

The Impact of Work Stress on the Professional Relationship Between Paramedics and Nurses in Emergency Situations

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Abstract: The current study aimed to identify the impact of work pressure on the professional relationship between paramedics and nurses in emergency situations, and the study was applied to a sample of 357 individuals working in the emergency departments in Taif city. The study concluded with several findings, the most important of which are: Occupational pressures affect the impact of work pressures on the professional relationship between paramedics and nurses in emergency situations on the performance of nursing staff, especially when they feel anxious and fearful about the deterioration of the patient's condition (life or death) as a result of practicing their professional duties. The study recommended increasing the awareness of paramedics and emergency nurses of infection prevention methods and techniques to reduce their fear of exposure to infection during work, as well as putting in place security measures that prevent aggression by some patients and companions.

Keywords: Work stress, professional relationship, paramedics, nurses, emergencies.

1-BACKGROUND:

Professional work is a crucial part of the functioning of a modern person. However, it contributes to a wide range of frustration levels, which affects health in a negative way. The recent civilization progress and resulting technological developments have been causing constant changes in the working conditions and in the organization of workplaces, triggering high levels of stress.

Stress is a stimulus and the reaction to it occurs on various levels: physical, behavioral, emotional, and cognitive. often characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment.

Occupational stress refers to temporary psychological strain from demanding work conditions, while burnout is a long-term syndrome involving emotional exhaustion, depersonalization, and reduced performance.. The nurse is an important employee in the labor market of medical services, with both the patients and their families being the subjects of their professional activities. Factors that may cause a psychological imbalance in a nurse, and lead to occupational burnout, may be associated with the working conditions and organization, the patient and his family, and the relationship with the therapeutic team, as well as discomfort resulting from the profession. While occupational stress refers to the psychological strain resulting from job demands, burnout is a prolonged response to chronic stress, often characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment (Olkiewicz & Andruszkiewicz, 2012, p. 73). affects those people who show strong motivations and increased expectations related to their professional work.

Currently, health workers suffering from stress exceed 28%, which has significant implications for the efficiency and responsiveness of prehospital emergency services is to be a rapid resource with a high degree of effectiveness, requiring coordinated interventions adapted to the specific characteristics of each situation, estimated after a previous assessment.

The high specificity of this service, nonetheless, does not always correspond to regulated training of professionals, and it is still possible to access the emergency ambulance unit with just a university nursing degree in some locations. For instance, in Spain, the Emergency Nurse must have a university degree in Nursing, but the Master's Degree in Emergency Nursing, or nursing specialties in community nursing or medical-surgical nursing are not mandatory requirements. Nevertheless, in other countries such as Sweden, Finland, Belgium, Thailand, Malaysia, Indonesia, or Brazil, nurses provide prehospital services and define a new field for the university nursing practice and training. Indeed, in Sweden, national regulations require an ambulance to be staffed with at least one registered nurse and, depending on local requirements, this nurse is often required to hold an additional one-year post-graduate specialist nursing diploma. In Croatia, Estonia, and Lithuania this training is ongoing, while in the Czech Republic, Germany, Ireland, Latvia, the Netherlands, and the United Kingdom nurses are required to attend courses on a yearly basis. (Mirzaei & Mozaffari, 2022)

The issue of work stress and burnout has been addressed in the psychology literature since the 1970s. The word "burnout" is a metaphor, but it accurately captures the essence of the exhaustion experienced by an individual as a result of highly stressful working conditions. The rapid development of work stress is a result of the tasks that are still imposed on the nurse, and her own sense of emotional exhaustion. Working as a nurse or paramedic is inherently associated with exposure to stress. For a nurse, the work can be a source of professional satisfaction as well as an overload. This job carries a high risk of developing burnout syndrome due to the occurrence of chronic stress. (Kowalczyk, K.; Zdańska, A.; 2011, P98)

Understanding the distinction between stress and burnout is essential for developing targeted interventions that support collaboration between paramedics and nurses in high-stress environments like emergency departments

The occurrence of work-related stress and burnout is a serious social issue. It has been observed for several decades, but its importance is still underestimated. The response to stress varies from person to person. Coping with stress may be more or less effective depending on the method we use and the particular situation.

The aim of this study is to assess the impact of work stress on the professional relationship between paramedics and nurses in emergency situations in the emergency departments in Taif city. Specifically, to identify the links between the level of work stress, the degree of professional experience and the level of knowledge. To study the relationship between the impact of work stress and professionalism among paramedics and emergency nurses. To study the main protective factors against work-related stress in emergency situations.

PROBLEM OF THE STUDY:

The research issue is the professional pressures experienced by nursing staff in health facilities that negatively affect their performance, satisfaction and job affiliation, as it became clear to the researchers through their work in the health field that nursing staff are exposed to severe pressures at work, often the source of which is the long working hours that extend for long hours and work on holidays, religious and official occasions, as well as the nature of work that requires a shift work system in addition to the workload on it, the researchers will study the impact of this on the performance of working nursing staff, so the issue for this study is summarized in the following main question: What is the impact of work pressure on the professional relationship between paramedics and nurses in emergency situations?

The main objective is to find out the impact of work stress on the professional relationship between paramedics and nurses in emergency situations.

From this objective, the following objectives are derived:

- 1- Presenting and analyzing the impact of shift times on the performance of paramedics and nurses in the emergency departments in Taif city.
- 2- Presenting and analyzing the impact of medical errors on the performance of paramedics and nurses in emergency departments in Taif city.

2-METHOD:

In this study, the descriptive-analytical approach was adopted to identify the opinions of workers in the emergency departments in Taif city through a survey to identify the views of health care workers on the impact of work pressures on the professional relationship between paramedics and emergency nurses in the emergency departments in Taif city. The descriptive-analytical approach was used to design a questionnaire assessing the perceived impact of work-related pressure on the professional relationship between paramedics and emergency nurses in the healthcare sector.

This study targets all 5000 healthcare workers in the emergency departments in Taif city, and their number is 5000 workers in the emergency departments in Taif city. The sample size for the current group was calculated using a sample size formula that would estimate an appropriate sample to justify the results of the current study on the impact of work pressure on the professional relationship between paramedics and emergency nurses, and the formula for calculating the minimum sample size for the current study was as follows:

$$n = N/1+N(e)^2$$

where n represents sample

**N shows population size e is the standard error which is appropriately $\pm 5\%$
(Yamane, 1967).**

$$n = 5000/1+5000(0.05)^2$$

$$n = 357 \text{ samples}$$

According to the formula, the minimum estimated sample size will be about 357, as the participants' responses will show the generalizability of the research results to the target group of health workers working in Taif region. Questionnaires were distributed among the sample to collect data using the survey instrument over a period of two months.

A five-point Likert scale-based survey questionnaire was developed to assess the impact of work pressure on the professional relationship between paramedics and emergency nurses in the emergency departments in Taif city. The questionnaire items were designed to measure various dimensions of occupational stress, including shift work, medical errors, work injuries, and interdepartmental movement, as perceived

by healthcare staff. Respondents rated their agreement with each statement on a scale ranging from 1 (strongly disagree) to 5 (strongly agree).

To ensure the reliability of the instrument, the internal consistency was evaluated using Cronbach's alpha, yielding a coefficient of 0.87, which indicates good reliability. Content validity was established by a panel of three healthcare experts who reviewed the questionnaire for clarity, relevance, and comprehensiveness of the items.

The questionnaire was designed to assess the perceived impact of work-related pressure on professional relationships. Example items included: 'I feel my performance is negatively impacted by frequent night shifts' and 'Medical errors increase tension between staff'. on the professional relationship between paramedics and emergency nurses in the emergency departments in Taif city, and the questionnaire was designed to assess the perceived impact of work-related pressure on the professional relationship between paramedics and emergency nurses in these health institutions from the employees' point of view.

The Likert scale is an effective means of identifying and measuring the acceptability of the responses of health care employees in the emergency departments in Taif city, so the questionnaire and its components were categorized into: Measuring the impact of work pressure on the professional relationship between paramedics and nurses in emergency situations. Likert scale scores ranged from 1 (strongly disagree) to 5 (strongly agree) to determine the level of agreement within each dimension in order to obtain a clearer picture of the Taif city Hospitals.

The following statistical methods and tests were applied to analyze the data: Arithmetic means, standard deviations, correlation matrix, regression analysis, regression analysis, and competitive analysis.

3-INTERPRET AND RANK THE STRENGTH OF THE EFFECT OF THE INDEPENDENT VARIABLES ON THE DEPENDENT VARIABLE:

The following is the interpretation and ranking of the strength of the effect of the independent variables on the dependent variable:

Independent variables	General average	Chi-Square	Arrangement
shift times	3.64	25.77	3
Medical errors	4.075	33.05	1
work injuries	3.75	23.05	2
Frequent rotation between departments	3.32	19.05	4

The independent variable (medical errors) is the most influential independent variable on the dependent variable (professional relationship between paramedics and emergency nurses), with an arithmetic mean of 4.075 and a chi-square value of 33.05.

The independent variable (work injuries) is the second most influential independent variable on the dependent variable (professional relationship between paramedics and nurses in emergency situations) at the Psychiatric Care Center in Taif, with an arithmetic mean of 3.75 and a chi-square value of 23.05.

The independent variable (shift times) ranks third in influencing the dependent variable (professional relationship between paramedics and emergency nurses), with a mean of 3.64 and a chi-square value of 25.77.

The independent variable (continuous movement between different departments) comes in the last rank to influence the dependent variable (professional relationship between paramedics and emergency nurses), with an arithmetic mean of 3.32 and a chi-square value of 19.05 that the sample members agree with the availability of night shifts in the surrounding work environment especially in the conflict of working time in most cases due to shifts with family obligations and the shift work system leads to stress, and this is confirmed by the value of the overall average of the axis which reached (3.64) corresponding to the answer agree.

1- The sample members agree that there are professional pressures due to medical errors, especially when feeling anxious and fearful about the deterioration of the patient's condition (life or death) as a result of practicing my duties, as well as fear of any medical error during the practice of the profession, and this can be deduced from

the value of the general arithmetic mean of the axis, which amounted to (4.75), corresponding to the answer agree according to the five-point Likert criterion.

2- The sample members agree that there are pressures due to work injury, as indicated by the general arithmetic mean value of (3.75), which corresponds to a 'positive response' on the Likert scale, including the possibility of infection and the possibility of being harmed by physical or verbal aggression by some patients or auditors.

3- The sample members expressed uncertainty regarding the work-related pressures at work due to the continuous movement between different departments, as the continuous movement between different departments weakens their skills in practicing the profession and the feeling of discomfort when moving to a different department, especially critical and emergency departments, and this is confirmed by the value of The overall arithmetic mean of 3.19 indicates an *uncertain* response among participants.

4- The respondents agree that their performance is affected by professional pressures through the arithmetic mean of (3.4), which corresponds to the answer agree according to the five-factor Likert scale, which means that Respondents indicated that work pressures negatively affect the professional relationship between paramedics and nurses in emergency situations, and their agreement is characterized by the following:

- Failure to complete tasks accurately.
- Absenteeism and frequent sick leave.
- Failure to show up on time.

4-RESULTS RELATED TO THE RELATIONSHIP BETWEEN THE VARIABLES:

The relationship between the independent variables (occupational stress, night shifts, medical errors, work injury) and the dependent variable (professional relationship between paramedics and emergency nurses), we find that the statistical significance level of the corresponding t-test is less than (0.05), which means that the

relationship between these variables and the dependent variable is significant at a statistical significance level of (0.05).

The results indicate that the effect of the independent variables on the dependent variable (the professional relationship between paramedics and nurses in emergency situations) was significant, especially with regard to medical errors, followed by work injuries, shift times, and finally continuous movement between different departments.

5-DISCUSS THE RESULTS OF THE STUDY:

5/1 The results of the study indicated that night shifts in the surrounding work environment are considered an occupational stressor for paramedics and nurses in emergency situations, especially in that they often conflict with family obligations and lead to physical stress. Such a conclusion was indicated by the study of (Al-Louzi and Al-Hunaiti, 2013). (Al-Shehri, 2014), where the results of the two studies indicated that the lack of continuity in the nursing profession is due to several reasons, including: Night shifts in addition to long working hours, which disrupts family duties.

5/2 The results of the study confirmed that medical errors are considered one of the main factors in occupational stress among nursing staff, especially when feeling anxious and fearful about the deterioration of the patient's condition (life or death), as well as the fear of any medical error during the practice of the profession, and this study is also consistent with consistent with Harim (2013) and also aligns with Dugan et al. (2013) whose results indicated that there is a strong correlation between work stress levels and medical errors.

5/3 The results of the current study indicated that injury at work is one of the causes of occupational stress among paramedics and nurses and the relationship between them, including the possibility of infection and the possibility of being harmed by physical or verbal aggression by some patients or patients, and this result may be consistent with the study of (Al-Maani & Rashida, 2015) which indicated that the

fear of infection while practicing the profession with an infectious disease is one of the causes of work stress among paramedics and nurses in emergency situations.

5/4 The continuous movement between different departments, as the study indicated, does not represent professional pressure on paramedics and emergency nurses in the practice of the profession in terms of feeling uncomfortable when moving to a different department, especially critical and emergency departments. This result is contrary to the study (Vander Ploeg, Kabir RJ, 2013), which confirmed that most of the workers who are transferred to work in the field of ambulance face severe pressures during the performance of their work, such as not being informed of important decisions during the practice of the profession, especially when it is necessary to implement some kind of intervention in the workplace.

6- CONCLUSIONS:

6/1 Shift-related stressors affect the professional relationship between paramedics and nurses in emergency situations because it conflicts with family obligations and the shift work system leads to stress.

6/2 Occupational pressures related to medical errors affect the impact of work pressures on the professional relationship between paramedics and emergency nurses and the performance of nursing staff, especially when they are concerned about the deterioration of the patient's condition (life or death) as a result of practicing their professional duties.

6/3 Occupational stress due to work injury affects the professional relationship between paramedics and nurses in emergency situations, including the possibility of infection and the possibility of being harmed by physical or verbal aggression by some patients or patients.

6/4 Occupational pressures due to continuous movement between different departments to some extent affect the professional relationship between paramedics and nurses in emergency situations, as the continuous movement between different departments weakens their skills in practicing the profession and feeling uncomfortable when moving to a different department, especially critical (emergency) departments.

6/5 Nursing performance is affected by occupational stress, which is represented by not accomplishing tasks accurately. Absenteeism, frequent sick leave, and irregular attendance on time.

7-RECOMMENDATION:

7/1 With regard to night shifts, take into account personal, health, family and social circumstances when determining individuals who work in the evening or morning shifts according to their previous circumstances, while minimizing the workload of workers during night shifts.

7/2 Regarding professional pressures related to medical errors affecting the professional relationship between paramedics and nurses in emergency situations, enrolling nursing staff in training courses through continuous education so that they have confidence while practicing their duties.

7/3 Minimize the continuous movement between different departments, as the continuous movement between different departments weakens their skills in practicing the profession.

7/4 With regard to work injury, attention should be paid to increasing the awareness of paramedics and emergency nurses of infection prevention methods and techniques to reduce their fear of exposure to infection during work, as well as to put in place security measures that prevent aggression by some patients and companions.

7/5 To achieve better performance by paramedics and emergency nurses, occupational stress must be addressed and mitigated.

Authors' Contributions

All authors contributed to revision of the manuscript and approved the final version of the manuscript prior to its submission.

Data Availability Statement

The datasets generated during and/or analyzed during the current study are not publicly available due to privacy, confidentiality and other restrictions, but are available from the corresponding author on reasonable request.

Compliance with Ethical Standards Institutional Review Board Opinion

Letter, A-02-T-1473.

Informed consent: Consent was secured from all the respondents who participated in the study.

Conflict of interest: No conflict of interest.

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