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MANIFESTATIONS OF OCCUPATIONAL STRESS AMONG NURSES IN PHU YEN GENERAL HOSPITAL - VIET NAM

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ABSTRACT

Objective: To describe the common signs and symptoms of occupational stress in nurses. **Method:** The descriptive study design was conducted on 281 nurses who were taking care patients at the Phu Yen General Hospital, Phu Yen province. Data collection instruments were developed based on literature reviews. The self-report questionnaire were used to collect data from participants. **Results:** All nurses had at least one of the signs or symptoms belonging to 4 groups of physical, psychological, emotional and behavioral signs or symptoms. Physical and psychological signs appeared more than emotional and behavioral signs. In which, the most frequent and continuous signs were described including of fatigue, headache

(53.4%); decrease in concentration (42%); insomnia (33.1%) and fastidious, irritable (36.7%). The symptoms were few or never appear including causing trouble with people around, making frequent mistakes, limiting contact, forming negative habits. **Conclusion:** Occupational stress was a common health problem, and their signs or symptoms varied from person to group. Current research was performed to assess the signs or symptoms of occupational stress in nurses and it would provide very useful data for healthcare facility sector in Viet Nam.

Keywords: Nursing, Occupational stress

1. INTRODUCTION

Occupational stress has been recognized as one of the most common health problems among health care workers [1]. In which, nursing was identified as a profession with a high level of stress [2], [3]. Occupational stress is fundamentally

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related to interpersonal relationships and work environments that are perceived to challenge or exceed the resources of nursing and endanger their health. Many studies had shown that work stress had dangerous effects not only on the health of nurses but also affects their ability to cope with work needs. This had seriously weakened the provision of quality care and efficiency of health service delivery [4], [5].

Nursing occupational stress is defined as the emotional and physical responses resulting from the interaction between the nurse and their work environment, where the demands of the job exceed capabilities and resources [6]. Stress responses are physiological responses (such as tachycardia, increased blood pressure) and psychological (anger, fear), which occur while facing with stressor [7]. Research over the years showed that signs or symptoms of occupational stress seemed to be on the rise in nurses, which was related to a number of factors ranging from changing disease patterns, restructure the health system to strengthen the roles, requirements and responsibilities of nurses [6], [8].

A study in Ghana (2017) [9] found common occupational stress manifestations of nursing including of fatigue, headache, high blood pressure, insomnia, anxiety, overreaction to an certain issues. Peterson and Wilson [10] in a study on stress in the US concluded that one in five nurses tested were at risk of health problems related to stress; 2 out of 5 nurses were facing work fatigue problems as a result of excessive work pressure or working with mental fatigue. Fatigue patterns or manifestations had been described by Hiva Azmoon et al., Including of physical fatigue, psychological fatigue, decreased motivation and decreased activity [11]. Another recent

report in Pakistan (2019) described the emotional conditions of anger, coldness, hatred, and social alienation of nurses when affected by occupational stress [12].

As may be seen, research on signs or symptoms of occupational stress in nurses had been very interesting topics. The results from these studies may help the process of managing the health problem better, towards reducing and controlling occupational stress of nurses and improving coping ability. So far, in Viet Nam, there was a lack of data on the symptoms or signs of occupational stress in nurses. Therefore, the aim of this study was to describe the common symptoms or signs of occupational stress in nurses.

2. RESEARCH METHOD

A cross-sectional descriptive study was conducted from January to June 2020 at Phu Yen General Hospital. Study participants were nurses proving care for the patients. The study selected this group because their scope of work encompassed almost all occupational areas of nursing including administrative work, care practice, relationships with staff and patients. Therefore, the work pressure would be higher and the symptoms of work stress would be more pronounced. All nurses who were part of the study were invited to participate in the study and had access to basic information such as the design, purpose and significance of the study, as well as their rights to participate. The anonymity of the participants was maintained throughout the study. They were given written consent before enrolling in the study. A total of 281 in 311 nurses agreed to participate in the study, the rest participated in the instrument testing.

Data collection instrument was developed based on the document of Psychological Trauma (stress) and

Preventive Measures by Nguyen Huynh Ngoc [13] and referred to the instrument in the study of Pham Thi Hang et al. [14]. The instrument described four groups of signs or symptoms of stress, including: physical, psychological, emotional and behavioral signs or symptoms. Each sign or symptom was assessed through four levels of never, sometimes (appear monthly), frequently (appear weekly), always (appear daily). After development, the instrument was sent to three experts who were knowledgeable about the research issue to check the validity of the content. The testing results of the content index validity (CIV) reached 0.91, showing that the instrument was relatively valid. The instrument was then sent to 30 nurses doing clinical work at Phu Yen General Hospital. Using the results from these 30 forms to check the reliability, the analytical results of the Cronback alpha reached 0.79.

Data collection process was described as follows. On the day of the survey, the chief nurse invited all the nurses of the department to the administrative office for data collection. The investigator communicated the research purpose and how to respond to the self-report questionnaire to the nurses under the supervision of the investigator. Those who agreed to participate in the study were sign the consent form and be given the questionnaire. Some nurses can not go to the administrative office due to health or work reasons, researchers provided the forms to nurses directly for data collection. After collecting sufficient data, the data were managed using EpiData software. Then, the data were analyzed using SPSS 21.0 software. The results of analyzing descriptive statistics were tabulated with frequency distribution and percentage of variables.

3. RESULTS

3.1. Participants characteristics

Table 1. Participants characteristics (n=281)

Characteristics		Number	%
Age group	< 25	44	15,7
	25 - < 35	146	52,0
	35 - < 45	52	18,5
	≥ 45	39	13,9
Sex	Male	28	10,0
	Female	253	90,0
Education level	Post-graduate	0	0,0
	University	59	21,0
	College	99	35,2
	Intermediate	123	43,8
Seniority	Less than 5 years	132	47,0
	5-10 years	52	18,5
	10-20 years	57	20,3
	> 20 years	40	14,2
Overtime	Yes	157	55,9
	No	124	44,1
Concurrently	Yes	38	13,5
	No	243	86,5
Enough leave	Yes	248	88,3
	No	33	11,7
Number of shifts / month	<8	153	54,4
	8-12	128	45,6
	>12	0	0,0

3.2. Manifestations of occupational stress in nurses

Table 2. Physical manifestations of participated nurses (n=281)

Physical manifestations	Appearance level							
	1		2		3		4	
	Number	%	Number	%	Number	%	Number	%
Dry mouth, loss of appetite, indigestion	20	7,1	225	80,1	31	11,0	5	1,8
Fatigue, headache	4	1,4	155	55,2	114	40,6	8	2,8
Pain in the neck, shoulders, and waist	15	5,3	174	61,9	78	27,8	14	5,0
Rapid pulse, increased sweating	80	28,5	175	62,3	18	6,4	8	2,8

(Appearance level: 1 = Never, 2 = sometimes, 3 = frequently, 4 = always)

Table 3. Psychological manifestations of participated nurses (n=281)

Psychological manifestations	Appearance level							
	1		2		3		4	
	Number	%	Number	%	Number	%	Number	%
Insomnia	18	6,4	170	60,5	86	30,6	7	2,5
Worried, depressed, sad	13	0,6	213	75,8	51	18,2	4	1,4
Decreased concentration and memory	22	7,8	141	50,2	116	41,3	2	0,7

(Appearance level: 1 = Never, 2 = sometimes, 3 = frequently, 4 = always)

Table 4. Emotional manifestations of participated nurses (n=281)

Emotional manifestations	Appearance level							
	1		2		3		4	
	Number	%	Number	%	Number	%	Number	%
Fastidious, irritability	33	11,7	145	51,6	102	36,3	1	0,4
Easy to be emotional, panic	56	19,9	191	68,0	33	11,7	1	0,4
Anxious, impatient	47	16,7	195	69,4	38	13,5	1	0,4

(Appearance level: 1 = Never, 2 = sometimes, 3 = frequently, 4 = always)

Table 5. Behavioral manifestations of participated nurses (n=281)

Behavioral manifestations	Appearance level							
	1		2		3		4	
	Number	%	Number	%	Number	%	Number	%
Causing trouble with people around	120	42,7	157	55,9	4	1,4	0	0,0
Frequent mistakes	88	31,3	186	66,2	7	2,5	0	0,0
Overreacting to all problems	122	43,4	147	52,3	12	4,3	0	0,0
Isolated, limited contact	165	58,7	109	38,8	7	2,5	0	0,0
Appear negative habits	203	72,2	67	23,8	10	3,6	1	0,4

(Appearance level: 1 = Never, 2 = sometimes, 3 = frequently, 4 = always)

4. DISCUSSION

Stress was a stimulus that had a strong impact on people, the physiological and psychological responses of people to that effect [13]. Therefore, when under stress, people may show some physical and psychological signs. In this study, for the purpose of maximizing information exploitation, stress signs were classified into four groups of physical, psychological, emotional and behavioral signs. However, each person had a different way of coping with stress, therefore, its symptoms may change, the symptoms of the problems may be ambiguous, then, the appearance of the signs was continued dividing into 4 levels of never, sometimes (appear monthly), frequently (appear weekly), always (appear daily).

The physical signs were clear signs, easy to recognize, however, easily confused with the physical manifestation of many other conditions. In this study, the physical stress signs that the nurse perceived to be at an occasional appearance. Most of the nurses felt tired, headache sometimes with a proportion of 40.6% and always with a proportion of 2.8%. This was followed by neck, shoulder, and lumbar pain, 27.8% of the nurses felt it very often and 5% of the nurses who felt it very often. Nurses often experienced dry mouth, anorexia, and indigestion, accounting for 11% and 1.8% always level. Signs of rapid pulse, increased sweating while not exercising appear only frequently accounted for 6.4% and accounted for 2.8% in nurses. Physical manifestations appeared on a fairly high frequency. This may have a negative impact on the performance of the nurses. Interviews and discussions were conducted among nurses getting quite similar results, as the majority of nurses felt that under stress

they often felt fatigued. The research had a higher proportion than the study of Pham Thi Hang and her colleagues at the Nam Dinh General Hospital. The proportion of the frequent feeling in the stress symptoms of Pham Thi Hang et al were the tachycardia, increased blood pressure accounted for 1.9%, sweating accounted for 7.1%, headache, fatigue, insomnia accounted for 7.6%, dry mouth, loss of appetite accounted for 8.9% and joint pain accounted for 8.2% [14]. Research by Nguyen Thi Kim Anh at the Bac Giang Pediatric Hospital on nurses, midwives showed that 28.3% of them felt dry mouth [15]. A qualitative study of stress symptoms among nurses in the first Chinese anti-Ebola medical group showed similar physical manifestations. Specifically, anorexia was a common symptom reported in 7 of 10 participants: "I lost my appetite, had bloating and often constipation" [16]. Fatigue and severe headache were stress symptoms found in a qualitative study conducted on 20 nurses working in the ICU department of a university hospital in Natal [17]. The proportions in the study, although higher or lower than that of similar studies, did not exclude cases that may be confused with the manifestations of other diseases that the nurses suffered from. However, the study results reflected the hard work of nursing, frequently staying up at night, performing activities contrary to physiological hours, resulting in physical manifestations as a direct consequence. In addition to stress, it directly affected the nurse's health and the quality of their medical service delivery.

While under stress, in addition to physical manifestations, the nurses were also psychology affected. This easily affected mental health, the ability to focus at work and easily led to working errors. Research had found that 30.6% of nurses frequently

experienced insomnia and 2.5% of nurses always experienced it. With expression of anxiety, depression, sadness, 18.2% of nurses frequently complained it and 1.4% always experienced it and especially, up to 41.3% nurses frequently felt reduced concentration, decreased memory. This was an alarming number because nursing required a high level of concentration, even the slightest mistake may lead to serious consequences for the patient's health. Therefore, nursing managers should take countermeasures for the nurses to limit work stress. The study of Pham Thi Hang and colleagues noted that expressions of anxiety, depression, and sadness were reported at a frequent level of 61.4% and always level of 4.4%. With regard to insomnia, 59.5% of nurses sometimes felt it and 7.6% of nurses frequently felt it [14]. Nguyen Thi Kim Anh's research showed that depressed expression accounted for the highest percentage of the manifestations of stress. The percentage of nurses recorded of stress was 34.8% [15]. China's first anti-Ebola nurses listed insomnia as one of the most common symptoms of stress. Specifically, "I usually sleep only after midnight. This happens five or six days per week. (Nurses E)". In addition, the expression of anxiety, inability to focus on work was also common among nurses "I am always anxious, with a lot of anxiety. I easily forgot what I did. (Nurses C)" [16].

The physical and psychological manifestations, although easy to recognize, were easily confused and affected by many other conditions. Therefore, in addition to the physical and psychological manifestations, when assessing the stress status, it was necessary to pay attention to the psychological and emotional manifestations. The study of emotional stress symptoms found that 36.3% of nurses

frequently found themselves difficult and irritable, 11.7% of nurses found themselves easily emotional, panic, and 13.5% of nurses frequently found impatience, short-tempered and anxious. In all three emotional manifestations, it was noted that 0.4% of NUTRERS feel it very often. The similar emotional manifestations were in the study at Bac Giang Obstetrics and Gynecology Hospital such as no interest accounted for 28.3%, anxiety accounted for 26.8%, negative emotions accounted for 20.7% [15]. These manifestations in the study of Pham Thi Hang et al. were that 4.4% of nurses felt difficult, irritable, 1.9% of nurses felt easily emotional and panic, and 1.3% of nurses felt isolated, limited contact [14]. These results demonstrated that the nurses in the study had significantly higher stress levels and more severe stress symptoms. This was also a situation that should find the resolutions by the hospital managers because psychological influences may affect the care process and communication of the nurses with the patients and the patient's family, causing conflicts and dissatisfaction in the nurses and patients.

When stressed, the nurses tend to release, manifest outwardly by their behavior towards themselves and everyone around them. It is these behaviors that make it easier for people to recognize that a person is under stress and many times these behaviors cause conflicts, negative effects not only on the nurses itself but also relationships around them. However, the research results of signs / symptoms of behavioral stress showed that the majority of nurses presented it at sometimes and never level. The frequent level was reported with a relatively low in nurses. Specifically, causing trouble with people around accounted for 1.4%; making mistakes accounted for 2.5%; overreaction to all problems accounted for

4.3%; isolate and limit contact with people around accounted for 2.5%; occurrence of negative habits such as smoking and drinking alcohol accounted for 3.6%. Out of all the behaviors, only one case had a negative habit accounting for 0.4%, which always occurred. The results were similar to those obtained from Pham Thi Hang et al., in which 1.9% of nurses frequently caused trouble with people around, 1.3% of nurses was isolated, limited contact with the people around them, 1.9% of nurses smoked and drank [14]. Research by the Chinese nurses, the behavioral symptoms were mainly negative thoughts. The results obtained from interviews with 10 nurses. The nurses reported "I feel that during that time period, I was a mess with endless talk and slow behavior", or "I don't know why I cried so much during that time. I cried because I saw someone else or after I called my family. I also cried if I couldn't sleep or had misunderstandings with my colleagues. I didn't behave like that before." Interviews with nurses at the ICU department of the university hospital in Natal showed that hot-tempered and rude behavior toward others were common behavioral symptoms in stressed nurses [16], [17]. Thus, it can be seen that nurses, despite being stressed and having quite frequent physical and psychological manifestations, know how to refrain from emitting negative behaviors. Although this is adaptation, trying to reconcile with the nurses' stress, restraining long-term behavior may lead to outbreaks in situations where the stress factor is strongly influenced. Therefore, hospital managers should prepare the solutions to deal with and limit stress-causing situations.

5. CONCLUSION

Research results indicated that 100% of nurses had at least one sign of symptoms of occupational stress. Among the most

commonly described signs included fatigue, insomnia, irritability / fastidious and decreased concentration. Occupational stress was a common health problem in nurses and carried negative health and economic burdens. Current research was performed to assess the signs / symptoms of occupational stress in nurses and it provided very useful data from a healthcare facility sector in Viet Nam. This research may, however, be misleading as it cannot be identified with signs / symptoms of other health problems. Besides, it was only using the self-report method to collect data. In order to be able to fully and accurately examine the signs of occupational stress, a further study should be conducted to observe the daily performance of nurses and use specialized psychological instruments - of course this may require more resources and efforts from researchers.

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