



Occupational stress of the medical nurses in 7A Military Hospital

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General Note

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ABSTRACT

Aim: This study described the stress situation of the medical nurses in 7A Military Hospital in 2019. *Material and methods:* This study employed a descriptive, cross-sectional approach and was performed on 165 nurses in 7A Military Hospital. The participants were

asked to fill the information of their stress situation in a predesigned questionnaire based on the Expanded Nursing Stress Scale. The stress situation was classified into three levels of "low", "average", and "high". *Results:* The studied nurses had a "low" stress level. The lowest stress score occurred in the issues related to their superiors such as lack of assistance from the leading board or conflicts with the head nurse in another department (1.55 ± 0.18), or problem with peers (1.55 ± 0.14) for example difference in genders or lack of sympathy and opportunity in experience sharing. The highest stress score was observed in the issues related to the patients' relatives (2.12 ± 0.25), such as irrational demands or verbal abuse from these relatives. *Conclusion:* In general the stress situation of the nurses is low. The largest factors causing this issue are irrational demands and verbal abuse from the patients' relatives, and the least impacted factors are gender differences between colleagues and lack of assistance from the head nurses.

Keywords: Stress, Nurse, Expanded Nursing Stress Scale (ENSS).

1. INTRODUCTION

Stress is a syndrome including non-specific body responses to the environmental stimulants, forces the body into a process of adaptation for a new state of balance under the environmental pressures. Normal stress responses contribute to the adaptation of the body, but improper and inadequate responses which failed to create a new balanced state will cause functional disorder and pathological signs of the physical and mental health and in the behaviors, all of which lead to acute or chronic pathological stresses (Nguyen, 2006).

The study of Hamaideh *et al.*, (2008) on 464 medical nurses of 13 hospitals in Jordan showed that work overload and exposures of patient fatality-related issues are the fundamental factors causing stress. Dobnik *et al.*, (2016) investigated 983 nurses of 21 hospitals in Slovenia and observed a high-stress rate (56.5% of the respondents). In Vietnam, research of Ngo *et al.*, (2015) showed an 18.1 stress rate including 2.7% severe cases amongst the nurses. Duong *et al.*, (2014) reported a 56.9% stress rate amongst the nurses and midwives in eight clinical departments of Nguyen Dinh Chieu Hospital, Ben Tre province (VietNam).

There are various researches on nurses occupational stress in Vietnam, however, most studies make use of the Depression, Anxiety and Stress Scale (DASS) (Duong *et al.*, 2014; Ngo *et al.*, 2015), which is a generalist scale for a wide range of demographics. In our study we employed the specialist Expanded Nursing Stress Scale (ENSS) for the nurses. Our study was aimed to make a description of the stress situation of the medical nurses in 7A Military Hospital in 2019.

2. MATERIAL AND METHODS

Time, location, and participants

The study was performed on the medical nurses working in the clinical departments of 7A Military Hospital, from March to December 2019.

Study design

The study employed a descriptive, cross-sectional approach. Convenient and whole-population sampling was used. There were 165 nurses included in this study.

Data collection

Data of the participants was collected by interviewing with a predesigned questionnaire. Before the interviews, the leading board of each investigated department was informed of the study content, time, methodology, together with the guarantee of privacy for the participants. The exact time of interviews was set with the agreement of the corresponding leading board. The total number of personnel and the number of personnel not available for a mass interview in each department was also collected beforehand to prepare a sufficient amount of questionnaires.

All the nurses available for mass interviews were summoned by the corresponding leading board on the day of the interview and were informed of the study. Participation in the study was voluntary, verified by a signed document. The participated personnel was asked to fill their data in the questionnaire. The personnel not available for mass interviews were surveyed personally following a similar procedure.

Stress scale employed

This study made use of the Expanded Nursing Stress Scale (ENSS) designed explicitly for medical nurses, which was invented in 1995 by French and colleagues (French *et al.*, 2000). The ENSS scale investigated the nurses' stress situation in eight aspects as the following:

Facing the patient fatality (7 questions),
Conflicts with the physicians (5 questions),
Emotional unpreparedness (3 questions),
Problem with peers (6 questions),
Problem with superiors (7 questions),
Workload (9 questions),
The uncertainty concern treatment (9 questions), and
Issues related to the patients' relatives (6 questions).
For each question, the respondents were asked to choose one amongst four stress levels:
Not stressful (scored 1 point),
Occasionally stressful (2 points),
Frequently stressful (3 points), and
Extremely stressful (4 points).

The total acquired score could be from 54 to 216 and the higher score meant greater stress. The stress situation was classified into three levels. The average score of 1 to less than 2 corresponded with "low" level, 2 to 3 with "average" level and more than 3 to 4 with "high" level (Polit and Hungler, 1999).

Data analysis

EpiData software was employed for data processing. The data was purified and processed before analysis. The stress situation was presented in percentage and frequency.

Ethical declaration

The study was approved by the Medicine Scientific Research Ethics Committee of the 7A Military Hospital and aimed to improve treatment (Number: 65/QĐ-HĐYĐ-BV7A, date: 25.03.2019). This study is original and is not published in other scientific journals.

3. RESULTS

General characteristics

Amongst 165 participated personnel, the majority were young nurses as 60.6% of the nurses aged from 25 to 35 years, 12.1% aged below 25, and only 27.3% aged over 35. Female nurses were dominant (84.8%). All nurses belong to the Kinh ethnic group. The marriage rate was 80.6%.

Most investigated nurses had junior college qualifications (72.2%). Vocational and university qualifications accounted for 13.9% each, and none had postgraduate degree. The majority of the nurses worked in the resident department (76.4%). Medical emergency and intensive care made up of 14.5% and clinical examination made up of 9.1%. The average length of services was 9.68 (± 4.79) years, and the average service length in the department was 5.38 (± 0.09) years, which meant there were stable career positions for young medical staff.

There was 107 personnel who had young children aged below five years (64.8%). The monthly average income was 10.30 (± 2.50) million VND (1 USD approximately 22.700.00 VND). Only 14 nurses had work overtime. The average number of patients taken care of per nurse per session was 22.11 (± 17.95) patients.

Stress situation

All the investigated nurses had a "low" stress level. The lowest stress score was observed in the issues related to the superiors (1.42 ± 0.18) and peers (1.61 ± 0.14). The highest score occurred in the issues related to the patients and their relatives (2.13 ± 0.25). The average score was (1.75 ± 0.19) (Table 1).

Amongst the stress factors, the ten most notable were: irrational demands from the patients (2.42 ± 0.74); verbal abuse from patients' relative (2.52 ± 0.82); irrational demands from the patients' relatives (2.25 ± 0.61); violence and aggressiveness from patients and their relatives (2.28 (0.78)); exposure to hazardous environment and dangers (2.32 ± 0.67); poor treatment and behavior from patients' relatives (2.27 ± 0.77); had to perform painful procedures on patients (2.27 ± 0.66); the witness of patient's suffering (2.24 ± 0.70); the witness of patients death (2.13 ± 0.77); not adequate time for caring of patients and their relatives (2.11 ± 0.68) (table 2).

Table 1 Nurse stress level per aspects

No.	Stress aspect	Stress score and percentage				Average score (standard deviation-SD±)	Stress level
		1	2	3	4		
1	Facing patient fatality	32.12	50.30	12.12	5.45	1.91 (±0.23)	Low
2	Conflict with doctors	39.39	52.12	7.27	1.21	1.70 (±0.14)	Low
3	Emotionally unpreparedness	24.85	66.67	7.27	1.21	1.85 (±0.11)	Low
4	Problem with peers	50.91	44.24	4.24	0.61	1.55 (±0.14)	Low
5	Issues related to superior	54.55	38.18	5.45	1.82	1.55 (±0.18)	Low
6	Workload	34.55	53.94	9.70	1.82	1.79 (±0.16)	Low
7	Uncertainty concern treatment	41.82	47.27	9.09	1.82	1.71 (±0.23)	Low
8	Patients and their relatives	20.00	47.27	19.39	6.06	2.12 (±0.25)	Average
The average stress level in general						1.77 (±1.09)	Low

Table 2 The ten most stressful factors

Question number	Factors	Average score ± SD
8.6	Verbal abuse from patients' relative	2.52±0.82
8.1	Irrational demands from the patients	2.42 ±0.74
7.7	Exposure to hazardous environment and dangers	2.32 ±0.67
8.5	Violence and aggressiveness from patients and their relatives	2.28 ±0.78
8.7	Poor treatment and behavior from patients' relatives	2.27±0.77
1.1	Had to perform painful procedures on patients	2.27 ±0.66
8.2	Irrational demands from the patients' relatives	2.25 ±0.61
1.7	The witness of the patient's suffering	2.24±0.70
1.4	The witness of the patients' death	2.13±0.77
6.6	Not having adequate time for caring of patients and their relatives	2.11±0.68

The ten least stressful factors were: gender difference between colleagues (1.31 ±0.51); lack of assistance from the head nurses (1.35±0.53); lack of support from other leading staff (1.49 ±0.51); conflicts with the head nurse from another department (1.44±0.62), feeling of inadequate training for the job (1.47±0.6); lack of assistance from the head nurse of the hospital (1.42±0.61); the uncertainty of what to tell and not to tell about the patients' situation and treatment to their relatives (1.53±0.68); absence of doctor in the case of fatality (1.52±0.84); lack of experience sharing and colleague sympathy in the department (1.55 ±0.54); being criticized by the head nurse (1.52 ±0.71) (table 3).

Table 3 The ten least stressful factors

Question number	Factors	Average score ± SD
4.6	Gender difference between colleagues	1.31 ±0.51
5.2	Lack of assistance from the head nurses	1.35±0.53
5.4	Lack of assistance from the head nurse of the hospital	1.42 ±0.61
5.1	Conflicts with the head nurse from another department	1.44±0.62
7.5	The feeling of inadequate training for the job	1.47±0.6
5.6	Lack of assistance from other leading staff	1.49 ±0.51
1.6	Absence of doctor in the case of fatality	1.52±0.84
5.7	Being criticized by the head nurse of the hospital	1.52 ±0.71
7.6	The uncertainty of what to tell and not to tell about the patients' situation and treatment to their relatives	1.53±0.68
4.2	Lack of experience sharing and colleague sympathy in the department	1.55 ±0.54

4. DISCUSSION

Our study results showed that stress level is low amongst the researched population and the lowest levels were observed in the issues related to the superiors (1.55±0.14) and other nurses (1.55±0.18) and the highest ones occurred in the problems related to the patients and their relatives (2.12 ±0.25) (Table 1). The study of Najimi *et al.* (2012) also observed that most of the participants had "normal stress" while none had "extreme" and very few had "medium" or "without stress". Meanwhile, Chatzigiani *et al.* (2018)

reported a 136.27 total ENSS score, and Kshetrimayum et al. (2019) reported 123.22 total ENSS scores, both at medium level. The difference was probably due to the difference in geographic location and demographics of the nurses. Tran *et al.* (2019)'s analysis showed a heterogeneous and highly classified stress status amongst the nurses based on ages, positions, working conditions, relationships, and rewards. Therefore further researches in larger samples and more detailed comparison may be essential for a better assessment.

The witness of patients' suffering and death can strongly affect the thinking and emotion of the nurses which leads to stress. In our study, the stress situation reached "average" level in such issues, for example, perform painful procedures on patients (2.27 ± 0.66), the witness of patient's suffering (2.24 ± 0.70), and witness of patients death (2.13 ± 0.77). Chatzigianni *et al.* (2018) also recognized facing death and dying is one of the two most important stressors amongst the nurses, and is in line with other studies using ENSS as the scale. The study of Tran (2014) on in-service educated nurses taking care of suffering patients observed a lower score of 1.99 ± 1.28 . Nursing is a career not only demanding in the profession but also ethics and morality, and even for the experienced personnel facing the death and suffering of the patients is still a significant factor of stress, which requires the self-control, self-balancing of the nurse to remain calm. The composed behavior of the nurses in a severe situation can also stabilize the emotional and mental health of the patients.

The behavior of the patients affects the medical staff-patient relationship. In all cases, the medical staff always feels the pressure of performance requirements. However, many factors affect that performance of the medical staff and the irrational behaviors from the patients are important ones. The rudeness and bad attitudes from the patients reduce the nurses' performance and increase their procedures. In our study, we also found the largest stress factors included irrational demands from the patients and their relatives (2.25 ± 0.61) and verbal abuse from patients (2.28 ± 0.78). Gates *et al.* (2011) reported 94% of emergency care nurses experienced posttraumatic stress disorder symptoms due to violence and 17% may fall into cases of post-traumatic stress disorder. Itzhaki *et al.* (2018) remarked that previous experiences of workplace violence reduced satisfaction and increased stress in mental nurses. Cheung *et al.* (2018) noticed much higher risks of physical and verbal abuse against nurses in comparison with physicians with patients and relatives were amongst the main culprits and called for zero-tolerance policy towards workplace violence against healthcare staffs since it is detrimental to their health and can cause irrecoverable harms for them. Chatzigianni *et al.* (2018) also argued that violence should not be treated as part of the job, and guidelines, program, frameworks for the issues is necessary.

The least stress-caused factor for nurses in our study was the difference in gender (1.31 ± 0.51), and lack of assistance from the head nurse (1.35 ± 0.53). A professional nurse already gets used to paying attention to small details of the patients and reporting to the doctors or nurses at a higher level; calmness, versatility, carefulness and high ethical standard are the musts for a professional nurse. Therefore the mentioned issues are not the major cause of stress for the medical nurses. Faremi *et al.* (2019) also reported that lack of staff support was less stressful than issues such as death and dying. Nurses are important companions of the physicians and surgeons from normal daily patient care to the sophisticated issues required the application of the most advanced test in surgical operations. In the cases of difficult surgery or illness treatment, patient care and infection prevention tasks of the medical nurses play a vital role. The nurses also have a social service function as they participate in the assistance of patients with financial difficulties, sharing information of patient care, and provide mental and spiritual assistance for the patients and their relatives. Hence the hospital leadership needs to guarantee and improve the performance and career quality for the nurse personnel. For example, the mental condition of the nurses should be taken care of as this career suffers from stressful working conditions both in physical and mental aspects. High-stress rate amongst the nurses not only affects their health but also leads to negative consequences in the profession which can directly affect the health of the patients.

5. CONCLUSION

In our study, the stress situation of investigated nurses was at "low" level. The lowest stress score took part in issues related to the superiors (1.55 ± 0.18), and peers (1.55 ± 0.14). The highest stress score occurred in issues related to the patients and their relatives (2.12 ± 0.25). The most important stress factors for the nurses were irrational demands and verbal abuses from the patients and their relatives. The least important stress factors were gender differences amongst colleagues and lack of assistance from the head nurse.

Declaration

Scientific Responsibility Statement

The authors declare that they are responsible for the article's scientific content including study design, data collection, analysis and interpretation, writing, some of the mainline, or all of the preparation and scientific review of the contents and approval of the final version of the article.

Animal and human rights statement

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

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Conflict of interest

None of the authors received any type of financial support that could be considered potential conflict of interest regarding the manuscript or its submission.

Contribution

This work was carried out in collaboration with all authors. All authors read and approved the final manuscript. The patients and relatives were well-informed about their conditions and equal treatment and were asked to take part in the study. The participation was strictly voluntary, verified by signed documents.

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