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Occupational Stress, Coping Strategies, and Quality of Life among Nurses in General and Psychiatric Setting in Jeddah City—KSA

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Abstract

Purpose: This study is aimed at comparing the level of occupational stress, ways of coping and the quality of life among nurses. **Methods:** Descriptive explanatory design was used with 278 nurses working in King Abdul Aziz Hospital in Jeddah, Mental Health Hospital in Jeddah, and Dr. Suleiman Fakeeh Hospital in Jeddah. **Findings:** Psychiatric nurses experience greater occupational stress than general nurses ($p = 0.001$). There was no statistically significant difference between the psychiatric and general nurses in relation to coping strategies ($p = 0.38$). **Conclusion:** Healthcare institutions should adapt stress evaluation and coping models specific to their unit. **Practical Implication:** Implementation of programs in each healthcare unit to educate nurses how to deal with work stressors and their negative effects.

Keywords

Psychiatric Mental Nurses, Stress, Nurses, Occupational Stress, Coping Strategies, Quality of Life, Saudi Arabia

1. Introduction

Occupational stress in nursing is common worldwide, ranging from 9.2% to 68%. Caring for the weak, sick, and traumatized client can impose a stress on the nurse [1]. The nurses in different departments are exposed to a broad variety of stressors including unpredictable work conditions, experience exposure to traumatizing incidents such as aggression, amputation, and extreme suffering of clients and potential violence, including patients under the influence of drugs and alcohol, and crime suspects brought in by police [2].

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Occupational stress has become one of the most severe health problems in the contemporary world [3]. Job stress can cause health related problem such as hypertension, cardiac problems, reduce immunity, contribute to substance abuse and reduce the overall status of mental and physical wellbeing. In fact, stress becomes a natural part of daily life for caregivers such as nurses, doctors and hospital administrators [4]. Occupational stress in nursing is the physical and emotional reactions that occur when the nurse's abilities and resources cannot deal with the demands and requests of their work [5]. The nursing profession in general is increasingly characterized by job stress [6]. According to American Journal of Industrial Medicine (2014), more than 70% of interviewed nurses indicated acute and chronic impacts of stress and exhaustion on their safety and health concerns. Several studies indicated that there are individual, social, environmental and organizational factors that lead to high levels of occupational stress among nurses [7].

Habib and Shirazi pointed out that nursing is a stressful job and identified the stressors as workload, close interaction with patients, high emotional involvement and being responsible of patients' life [7]. Also, there are issues related to physical hazards at workplace such as work injuries, uncertain job security and the fear of layoff [8], meanwhile, taking into consideration that the most of nurses are females and they experience stress more frequently than males [8]. This could be explained by the fact that female nurses are emotionally sensitive group, and also, they have an additional social role as a wife, woman and mother. In addition to occupational demands, they should satisfy their family's needs such as nutrition, economic deals, educational matters, socializing kids, and family relations. These multiple roles impose severe burden and roles interactions, personal relationships at work and home, personal resources and job's natural complication, which can cause various hazards. In addition, occupational stress of nursing at hospitals is reported to be significantly higher than nurses in other working setting [9]. In psychiatric setting, there is challenging task for nurses because they have to care for both the mental and physical health of the patient and this leads to additional burden on these nurses [2].

Stress causes mental health disorders for psychiatric nurses, some common stressors include poor working relationships between nurses and doctors and other health care professionals, demanding communication and relationships with patients and relatives, emergency cases, high work load, understaffing and lack of support or positive feedback from senior nursing staff [10]. Also, psychiatric nurses have an isolated occupation environment that includes locked ward entrances, as a result, the potential for patient conflict with the associated risk of both physical and mental danger or violence perpetrated by aggressive patients is potentially present. In addition, psychiatric nurses are required to seclude or restrain patients to prevent them from harming themselves or others. Moreover, psychiatric nurses are dealing with high potential drugs and medication which

consider a stressor for psychiatric nurses more than other nursing specialties. Therefore, the structures of occupational stressors experienced by psychiatric nurses potentially differ from those of other employees [11].

Zeller and Levin [1] reported that occupational stress is a major challenge worldwide. Work stress affects individual mental and physical health as well as organizational health in diverse ways. These include the fact that stressed workers are more likely to be unhealthy, poorly motivated, less productive and less safe at work. Also, high level of occupational stress reduces the quality of nursing care [12], and can threaten patients' lives and security [7].

There are several traditional means of managing everyday stress. This evolves physical exercise, emotional and psychological therapies, change in work approach or medications. The choice of management procedure adopted is usually subjective to the source, nature of the stress and the resources available to the individual under stress (Cohen *et al.*, 2002). It is believed that the best management practice of stress is to learn how to cope with it using healthy and positive coping strategies. The first step of effective stress management is to understand one-self better and understand stress triggers and how one can react to stressful situations. In the nursing field, the ability to render high quality health and nursing services to the patients in spite of occupational stress is considered as an effective coping [13]. Most literatures that worked on stress and coping tried to link the coping strategies to the type and sources of the stressor. Lockley, Barger [14] established a safe hour work limit for nurses in order to prevent the high rate of fatigue related medical errors and injuries. Therefore, there is a need to limit the number of working hours done by nurses to help them to manage the stress arising from long working hours. The shifts and the duration of shifts can be controlled by a combined effort of the nurse managers and the nurses working in the hospitals. Fielden and Peckar [15] agreed that stress is associated to the number of working hours nurses do in the hospital.

Availability of social support also helped in reducing the negative effect of the stress on their performance. Consequently, social support was identified as an effective coping strategy. Sharma, Sharp [16] stated that nurses are believed to have lower level of burnout than surgeons and they agreed that this is as a result of better working practice, the type of responsibilities and the management structure. By this, a better-organized management structure and organized individual working practice are seen as effective way of managing or coping with working stress. Therefore, social support and working group are considered effective coping strategies for stress [17]. Other preventive strategies include effective communication strategies during end of life care, prevention of management conflicts [17].

Quality of life (QOL) is one of the most important aspects of human health, which is embedded in physical, cultural, and social contexts. Various studies have indicated that favorable QOL depends on working conditions and family life [17]. Therefore, working life is one of the factors affecting QOL. On the

other hand, hospitals as an organization may put the clients and specially nurses under a serious load of stress, which subsequently affects their physical and emotional health. Occupational stress has a large negative effect on QOL and may lead to reduced work performance, early retirement, dissatisfaction and physical damage [18]. Health related problems from stress such as migraine, hypertension, and irritable bowel syndrome can plague a nurse both at work and on their off-duty time and may require regular intake of medications, and restriction of social activities affecting nurses' QOL. Psychological problems such as chronic fatigue syndrome, secondary traumatic stress, and nursing burnout may also occur due to stress. It is logical to theorize that a nurse's quality of life is affected by these health conditions. Clearly, nurses play an effective role in improving patients' QOL, to do so; initially they themselves should have a high QOL. Nayomi [19] reported that the physical, social, and psychological QOL of nurses is lower than factory workers. The main goal of the study was to compare the level of occupational stress, ways of coping and the quality of life among nurses who work in general and psychiatric hospital in Jeddah city, KSA.This study was conducted in Jeddah city, the second biggest city in Kingdom of Saudi Arabia. The study included three main hospitals in Jeddah, two of them were governmental hospitals and one was a private hospital. The first hospital was King Abdul Aziz hospital which is a general hospital occupied with 445 beds with total of 850 nurses. The second hospital was Mental Health hospital which is a psychiatric hospital has 120 beds with total of 183 nurses. In addition, Dr. Suleiman Fakeeh hospital is a private hospital with 530 beds and it has 920 nurses. The sample of general hospital was obtained from seven workplaces: intensive care unit (ICU), emergency unit (ER), surgical unit, medical unit, operation room (OR), outpatient unit, and nursing offices whilst the sample of psychiatric hospital was obtained from three workplaces: inpatient unit, the outpatient unit, and nursing offices.

2. Methods

2.1. Study Design

The design of the study was used descriptive explanatory design.

2.2. Study Sample

The target sample of this study was 400 nurses and the final sample consisted of 278 nurses (response rate 69.5%) working in King Abdul Aziz Hospital (KAAH) in Jeddah, Mental Health Hospital in Jeddah, and Dr. Suleiman Fakeeh Hospital in Jeddah.

2.3. Inclusion Criteria

- Nurses and nurses' assistants.
- Both male and female.
- Working in the general and psychiatric hospital.

- Able to read and speak English language.

2.4. Exclusion Criteria

- Nurses who did not able to read and speak English language.

2.5. Data Collection Procedure

Ethical approval was obtained from the Institutional Review Board (IRB) committees in the Ministry of Health and from the Dr. Suleiman Fakeeh hospital. The author placed an A3 paper in the ward noticed-board to announce the study. The author met each potential participant providing them with an informational sheet about the study, purpose, and expected tasks. Verbal explanation is given alongside informed consent, then they were requested to return signed consent form. It was explained to the participants that they can withdraw at any time without harm from the study. It was also made clear that there was no financial or any other form of gain from the participation of study. The author distributed and collected the questionnaire to those who volunteered to participate in the study paper.

2.6. Data Collection Method and Outcomes Measure

A pre-designed structured interviewing questionnaire including the following items:

2.6.1. Socio-Demographic Characteristics of the Participants

Age, sex, marital status, level of education, hospital category (government, private) and work setting (general, psychiatric).

2.6.2. The Expanded Nursing Stress (ENSS) Scale

ENSS is an expanded and updated revision of the classic Nursing Stress Scale (NSS) developed by Gray-Toft and Anderson [20]. The NSS was the first instrument to target nursing stress rather than general job stress. The completed ENSS contained 59 items in nine subscales. The first source is physical which includes work overload and computer breakdown. The second source is psychological which includes death, inadequate preparation, pain and suffering, lack of support and mistakes. The third source is social which includes uncertainty related to conflicts with doctors and other nurses and lack of knowledge and conflict with supervisor.

The 59 items were arranged in a 5-point Likert response scale. The responses were "never stressful" [1], "occasionally stressful" [2], "frequently stressful" [3], "extremely stressful" [4], and "does not apply" [5]. ENSS demonstrated better reliability with Cronbach's alpha ($\alpha = 0.96$) over the original NSS ($\alpha = 0.89$). The Individual subscale reliability ranged from $\alpha = 0.88$ (problems with supervisors) to $\alpha = 0.65$ (discrimination).

2.6.3. The Brief Cope Scale

It was developed by Charles S. Carver in 1997. It has 28 questions divided in 14

subscales. The aim of the BC is to evaluate people coping abilities during times of stress (Carver, 1997). Scoring for the 28 questions is as follows: 1 = I haven't been doing this at all; 2 = I have been doing this a little bit; 3 = I have been doing this a medium amount; and 4 = I have been doing this a lot. Cronbach's Alpha was used to assess reliability. Subscale Items Cronbach's Alpha: self-distraction 0.77, active coping 0.63, denial 0.64, substance use 0.79, use of emotional support 0.51, use of instrumental support 0.68, behavioral disengagement 0.74, venting 0.74, positive reframing 0.75, planning 0.75, humor 0.75, acceptance 0.77, religion 0.81 and self-blame 0.61.

2.6.4. Professional Quality of Life Scale (ProQOL)

This scale was originally designed by a psychologist, Flanagan in 1975 and measured a person's sense of well-being (Burkhardt & Anderson, 2003). The tool has been adapted to assess different populations such as the chronically ill, and professionals who provide care. The reliability for the subscale—Trauma/Compassion Fatigue has an alpha score of 0.80.

2.7. Ethical Consideration

The ethical approval was obtained from the research and ethical committee in X. The participants were informed about the voluntary nature of participation and they then had a full right to withdraw at any point. Participants privacy and confidentially were assured and their names would not appear on any documents in the study.

2.8. Statistical Analysis

Data entry and statistical analysis were done by using the Statistical Package for the Social Sciences (SPSS) version 23. Statistical significance was set at $p < 0.05$. Descriptive and inferential statistical techniques were utilized to analyze the collected data. These techniques included (frequencies, percentages, mean value and standard deviations). In addition, Chi Square test and/or independent sample t test was applied to examine differences among participants in general and psychiatric hospitals.

3. Results

3.1. Socio-Demographic Characteristics of the Study Participants

A total of 400 questionnaires were distributed to nurses in each of intensive care unit (ICU), emergency unit (ER), surgical unit, medical unit, operation room (OR), outpatient unit, inpatient unit, and nursing office. The total number of returned questionnaires was 278 (response rate is 69.5%). As presented in Table 1, the study participants were divided according to work setting into two groups: general and psychiatric nurses. In both groups, females were predominant, as constituted 78.4% among general nurses versus 58.8% among psychiatric nurses. In addition, the age group of general nurses was slightly higher than psychiatric

Table 1. Socio-demographic characteristics of the study participants.

Socio-demographic Characteristic	General Nurses (%) N = 171	Psychiatric Nurses (%) N = 107
Gender:		
Male	37 (21.6%)	44 (41.1%)
Female	134 (78.4%)	63 (58.8%)
Age (years):		
20 - 29	56 (32.7%)	55 (51.4%)
30 - 39	76 (44.4%)	40 (37.4%)
40 - 49	33 (19.3%)	12 (11.2%)
50 - 59	6 (3.5%)	0 (0.0%)
Marital status:		
Single	75 (43.9%)	40 (37.4%)
Married	84 (49.1%)	56 (52.3%)
Widowed	3 (1.8%)	0 (0.0%)
Divorced	9 (5.3%)	11 (10.3%)
Education level:		
Diploma	34 (19.9%)	12 (11.2%)
Bachelor Degree	133 (77.8%)	95 (88.8%)
Postgraduate	4 (2.3%)	0 (0.0%)
Hospital category:		
Governmental Hospital	149 (87.1%)	83 (77.6%)
Private Hospital	22 (12.9%)	24 (22.4%)
Department:		
Inpatient	0 (0.0%)	58 (54.2%)
Outpatient	39 (22.8%)	37 (34.6%)
ICU	24 (14%)	0 (0.0%)
ER	21 (12.3%)	4 (3.7%)
Surgical	40 (23.4%)	0 (0.0%)
Medical	21 (12.3%)	0 (0.0%)
OR	6 (3.5%)	0 (0.0%)
Nursing Office	6 (11.7%)	8 (7.5%)

nurses. For instance, approximately 45% of general nurses were aged between 30 to 39 years and about half of the psychiatric nurses were aged ranged from 20 to 29 years. In addition, the majority of the study sample in both groups were married. Moreover, the highest percent of nurses in both groups had attained a bachelor's degree in nursing science.

3.2. Occupational Stress Level among the Study Participants

The maximum score of occupational stress is 236 with a mean score of 148.8 and a standard deviation of 35.22. Independent sample t test was used to compare the occupational stress level between psychiatric nurse and general nurses. There was significant difference between nurses regarding the work setting at the hospital level ($p < 0.05$), as indicated in Table 2. It was found that psychiatric nurses experience greater level of stress than general nurses.

3.2.1. Occupational Stress Subgroups

In Table 3, the result of subgroups analysis shows that there was statistically

Table 2. Occupational stress scores among the study participants.

Occupational Stress	Mean	SD	P value
Psychiatric Hospital	157.6	26	0.001
General Hospital	143.3	39	

SD: Standard Deviation.

Table 3. Occupational stress subgroups scores among the study participants.

Occupational Stress Subgroup	Sample	Mean	SD	P value
Death and Dying	General Nurses Psychiatric Nurses	2.5 2.25	0.62 0.79	0.007
Conflict with Physicians	General Nurses Psychiatric Nurses	2.40 2.755	0.90 0.57	0.001
Inadequate Emotional Preparation	General Nurses Psychiatric Nurses	2.17 2.35	0.80 0.60	0.034
Problems Relating to Peers	General Nurses Psychiatric Nurses	1.98 2.21	0.75 0.56	0.006
Problems Relating to Supervisors	General Nurses Psychiatric Nurses	2.64 2.87	0.90 0.43	0.04
Work Load	General Nurses Psychiatric Nurses	2.71 2.46	0.61 0.88	0.011
Patients and their Families	General Nurses Psychiatric Nurses	2.43 2.85	0.96 0.62	0.001
Uncertainty Concerning Treatment	General Nurses Psychiatric Nurses	2.34 2.85	0.79 0.54	0.001
Discrimination	General Nurses Psychiatric Nurses	2.10 2.89	1.19 0.88	0.001

significant variation between general nurses and psychiatric nurses where independent t test value ($p < 0.05$). The significant variation includes death and dying approach ($p = 0.007$), conflict with physicians approach ($p = 0.001$), inadequate emotional preparation approach ($p = 0.034$), problems relating to peers approach ($p = 0.006$), problems relating to supervisor approach ($p = 0.04$), work load approach ($p = 0.011$), patients and their families approach ($p = 0.001$), uncertainty concerning treatment approach ($p = 0.001$), discrimination approach ($p = 0.001$).

3.2.2. Coping Strategies

The result of independent sample t test appeared that there was no statistically significant difference between the psychiatric and general nurses in relation to coping strategies ($p > 0.05$), as shows in Table 4. The result of coping strategies subgroup analysis in Table 5 indicate that there was statistically significant difference ($p > 0.05$) between the nurses in psychiatric and general setting in approach of avoidance coping were ($p = 0.012$). On other hand, there was no statistically significant difference between study's group in the others coping

Table 4. Coping strategies scores amongst the study participants.

Coping Strategies	Mean	SD	P value
Psychiatric Hospital	68.72	10.191	0.38
General Hospital	67.44	13.869	

SD: Standard Deviation.

Table 5. Coping strategies subgroups scores among the study participants.

Coping Strategies Subgroup	Sample	Mean	SD	P value
Approach Coping	General Nurses	2.69	0.67	0.35
	Psychiatric Nurses	2.63	0.48	
Avoidance Coping	General Nurses	2.18	0.57	0.012
	Psychiatric Nurses	2.34	0.47	
Altering Consciousness	General Nurses	2.22	0.48	0.87
	Psychiatric Nurses	2.21	0.37	
Seeking Support	General Nurses	2.50	0.65	0.17
	Psychiatric Nurses	2.59	0.51	

SD: Standard Deviation.

strategies subgroups such as approach of coping ($p = 0.354$), avoidance coping ($p = 0.87$) and seeking support ($p = 0.17$).

3.3. Quality of Life

The findings of the analysis highlighted that quality of life score was lower in psychiatric nurses compared with their counterparts as indicated in **Table 6**. There was statistically significant difference between the psychiatric and general nurses ($p < 0.05$).

4. Discussions

Nursing is a stressful profession that deals with intense human aspects of health and illness. General and psychiatric nurses experience different levels of occupational stress. In this study, compared to the nurses working in the general setting, those working in the psychiatric setting had a higher statically level of occupational stress ($p = 0.001$). There are several possible reasons that could explain psychiatric nurses had higher level of stress than general nurses. The main reason is that psychiatric nurses in this study worked in restricted environments, such as closed wards with isolation rooms that mainly serve acute and potentially violent patients [21]. Moreover, a considerable proportion of these patients displayed aggressive behavior previously and were compulsively admitted. Therefore, they were exposed to psychological and physical stress and aggression at work more frequently than nurses in general care setting [21]. In addition, there is a strong need for continuous education and training about workplace violence; particularly how to support each other and being sensitive to subtle signs that can indicate proneness to aggressive behavior [22]. However, this type

Table 6. Quality of life scores among the study participants.

Quality of Life	Mean	SD	P value
Psychiatric Hospital	95.14	7.61	0.01
General Hospital	97.12	13.06	

SD: Standard Deviation.

of training is not universally implemented or inadequate in psychiatric hospitals. For example, a survey of 300 randomly selected nurses from five psychiatric hospitals in China found that 75.6% were not satisfied with the lack of continuing training on violence [22].

The finding is supported by a study conducted by Qi, Xiang [23] who compared the level of work-related stress between female nurses working in psychiatric and general hospitals in China. It was found that compared to the nurses working in the general hospital, those working in the psychiatric setting had a higher level of stress. Another study designed by Jenkins and Elliott (2004) stated that psychiatry nursing has similarities to other nursing specialties, however, its difference is that psychiatric nurses have more deep relationships with their patients, engage in preventing self-harm and often face higher levels of challenging behaviors in the environment (Jenkins and Elliott, 2004). In contrast to the above finding, Jenkins and Elliott [24] conducted a study to investigate occupational stress levels among general and psychiatric nurses and found that general nurses reported stress levels that were significantly higher than those of psychiatric nurses and that they would be more likely to use workplace counseling services. Another study designed by Hussein, Aniza [25] concluded that psychiatric nurses are protected from stress through social support from the multi-disciplinary team [25].

Furthermore, Al Hosis *et al.* (2013) highlighted that the impact of occupational stress on the well-being of Saudi nurses working in the ministry of health hospitals (MOH) in AL-Qassim region in KSA found that nurses' occupational stress was not affected by their educational level. Also, a significant relationship was found between work setting and communication subscale. This goes in coincidence with the research conducted by Flannery *et al.* (2007), Hanrahan *et al.* (2010) these studies explained that psychiatric nurses constantly manage patients and families from all levels of people and is essential to deal with manifold communications. Both hurts from work and verbal attacks from patients will increase psychiatric nurses' occupational burnout. Yada *et al.* (2015) investigated the specificity and structures of occupational stress in psychiatric dementia nurses (PDNs) caring for elderly patients with serious behavioral and psychological symptoms of dementia occupational stress in PDNs revealed physical workload and work environment to be more significant stressors.

4.1. Coping Strategies

Coping strategies are used to help nurses who experience occupational stress. In

the current study, results revealed that there was no statistically significant difference between the psychiatric and general nurses in relation to coping strategies ($p > 0.05$). This finding agreed with a study designed by Dawood, Mitsu [26] who stated that there were no significant differences emerged between general and mental nurses regarding coping strategies.

The most used coping strategies by nurses in general and psychiatric nurses were problem focused or approach coping (mean score for general nurses was 2.69, mean score for general nurses was 2.63). This strategy corresponds to an active way to react to stressful situation, because coping, focused on the problem, is intended to remedy the stressful situation and is considered to be the most effective strategy to deal with stress (Bennett *et al.* 2001). This finding agreed with a study by conducted among community health agents, where problem focused, or approach coping was the most adopted approach to cope with occupational stress [27].

In contrast, Edwards and Burnard (2003) conducted a systematic review to determine the effectiveness of stress management methods that mental health nurses utilize. They reported that the most frequently reported coping strategies utilized by mental health nurses were seeking social support. Also, Happell *et al.* (2013), stated that the most popular form of coping mechanism among these nurses was the social support. However, the study by Zaki [18] has pointed out that one of the factors influencing psychiatric nurse's ability to cope effectively with their work stress as uncooperative work place. Psychiatric nurses have an uncommon work setting [11]. As well association was found between length of experience and communication subscale, but when this result is compared with research done by Ho, Chang [28] they explained that nurses with 6 - 10 years of experience have higher level of job stress than nurses with less than 5 years or more than 11 years' experience. Likewise, the finding from Yada, Abe [10] recognized that middle aged nurses *i.e.* with 6 - 10 years' experience are given full accountabilities at work, and many roles during this phase clarify why middle-aged nurses experience job stress more often.

4.2. Quality of Life

Nurses are a special professional that have a risk of suffering from occupational stress and insufficient coping strategies resources, which may lead to serious mental and physical health problems and a reduced QOL Asberg, Bowers [29]. Excessive occupational stress has a negative consequence on the psychological well-being of nurses (including behavioral, emotional and cognitive levels), reducing their work efficiency [10]. However, Asberg, Bowers [29] supported that occupational stress strongly correlated with QOL. The findings in the current study pointed out that quality of life score was lower in psychiatric nurses compared with their counterparts. There was statistically significant difference between the psychiatric and general nurses ($p = 0.01$). The main limitation of the study is that the sample selected from one governmental hospital which did not

represent all nurse in Saudi Arabia.

5. Conclusion

The study showed that occupational stress is a global phenomenon and it affects the nurses in all the countries in which researches had been conducted on occupational stress. The results noted that there was variety in occupational stress level between nurses working in the general setting and nurses working in the psychiatric setting.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] Zeller, J.M. and Levin, P.F. (2017) Mindfulness Interventions to Reduce Stress among Nursing Personnel: An Occupational Health Perspective. *Workplace Health & Safety*, **61**, 85-89.

[2] Yada, H., Abe, H., Funakoshi, Y., Omori, H., Matsuo, H., Ishida, Y., *et al.* (2015) Development of the Psychiatric Nurse Job Stressor Scale (PNJSS). *Psychiatry and Clinical Neurosciences*, **65**, 567-575. https://doi.org/10.1111/j.1440-1819.2011.02258.x

[3] Park, Y.-M. and Kim, S.Y. (2013) Impacts of Job Stress and Cognitive Failure on Patient Safety Incidents among Hospital Nurses. *Safety and Health at Work*, **4**, 210-215. https://doi.org/10.1016/j.shaw.2013.10.003

[4] MacKay, C.J., Cousins, R., Kelly, P.J., Lee, S. and McCAIG, R.H. (2004) Management Standards' and Work-Related Stress in the UK: Policy Background and Science. *Work & Stress*, **18**, 91-112. https://doi.org/10.1080/02678370410001727474

[5] Nakhli, J., Maraoui, A., Bouhlel, S., Nasr, S.B. and Ali, B.B.H. (2013) 1294-Assessment of Professional Stress among Nurses at the General Hospital of Sousse in Tunisia. *European Psychiatry*, **28**, 1. https://doi.org/10.1016/S0924-9338(13)76354-5

[6] Adriaenssens, J., De Gucht, V., Van Der Doef, M. and Maes, S. (2016) Exploring the Burden of Emergency Care: Predictors of Stress-Health Outcomes in Emergency Nurses. *Journal of Advanced Nursing*, **67**, 1317-1328. https://doi.org/10.1111/j.1365-2648.2010.05599.x

[7] Hamaideh, S.H., Mrayyan, M.T., Mudallal, R., Faouri, I.G. and Khasawneh, N.A. (2013) Jordanian Nurses' Job Stressors and Social Support. *International Nursing Review*, **55**, 40-47. https://doi.org/10.1111/j.1466-7657.2007.00605.x

[8] Bickford, M. (2015) Stress in the Workplace: A General Overview of the Causes, the Effects, and the Solutions. Canadian Mental Health Association Newfoundland and Labrador Division, 1-3.

[9] Hanrahan, N.P., Aiken, L.H., McClaine, L. and Hanlon, A.L. (2017) Relationship between Psychiatric Nurse Work Environments and Nurse Burnout in Acute Care General Hospitals. *Issues in Mental Health Nursing*, **31**, 198-207. https://doi.org/10.3109/01612840903200068

[10] Yada, H., Abe, H., Omori, H., Ishida, Y. and Katoh, T. (2015) The Supplement to Developing the Psychiatric Nurse Job Stressor Scale. *International Journal of Nursing & Clinical Practices*, **2**, 145. https://doi.org/10.15344/2394-4978/2015/145

[11] Kane, P. (2016) Stress Causing Psychiatric Illness among Nurses. *Indian Journal of Occupational and Environmental Medicine* (*Internet*), **13**, 5 p.

[12] Koivisto, K., Janhonen, S., Latvala, E. and Väisänen, L. (2014) Applying Ethical Guidelines in Nursing Research on People with Mental Illness. *Nursing Ethics*, **8**, 328-339. https://doi.org/10.1177/096973300100800405

[13] Joseph, J.G., Emmons, C.-A., Kessler, R.C., Wortman, C.B., O'Brien, K., Hocker, W.T., *et al.* (2011) Coping with the Threat of AIDS: An Approach to Psychosocial Assessment. *American Psychologist*, **39**, 1297. https://doi.org/10.1037/0003-066X.39.11.1297

[14] Lockley, S.W., Barger, L.K., Ayas, N.T., Rothschild, J.M., Czeisler, C.A. and Landrigan, C.P. (2017) Effects of Health Care Provider Work Hours and Sleep Deprivation on Safety and Performance. *The Joint Commission Journal on Quality and Patient Safety*, **33**, 7-18. https://doi.org/10.1016/S1553-7250(07)33109-7

[15] Fielden, S. and Peckar, C. (2014) Work Stress and Hospital Doctors: A Comparative Study. *Stress Medicine*, **15**, 137-141. https://doi.org/10.1002/(SICI)1099-1700(199907)15:3<137::AID-SMI792>3.0.CO;2-5

[16] Sharma, A., Sharp, D.M., Walker, L.G. and Monson, J.R. (2008) Stress and Burnout among Colorectal Surgeons and Colorectal Nurse Specialists Working in the National Health Service. *Colorectal Disease*, **10**, 397-406. https://doi.org/10.1111/j.1463-1318.2007.01338.x

[17] Embriaco, N., Papazian, L., Kentish-Barnes, N., Pochard, F. and Azoulay, E. (2014) Burnout Syndrome among Critical Care Healthcare Workers. *Current Opinion in Critical Care*, **13**, 482-488. https://doi.org/10.1097/MCC.0b013e3282efd28a

[18] Zaki, R. (2016) Job Stress and Self-Efficacy among Psychiatric Nursing Working in Mental Health Hospitals at Cairo, Egypt. *Journal of Education and Practice*, **7**, 103-113.

[19] Nayomi, W. (2016) Workplace Stress in Nursing: A Literature Review.

[20] Gray-Toft, P. and Anderson, J.G. (1981) The Nursing Stress Scale: Development of an Instrument. *Journal of Behavioral Assessment*, **3**, 11-23. https://doi.org/10.1007/BF01321348

[21] Yada, H., Abe, H., Omori, H., Matsuo, H., Masaki, O., Ishida, Y., *et al.* (2014) Differences in Job Stress Experienced by Female and Male Japanese Psychiatric Nurses. *International Journal of Mental Health Nursing*, **23**, 468-476. https://doi.org/10.1111/inm.12080

[22] Liu, J., Hou, A., Tian, M., Hu, Z. and Li, K. (2016) A Study on the Training Need for Psychiatric Nurses of Hebei Province on Management of Violence and Aggression. *Chinese Hospital Management*, **31**, 33-35.

[23] Qi, Y.K., Xiang, Y.T., An, F.R., Wang, J., Zeng, J.Y., Ungvari, G.S., *et al.* (2014) Nurses' Work-Related Stress in China: A Comparison between Psychiatric and General Hospitals. *Perspectives in Psychiatric Care*, **50**, 27-32. https://doi.org/10.1111/ppc.12020

[24] Jenkins, R. and Elliott, P. (2004) Stressors, Burnout and Social Support: Nurses in Acute Mental Health Settings. *Journal of Advanced Nursing*, **48**, 622-631. https://doi.org/10.1111/j.1365-2648.2004.03240.x

[25] Hussein, J., Aniza, I. and Taufik, J.A. (2015) Factors Associated with Organizational Stress among Intensive Care Unit Healthcare Workers, in Somalia Hospital. *Malaysian Journal of Public Health Medicine*, **12**, 57-66.

[26] Dawood, E., Mitsu, R. and Monica, A. (2016) Perceived Psychiatric Nurses Job Stress: A Cross Sectional Study.

[27] Telles, H. and Pimenta, A.M.C. (2009) Síndrome de Burnout em Agentes comunitários de saúde e estratégias de enfrentamento. *Saúde e Sociedade*, **18**, 467-478. https://doi.org/10.1590/S0104-12902009000300011

[28] Ho, W.-H., Chang, C.S., Shih, Y.-L. and Liang, R.-D. (2014) Effects of Job Rotation and Role Stress among Nurses on Job Satisfaction and Organizational Commitment. *BMC health Services Research*, **9**, 8. https://doi.org/10.1186/1472-6963-9-8

[29] Asberg, K.K., Bowers, C., Renk, K. and McKinney, C. (2014) A Structural Equation Modeling Approach to the Study of Stress and Psychological Adjustment in Emerging Adults. *Child Psychiatry and Human Development*, **39**, 481-501.