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Managing stress in prehospital care: Strategies used by ambulance nurses

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ABSTRACT

Background: Ambulance nurses display stress symptoms, resulting from their work with patients in an emergency service. Certain individuals seem, however, to handle longstanding stress better than others and remain in exposed occupations such as ambulance services for many years. This paper examines stress inducing and stress defusing factors among ambulance nurses.

Methods: A qualitative descriptive design using critical incident technique was used. A total of 123 critical incidents were identified, and a total of 61 strategies dealing with stress were confirmed. In all, 13 sub-categories (seven stress factors and five stress reducing factors) were merged into four categories (two stress categories and two stress reducing categories).

Results and conclusion: The study shows that ambulance nurses in general experience emergency calls as being stressful. Unclear circumstances increase the stress level, with cases involving children and childbirth being especially stressful. Accurate information and assistance from the dispatch centre reduced the stress. Having discussions with colleagues directly after the assignment were particularly stress reducing. Advanced team collaboration with teammates was viewed as effective means to decrease stress, in addition to simple rituals to defuse stress such as taking short breaks during the workday. The study confirmed earlier studies that suggest the benefits of defusing immediately after stress reactions.

1. Introduction

This paper highlights the strategies used by ambulance nurses when defusing traumatic events – a focus that has previously received limited attention, particularly in Sweden, where the data collection took place.

2. Background

Ambulance nursing staff and healthcare specialists as well as paramedics around the world are prone to stress symptoms and display different health problems, especially those who work in emergency medicine and are exposed to violence and trauma [8,19,7]. Nevertheless, certain individuals seem to be able to handle longstanding stress better than others. Accordingly, some people have the ability to remain in occupations exposed to stress such as ambulance services. Others leave such professions early on in their careers and choose less stressful professions. Ambulance staff are often the first ones to face humans in life threatening trauma and circumstances [37]. Studies from Sweden and Norway confirm that ambulance staff experience stress [34]. The authors found that 360 out of 1286 (28%) of the interviewed ambulance staff occasionally had feelings that life was not worth living. As many as 270 (10.4%) had thoughts of committing suicide and 35 (3.1%) had attempted suicide. Sterud et al. [35] believed that staff in ambulance services are not likely to seek help from a psychologist or physician. Jonsson et al. [20] found that lack of Sense of Coherence (SOC), which reflects a person's ability to cope with stressful situations [4], was related to a predisposition to Post-Traumatic Stress Disorder (PTSD). PTSD is characterised by the developing anxiety symptoms after being exposed to an extreme traumatic stressor, for example, witnessing an event that involves death or serious injury [5]. The study found that analysis of low SOC was a way to predict PTSD-symptoms in ambulance staff [36].

Models that have been used to prevent PTSD among professional groups include debriefing, defusing, conversation sessions, peer support and stress therapy [28]. Several studies have shown that poor debriefing, and simplified or compressed defusing sessions could contribute to the risk of suffering PTSD, depression, anxiety syndrome and suicidal tendencies [29,32].

Bannister and McInnes [6] stated that stress affects nurses because they seldom had time to defuse after a traumatic experience. Ambulance nurses, who have an intensive pace at work, are

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therefore unable to sit down and talk about traumatic experiences. Furthermore, strategies to prepare newly employed staff for traumatic situations were seldom provided.

Several researchers have studied PTSD, but as far as we know, no studies have addressed strategies that ambulance nurses implement to handle and/or prevent stress in the ambulance context. In this study, stress inducing and stress defusing factors among ambulance nurses were examined.

3. Method

3.1. Design, setting and participants

This study used a descriptive design based on Critical Incident Technique (CIT) [14]. The critical incident technique uses a systematic, inductive, research method to obtain descriptions of human behaviour in critical situations [9,23,22]. According to Flanagan [14], data from interviews, questionnaires, observations and self-reports can be used to collect information about incidents. In this study, interviewed participants were given the opportunity to express both favourable and less favourable critical incidents from their work experiences [9]. Andersson and Nilsson [3] suggests a total of one hundred or more incidents are needed to reach data saturation and adequate analysis [13].

The number of incidents can vary, depending on the sensitivity and complexity of the studied context and could be deemed satisfactory when data saturation is obtained [3]. The selection of participants was based on the studied context, i.e. socio-demographic and professional characteristics such as sex, education and years in service [15]. A strategic sample according to sex was selected and a minimum of ten years in ambulance service was chosen, in order to capture information about critical incidents. In order to identify ambulance nurses with over 10 years of experience, station managers at four ambulance services were contacted. After obtaining permission from the station manager, an informative letter was sent to the ambulance nurses to inform them about the study and ask for their participation. Eight female and seven male nurses from four different ambulance services in western Sweden were invited to participate in the study. The participants' work experience varied from 10 to 43 years, and they had completed a range of specialist nursing qualifications (Table 1). All participants who met the inclusion criteria volunteered to participate in the study.

3.2. Ethical aspects

This study complied with ethical procedures according to Swedish law [33] as well as the World Medical Association Declaration of Helsinki (2009) [11]. The study contained an introductory letter in which the purpose of the study was described, providing detailed instructions and information that clearly pointed out that participation in the study was voluntary [38]. Confidentiality was guaranteed, and participants were informed that they were free to withdraw from the study at any time they wanted without negative consequences. Participants were assured that the data was safeguarded according to Swedish statutes [33].

Table 1
Distribution of participants.

Male	7
Female	8
Years in profession as ambulance nurse	
10–19	7
20–29	4
30–39	3
40–49	1
Advanced level[a]	
Ambulance	5
Anesthesia	2
Intensive care	1
Midwifery	1
Neonatal	2
First cycle graduation	6

[a] Some participants had several qualifications at advanced level.

3.3. Data collection

The first author collected data from semi-structured interviews recorded on an MP3 player.

These interviews were later transcribed. Five interviews were undertaken face-to-face at the workplace after work hours and three in a neutral area. Seven interviews were conducted by telephone. Each of the interviews started with open-ended questions about stress related to the interviewee's work in ambulance services and then about critical incidents and emergency situations. The length of the interviews was approximately 45 min. The shortest interview lasted 25 min and the longest lasted one hour and 10 min.

An interview instrument was used to capture critical incidents. Some of the questions were:

Do you experience your work as being stressful? Tell us about an episode where stress was handled in a successful way? Tell us about an episode where stress was handled in a less successful way? Tell us about strategies you have used in order to handle stressful experiences?

3.4. Data analysis

The process of analysis started with reading of the transcribed interviews [24].

Experiences related to stressful experiences were identified and subjected to a structural analysis in line with the CIT-tradition [16]. The data were distributed in main areas of category and subcategory. A sum of 123 critical incidents and a total of 61 strategies to deal with stress were identified by the authors. As many as 49 suggestions for organisational improvements were made, and 14 factors that could decrease sick leave and staff turnover if implemented were identified. According to the method described by Andersson and Nilsson [3], incidents were compared to identify 94 similarities and differences. They were categorised into subcategories respectively. When an incident fitted into more than one of the sub-categories, the sub-category that related to the type of event was chosen. In all, 13 sub-categories (seven stress factors and five stress reducing factors) were merged into four categories (two stress categories and two stress reducing categories).

4. Results

4.1. Factors contributing to stress

Two themes were identified as factors contributing to stress, namely, insufficiency and uncertainty. Each factor and related sub-categories are discussed in the following.

4.1.1. Insufficiency

Insufficiency was distributed in the sub-categories of lack of information, being worried about not having resources to deal with the situation, a feeling of personal shortcomings and lack of control over the situation (Table 2).

4.1.1.1. Lack of information. The alert warnings created a feeling of stress. This occurred before the patient's information was provided

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