

Risk factors of ASD: An Examination of Stressful Call Types

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Background

In a previous study, emergency dispatchers were surveyed to investigate the relationships between stress, compassion fatigue, and quality of life (Trachik et al., 2015). The study by Trachik et al. (2015) found that emergency dispatchers endorsed rates greater than the general population and other occupations. These increased rates give credence that investigating the unique experiences of emergency dispatchers is warranted and is a worthwhile cause. Understanding the unique experiences is particularly important for purposes of secondary prevention and for understanding the risk and resilience factors that contribute to the increased rate of stress injuries (i.e., acute stress disorder, posttraumatic stress disorder, burnout) in this high-risk occupation.

Given that it is not possible to change the inherent stress associated with the job of emergency dispatching, it is important to examine additional strains that contribute to making the job more stressful. Specifically, the focus should be directed toward the potential impact of multiple indirect exposures to certain types of calls as well as assess specific environmental and workplace conditions that contribute to dispatcher stress injury manifestation.

With regards to the types of calls, Trachik et al. (2015) selected six call types rated as most stressful and impairing to functioning by at least 45% of participants. Individuals who met criteria for ASD endorsed four types of calls (involving children, structure fire, first party caller, and calming uncooperative caller) as significantly more stressful to handle than individuals who did not meet criteria for ASD (p 's < .049).

In addition to the types of calls, certain environmental and workplace factors have been identified as significant contributors to increased stress in the workplace. Shift work is one such example that contributes to serious physical and mental health issues (Smizinski, 2016; Trachik et al., 2015). Additional factors such as insufficient pay, lack of breaks, and lack of support or positive reinforcement from supervision and management contribute to workplace stress (Burke, 1995).

Few studies have explored how these factors uniquely contribute to stress injuries. By examining which call types contribute to stress injury manifestation, unique risk and resilience factors can be identified, which is the purpose of the current study. This investigation focused on the impact of work and environmental factors and how call types are considered differently. This study was conducted with the purpose of identifying risk and resilience factors to aid in the development of secondary prevention.

Methods

Data from the primary study (Trachik et al., 2015) that investigated the relationships between stress, compassion fatigue, and quality of life for 9-1-1 emergency dispatchers, was examined for the current investigation. A sample of 67 participants was included in the study.

Survey: Stressful to handle

A list of potentially stressful or traumatic calls was created in collaboration with professional dispatchers. For each traumatic call the participant was asked to rate on a scale of 0 (None) to 5 (Extremely) for acutely experienced stress.

Types of Calls.

The four types of calls (involving children, structure fire, first party caller, and calming an uncooperative caller) were selected for the current study. These calls were selected based on the results of independent sample t-tests assessing whether individuals that met criteria for ASD (i.e., 9 or more symptoms) perceive specific types of calls to be more stressful to handle than individuals who do not meet criteria for ASD (see Trachik et al., 2015).

Work Related Stressors.

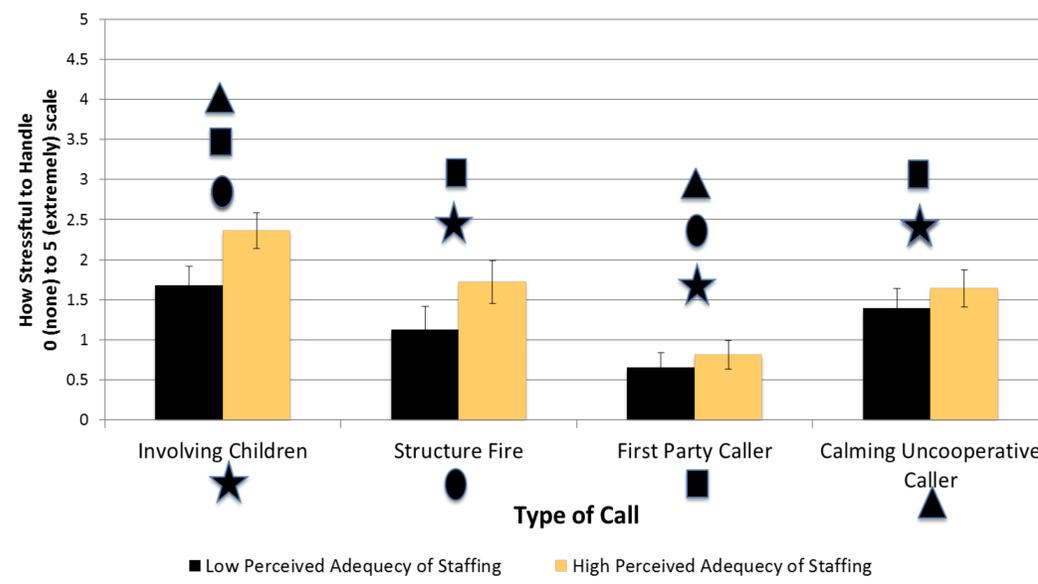
The Organizational Sources of Stress (Troxell, 2008)

This questionnaire asked 17 sources of stress experienced specific to the emergency dispatch workplace. Participants were asked to indicate all current sources of stress. (i.e., lack of training, ergonomics, the media, the public, poor staff communication)

Adequacy of Staffing (Troxell, 2008)

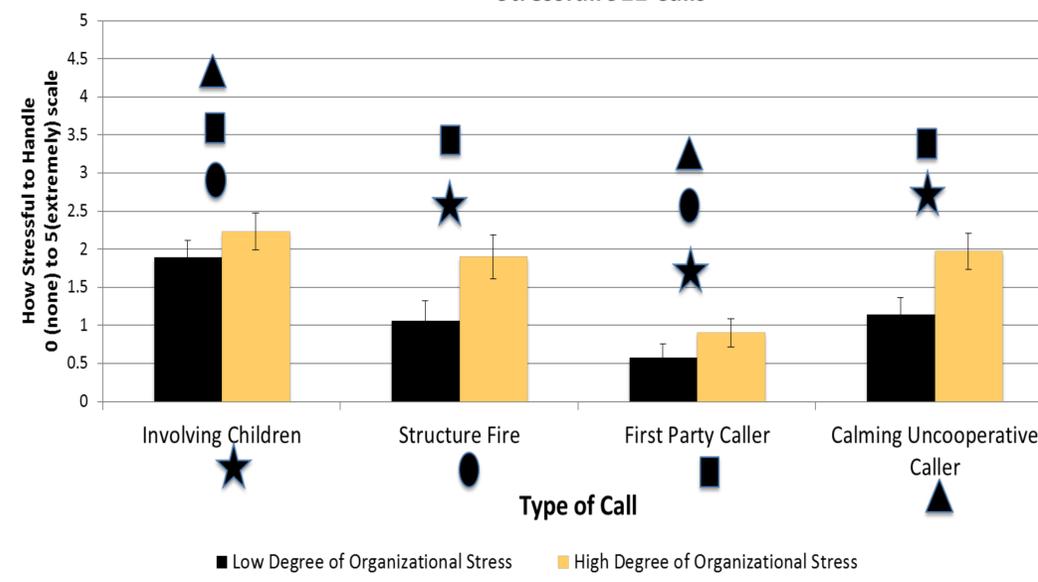
Adequacy of staffing was assessed with 4-items rated on a 5-point Likert scale of Never (1) to All of the time (5). The sum of these ratings represented the adequacy of staff-ing index.

Figure 1. No Influence of Perceived Staffing Adequacy on Perception of Stressful 911 Calls



Note: Symbols represent significant pairwise comparisons all p 's < .01

Figure 2. No Influence of Organizational Stress on Perception of How to Deal with Stressful 911 Calls



Note: Symbols represent significant pairwise comparisons all p 's < .01

Results

Two mixed model ANOVAs were conducted in order to determine whether calls that were risk factors for ASD (within-subjects) were considered different, in terms of how stressful they were to handle, by the between-subjects variable of work related stressors (organizational sources of stress and staffing adequacy).

2 (low and high staffing adequacy) x 4 (call type) mixed ANOVA (Figure 1)

- Main effect of call type $F(3, 195) = 17.84, p < .0001, \text{partial } \eta^2 = .22$
- No main effect of perceived staffing adequacy or interaction between calls and perceived staffing adequacy

2 (low and high organizational stress) x 4 (call type) mixed ANOVA (Figure 2)

- Main effect of call type $F(3, 195) = 18.55, p < .0001, \text{partial } \eta^2 = .22$
- Simple main effect of organizational stress $F(1, 65) = 5.60, p = .02, \text{partial } \eta^2 = .08$
- No interaction between calls and organizational stress

The differences between how stressful the calls were to handle are indicated on the graph.

Discussion

The goal of secondary prevention is to identify individuals who are at an increased risk for stress injury that is above and beyond the inherent risks associated with the job.

These results suggest that these emergencies that are risk factors for ASD are considered different in terms of stressful to handle, except for the call types of structure fires and calming uncooperative callers. Surprisingly, regardless of which call type was included, the results indicated that these differences were not due to work related stressors.

In light of these findings, other differences that are related to call types (including individual versus organizational dispositional levels of job stress) are important to investigate in order to elucidate risk and resilience factors associated with specific call types. Future research should build upon this by investigating individual level differences in response to different call types. Identifying the distinctive individual factors of each emergency dispatcher that contribute to how he or she will react to stressors will assist in the development of secondary prevention.

References

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