in Turkish health workers should be taken into consideration and necessary precautions should be taken.

As we mentioned before, the reason for the insignificance of the coping ways as moderator might also be related with the specific characteristics of the sample and

the target population. To clarify; the sample as an occupation group work 24 hours together, they sleep, eat and stay in the same place during working time. That might be a factor that can increase group cohesion and group cohesion might act as a buffer for the negative impacts of the traumatic events the employees encounter. However it is evident that they still have problems related with the long working hours and inadequate breaks for relaxation. The homogeneity of the sample and all these similar condition they share might also decrease the variance of the data related with stress and coping styles, and the range restriction or inadequate variance might be the reason for insignificant moderation.

When the traumatic experiences they shared with us were taken into consideration physical or verbal assaults that they are exposed seems to be really traumatic for them since they try to alleviate the serious situations that the victims and their relatives experience. They sometimes become the target of the aggressive kins that

they are trying to help. Secondly they mentioned baby and child deaths as examples of the most traumatic events. They generally defined these situations as desperate. A similar study in 2004 showed that the most traumatic event that ambulance personnel indicated was cases that include children. They also internalize these events and think of their own children and similar relatives. (Jonsson & Segesten, 2004). On the other hand, whatever the age of the patients; loss is the most tragic and traumatic case for ambulance personnel.

In sum, this study pointed out the relationship between trauma and burnout in health care workers; but coping strategies failed to statistically show the moderator effect. For further studies, the model can be modified and an indepth investigation by using qualitative techniques like interviewing might be conducted to understand the variance of coping strategies and their importance for alleviating the effects of traumatic events for employees.