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EVALUATION OF NURSING STRESS IN INTENSIVE CARE UNITS

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ABSTRACT

Background: Several factors such as the circular shifts, the increasingly heavy load of work, the hard working conditions, as well as the severe nature of the patient's health condition contribute to nurses' stress in Intensive Care Unit. **Aim:** To identify particular circumstances in Intensive Care Units which increase nurses' level of stress. **Methods:** Nurses (N= 158) from public and private hospitals of Athens participated by filling out the Expanded Nurse Stress Scale (ENSS) which describes 57 frequent encountered situations in the hospital that cause stress to the nursing staff. The induction of the results was made by using the statistical program IBM SPSS Statistics version 20. **Results:** A big percentage of the nursing staff is influenced at a huge degree by the critique either from a doctor or from someone superior. Also, it is accepted by one third of the research population that the lack of nursing staff influences negative the function of this hospital department. Most of the nursing staff get disappointed by the unfavorable outcome of their patients and one third of them are influenced by the fear of a possible error to the treatment followed. Additionally, the medical instruction which couldn't be in correspondence with the treatment, contributes to nurses' stress. Finally, professional experience corresponds statistically significant with the possibility of error during the nursing practice (p = 0,293). **Conclusion:** There are more than enough factors which influence an ICU nurse. Each organization (either hospital or private clinic) should take care for the possibilities and endurance of its nursing staff and assess efficiently and constantly the quality of its practice.

KEYWORDS: Nurses' stress, ICU, burnout, stress factors.

INTRODUCTION

Intensive Care Units (ICU) consist of a series nurses developed criticism in emergency nursing care with a high level of knowledge, skills and confidence to the correct and evidence based nursing practice. The professional tasks in the ICU can cause, nevertheless, stress for health care professionals.[1,2] These health professionals react normally to chronic stress, developing defense mechanisms based on their basic personality. These defense mechanisms and a number of mood disorders such as anxiety or depression may be converted into an abnormal phenomenon leading to the development of occupational burnout syndrome. In emergency and intensive care, where the evaluation of patient needs and their families is essential and decisions about care planning are critical, the ability of nurses to take immediate decisions and actions based on them are an integral component of the patient's outcome.[3,4]

The effects of stress are not only for the well-being of nurses, but also have a negative impact in addressing the needs of patients, the patient satisfaction of care provided and the course and outcome of health.[5,6] The ringing of the phone and the warning beeps of monitors are considered to be the most common stressors sounds leading to production headaches in hypertension and cardiovascular problems after prolonged exposure. The factors causing burnout in 2392 nurses working in intensive care units in France, are divided into four main features: individual characteristics, which include age, self-esteem, marital status, smoking[7], the organizational characteristics that include the license selection skills, engaging in research group ICU, the quality of industrial relations which includes collisions with patients, administrative staff and medical staff, and finally the factors related to the severity of the clinical picture of the patient ICU.[8] The symptoms are appeared with negative behavior, poor extended memory, poor judgment, reduced sensitivity and emotional burnout.

The nurse-physician relationships relating mainly to the proposed treatment, the nurse-patient relationships (eg paternalistic behavior nurses, deceit, breach of

confidentiality), relationships between nurses and other nurses (requirement of faith, nurses failure), lack of staff, allocation of financial resources are considered as source stress in ICU.[9]

AIM

The purpose of this research was to identify particular factors in Intensive Care Units which increase nurses' level of stress.

MATERIAL AND METHODS

The target group of the research were 158 nurses from 14 ICUs of public and private hospitals of Athens. Participants completed a questionnaire anonymously and voluntarily. In total, 190 questionnaires were distributed, of which 162 were returned completed. Valid questionnaires were found 158 of them. The distribution and collection of questionnaires completed within eight months (July 2015- February 2016). The tool used was the Expanded Nurse Stress Scale (ENSS).[10] This questionnaire describes 57 situations in the daily work environment of the nurse, who is asked to rate the intensity of the stress experienced by each of them in scale of Likert 5 point ('does not apply' (0), 'never stressful' (1), 'occasionally stressful' (2), 'frequently stressful' (3) and 'extremely stressful' (4). ENSS has been used in several studies among nurses[11-13] in critical and primary health care. The translation and validation of the questionnaire in Greek language was made by Moustaka et al.[14]

The procedure of the distribution and completion was made after acquiring the appropriate registration from the ethics and deontology commissions of the specific hospitals.

RESULTS

Table 1 Demographic characteristics of participants are presented below.

		(%)
Sex	Male	22.29
	Female	77.71
Marital status	Unmarried	54.84
	Married	13.55
	With children	31.62
Working years	< 5	52.56
	6-10	25.64
	11-15	9.62
	>16	12.18
Age (Years)	Mean: 34.21 SD ± 8.2	
Number of beds/Unit	Mean: 9.07 SD: ± 3.28	
Number of patients	1-3	86.1%
	3-6	4.4%
	>6	5.7%

Subjects' responses on each factor are presented in tables 2,3,4,5,6,7,8,9.

Factor 1 Death and dying

	Never stressful	Occasionally stressful	Frequently stressful	Extremely stressful	Does not apply
Preforming procedures that patients experience as painful	8.2%	41.8%	34.8%	8.9%	4.5%
Feeling helpless in the case of a patient who fails to improve	8.9%	29.7%	40.5%	14.60%	2.5%
Listening or talking to a patient about his/her approaching death	3,2%	15,2%	20,3%	27,8%	31%
The death of a patient	14,6%	29,1%	31%	21,5%	3,8%
The death of a patient with whom you have developed a close relationship	5.1%	21.5%	22.2%	35.4%	15.2%
Physician not being present when a patient dies	10.8%	19%	16.5%	12%	37.3%
Watching a patient suffer	3.8%	23.4%	36.7%	28.5%	6.3%

Factor 2 - Conflict with physicians,

	Never stressful	Occasionally stressful	Frequently stressful	Extremely stressful	Does not apply
Criticism by a physician	12%	35.4%	34.2%	13.9%	3.8%
Conflict with physicians	8.9%	28.5%	27.8%	18.4%	14%
Disagreement concerning the treatment of a patient	8.9%	24.1%	9.5%	3.8%	51.3%
Making a decision concerning a patient when the physician is unavailable	5.1%	21.5%	22.2%	35.4%	15.2%
Having to organize physicians' work	9,5%	20,3%	15,2%	4,4%	47,5%

Factor 3 Inadequate emotional preparation.

	Never stressful	Occasionally stressful	Frequently stressful	Extremely stressful	Does not apply
Feeling inadequately prepared to help with the emotional needs of a patient	15.8%	37.3%	27.2%	5.1%	13.3%
Being asked a question by a patient for which I do not have a satisfactory answer	5.7%	36.7%	31%	8.2%	17.1%
Feeling inadequately prepared to help with the emotional needs of a patient's family	10.8%	37.3%	22.2%	3.8%	26%

Factor 4 - Problems with peers.

	Never stressful	Occasionally stressful	Frequently stressful	Extremely stressful	Does not apply
Lack of an opportunity to express to other personnel on the unit my negative feelings toward patients	17.7%	20.9%	8.2%	0.6%	50%
Lack of an opportunity to share experiences and feeling with other personnel in the work setting	13.9%	17.1%	6.3%	1.9%	58.2%
Lack of an opportunity to talk openly with other unit personnel about problems in the work setting	13.3%	22.2%	6.3%	1.9%	53.1%
Difficulty in working with a particular nurse (or nurses) in my immediate work setting	19.6%	17.1%	5.7%	1.9%	51.9%
Difficulty in working with a particular nurse (or nurses) outside my immediate work setting	13,3%	25,3%	15,2%	6,3%	38,6%
Difficulty in working with nurses of the opposite sex	18.4%	7	3.8%	1.3	66.5%

Factor 5 Problems with supervisors.

	Never stressful	Occasionally stressful	Frequently stressful	Extremely stressful	Does not apply
Conflict with a supervisor	9.5%	21.5%	30.4%	18.4%	17.1%
Lack of support from my immediate supervisor	7.6%	15.2%	22.8%	7.6%	46.2%
Lack of support by nursing administration	9.5%	16.5%	19%	19.6%	31%
Lack of support by other health care administrators	12%	25.3%	20.3%	7%	34.5%

Criticism by a supervisor	8.2%	27.8%	27.8%	24.1%	9.5%
Being held accountable for things over which I have no control	8.9%	15.8%	20.9%	15.2%	33%
Criticism from nursing administration	10.8%	23.4%	23.4%	29.7%	10.7%

Factor 6 – Workload.

	Never stressful	Occasionally stressful	Frequently stressful	Extremely stressful	Does not apply
An Unpredictable staffing and scheduling	12%	24.7%	28.5%	25.9%	7.6%
Too many non-nursing tasks required such as clerical work	19.6%	25.3%	18.4%	20.9%	12.7%
Not enough time to provide emotional support to the patient	12%	24.7%	31.6%	5.7%	26%
Not enough time to complete all of my nursing tasks	5.1%	25.3%	22.2%	15.2%	31%
Not enough staff to adequately cover the unit	10.1%	16.5%	32.9%	25.3%	13.9%
Not having enough time to respond to the needs of the patients' families	7%	24.7%	31%	23.4%	10.1%
Demands of patient classification system	21.5%	25.3%	11.4%	5.7%	31.7%
Having no work through breaks	3.8%	23.4%	36.7%	28.5%	6.3%
Having no make decisions under pressure	10.1%	20.3%	27.8%	29.7%	10.1%

Factor 7 Uncertainty concerning treatment.

	Never stressful	Occasionally stressful	Frequently stressful	Extremely stressful	Does not apply
Inadequate information from a physician regarding the medical condition of a patient	6.3%	24.7%	32.9%	20.3%	15.90%
A physician ordering what appears to be inappropriate treatment for a patient	8.2%	21.5%	40.5%	15.8%	12%
Fear of making a mistake in treating a patient	6.3%	23.4%	30.4%	25.3%	12%
A physician not being present in a medical emergency	4.4%	13.9%	21.5%	27.8%	31%
Not knowing what a patient or a patient's family ought to be told about the patient's condition and its treatment	15.2%	21.5%	22.8%	8.2%	30.3%
Being exposed to health and safety hazards	5.1%	14.6%	25.9%	32.3%	19.7%
Uncertainty on the correct operation of special equipment	8.9%	25.9%	31.6%	15.2%	15.2%
Feeling inadequately trained for what I have to do	11.4%	22.2%	19.6%	5.7%	40.5%
Being in charge with inadequate experience	1.9%	14.6%	27.2%	22.8%	31%

Factor 8- Patients and their families.

	Never stressful	Occasionally stressful	Frequently stressful	Extremely stressful	Does not apply
Patients making unreasonable demands	22.2%	37.3%	22.20%	2.5%	15.2%
Patients' families making unreasonable demands	22.8%	36.7%	21.5%	9.5%	8.2%
Being blamed for anything that goes wrong	4.4%	11.4%	13.9%	18.4%	47.1%
Being the one who has to deal with patients' families	13.9%	21.5%	17.1%	3.2%	43.6%
Having to deal with abusive patients	13.9%	20.9%	34.8%	27.2%	2.5%
Having to deal with violent patients	7%	24.7%	31%	23.4%	10.1%
Having to deal with abuse from patients' families	8.9%	8.9%	10.8%	7%	56.3%
Not knowing whether patients' families will report you for inadequate care	19%	24.1%	19.6%	7%	26%

Factor 9 - Discrimination.

	Never stressful	Occasionally stressful	Frequently stressful	Extremely stressful	Does not apply
Being sexually harassed	5.7%	4.4%	1.9%	2.5%	78.5%
Experiencing discrimination because of region or school of origin*	6.3%	7%	6.3%	3.2%	70.9%
Experiencing discrimination on the basis of sex	7%	7%	1,9%	1,9%	76%

According to Pearson's test a statistically significant difference (p = 0,293) was revealed between working years and the fear of potential error when administering therapy.

DISCUSSION

The nursing staff is the basic part of a hospital and it gets severely influenced by real situations and before it understands it, it experiences the first stages of professional exhaustion.[15,16]

According to Meltzer & Huckabay, the nature of nursing work itself causes an increased level of stress in nursing staff. In this field factors such as the long occupation, the constant contact with patients and the family environment, are included.[17] In our research, the workload, the conflicts with the medical staff, the relationship with the critically ill and the criticism from the nursing administration can cause stress among nurses. Besides, according to Karanikola et al (2009), the environment of the ICU is a high-end segment with an increased workload and fast rhythmus.[18] The adequacy of the nursing staff is, for many researches, a stressful factor, which is associated with mortality of patients. Studies such as those of Aiken et al (2002) and McGillis et al (2004) show a significant relationship between nurse-patient ratio and the increased mortality of patients as well as the increased likelihood of infection of surgical wounds.[19,20]

Different perceptions and expectations on the most appropriate therapy followed often result in conflict in the area of ICU. These conflicts are most often the result of various disputes, disagreements or differing views regarding the administration of the whole situation of critically ill patients.[21]

Therefore, different perceptions can have each for ICU space, and the expectations of this on the outcome of patients may create stress and anxiety, which, when channeled outward, takes the form of intense reactions and creates rivalries.

However, numerous studies do not support these statistical results.[19,20] The contact of the nurses with dying patients is a particular stressful factor, according to the results of this literature search. Several surveys[14,22] demonstrated the significance of this factor, even using the same measuring tool. In a survey conducted in Australia, researchers found that the most stressful factor for nurses are patients and their family environment.

A contrast of our results is that 37.3% of nurses do not consider that the absence of a doctor at the outcome of the patient is a stressful factor. However, 35.4% always consider the absence of a doctor in critical decisions taking as a stressful factor. This contrast, perhaps, is based on the fact that the ICU nurses are familiar with the loss of a patient and there is autonomy in its management. Also, we correlated the working years of the nurses with the in fear of a possible error. According to the results, it appeared to have a proportional relationship to increase this fear with years of service (p >0,005 - ,293). In this ase We have to highlight that the majority of respondents nurses had little experience (5 years).A similar survey that occur in a hospital setting, 56% of the nurses who have been working for 9 years, answered that experience plays a key role' in such a situation.

CONCLUSION

Work-related stress affects nurses in personal, family and social level. The human body perceives stress and converts it to physically outbreaks such as anger, headaches and slowly destroys the person's resistance.

All kinds of stressful situations that arise in the intensive care unit, not only have emotional and psychological impact on nurses directly involved in this, but also impact on the management and disposal of material resources. A further effort to understand the nature and reasons of conflicts are necessary and would be a first step in creating better working environment conditions for nursing staff and, therefore, optimal treatment and care conditions for hospitalized patients.

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