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# Occupational stress associated with exposure to trauma in professional firefighters

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# ABSTRACT

Exposure to traumatic events is frequent in emergency services (Berger, Coutinho, Figueira, Marques-Portella, Luz, Neylen, Marmar, & Mendlowicz, 2012). Emergency care professionals like firefighters deal with death, the risk of death or threats to another person's physical integrity on a daily basis (Berger et al., 2012). Experiencing traumatic situations can have negative consequences and affect the well-being and health of this professionals, as well as the quality of the emergency serviced provided. This study aims to explore occupational stress associated with exposure to trauma in professional firefighters. Data were collected through logbooks and interviews utilizing the Critical Incident Technique. Data collected was submitted to a thematic content analysis using NVivo 12 software. Results show that exposure to trauma in firefighters is a subjective and diverse experience with an accentuated negative dimension. In fact, negative emotions and negative consequences resulting from traumatic events have an impact more significant. Thus, when exposed to traumatic events, firefighters experience mainly distress. To manage these situations and the associated negative emotions, they often resort to emotion-focused coping strategies. This study contributed to a greater awareness of the importance of psychological intervention in these professionals, through the development of strategies and actions in secondary prevention to improve these professional's quality of life.

# **INTRODUCTION**

Since the firefighter's occupational environment is highly stressful, the interest in studying their mental health has been increasing (Carey, Al-Zaiti, Dean, Sessanna, & Finnell, 2011). In fact, emergency professionals such as firefighters as constantly exposed to traumatic incidents (Jonsson, Segesten, & Mattsson, 2003) with road crashes, children's injuries, suicides, and cardiac arrested being the most noteworthy (Marcelino, Figueiras, & Claudino, 2012). A portuguese study revealed that 98% of firefighters experienced at least one major adverse event in the year prior to the inquiry, 50% in the prior month, and 74% in the prior week (Carvalho & Maia, 2009).

According to the cognitive-motivational-relational theory of emotion (Lazarus, 1991), the cognitive evaluation that an individual makes of a traumatic event triggers an initial set of emotions that make him convoke certain coping strategies which mediate the newly generated emotions (Folkman & Lazarus, 1988a, 1988b). As such, the way an individual handles a particular situation is an important predictor of psychological distress (Brown, Mulhern, & Joseph, 2002).

With the aim to explore occupational stress associated with exposure to trauma in professional firefighters, we intend specifically to answer the following research questions: RQ1. What situations do firefighters experience as traumatic? RQ2. What is the emotional experience associated with traumatic events? RQ3. What coping strategies do firefighters use to manage traumatic situations? RQ4. What are the consequences of a traumatic situation's exposure in the professional practice of a firefighter?



METHOD

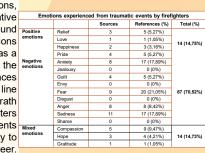
The data were collected through the application of logbooks and interviews using the Critical Incident Technique. The information collected was subject to a thematic content analysis through NVivo 12 software.



### **RESULTS AND DISCUSSION**

Situations experienced as traumatic by firefighters				
	Sources	Μ		
Accidents with children	5	Ja		
Traffic accidents	5	(2		
Knowing the victim	4	id		
Death of a co-worker	1	fir st		
Suicides	4	wi		
To fear for one's own life	6	or		
Other occurrences	4			

hese findings are in line with those of Tomaka, lagoc, Morales-Monks and Reyes (2017), acobsson, Backteman-Erlanson, Brulin and Hörnsten 2015) and Harris, Baloğlu and Stacks (2002) which lentify as potentially traumatic accidents large-scale res, explosions, drownings, suicides or attempted uicides, serious traffic accidents and occurrences ith multiple victims, the death or injury of colleagues acquaintances, and serious injury or death of children



Coping strategies used by firefighters do deal with traumatic situations					
		Sources	References (%)	Total (%)	
Emotion-focused coping	Acceptance	6	8 (8,42%)		
	Moving away from the problem	9	22 (23,16%)		
	Distraction	5	10 (10,53%)		
	Faith and Religion	2	4 (4,21%)	58	
	Focus on positive aspects	5	5 (5,26%)	(61,05%)	
	Play down the importance of the problem	5	9 (9,47%)		
Problem-focused coping		7	18 (18,95%)	18 (18,95%)	
Social support focused coping		7	16 (16,84%)	16 (16,84%)	
Other coping strate	egies	2	3 (3,16%)	3 (3,16%)	

The participants resort more often to strategies focused on emotion, which meets the results found by Murta and Tróccoli (2007). One possible explanation is that the occupational context of the firemen often does not allow for a choice (Van der Klink, Blonk, Schene & van Dijk, 2001). In other words, sometimes traumatic situations are not changeable and there is nothing to do in order to reverse them.

The negative consequences of experiencing traumatic situations were more frequently referred to by firefighters than the positive consequences. A qualitative study by Capitaneo, Ribeiro e Silva (2012) shows that exposure to risk factors is reflected in negative consequences in the different areas of firefighters' lives.

Consequences of experience traumatic events by firefighters							
		Sources	References (%)	Total (%)			
Positive consequences	Developing a self-defense system	4	11 (11,22%)				
	Drawing lessons for the profession	6	11 (11,22%)	30 (30,61%)			
	Drawing lessons for life	4	8 (8,17%)				
Negative consequences	Changes in sleep and dreams	4	7 (7,14%)				
	Emotional wear	7	19 (19,39%)	68			
	Negative memories	8	26 (26,53%)	(69,39%)			
	Feeling of powerlessness and frustration	10	16 (16,33%)				

## REFERENCES

When experiencing traumatic situations, firefighters mostly experience negative emotions. Beaton and Murphy (1995) found that firefighters experience emotional reactions such as fear, sadness, anxiety, or anger as a result of exposure to traumatic events in the motion performance of their duty. These experiences generate distress. These results are in line with those of Regehr, Leblanc, Jelley, Barath

and Daciuk (2007) who state that firefighters who have been exposed to traumatic events are at greater risk of developing vulnerability to stress and distress throughout their career.

## CONCLUSION

The results show that exposure to trauma in firefighters is a subjective and diverse experience with a more negative than positive dimension. In fact, negative emotions and the negative consequences of traumatic events have a significantly more noticeable impact. Thus, when exposed to traumatic events, firefighters experience distress. To cope with these situations and the associated negative emotions, firefighters more often resort to emotionfocused coping strategies.