

Survey of occupational stress with an emphasis on psychological well-being and its related factors intensive care units nurses in educational and medical centers

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ABSTRACT

Background and Objectives of the Study: Nursing is one of the most stressful occupations dealing with human health and life. Herein, nurses in specialized departments suffer from more stress due to specific reasons. Therefore, the present study aimed to investigate the occupational stress in nurses working in special wards with an emphasis on psychological well-being and its related factors in the educational health centers of Rasht. **Method:** This is an analytical cross-sectional study conducted on 187 nurses from the specialized departments of Rasht medical centers who were selected through stratified random sampling. The Personal Information Questionnaire (RIWR), Reef Psychological Well-Being Scale and a nursing occupational stress questionnaire were used as data collection instruments. Data were analyzed through descriptive statistics, Spearman correlation coefficient, Kruskal-Wallis correlation coefficient, and Mann-Whitney logistic regression in SPSS 21. **Findings:** The results showed that the total score of occupational stress is 40.16 ± 14.57 , which was 61% of the nurses with average occupational stress. The total psychological well-being score was 65.5 ± 3.78 and there was no significant relationship between occupational stress and the general well-being score. Also, gastrointestinal diseases (Odds Ratio = 2.82 CI: 95% OR: 1.147-6.969) and autonomy area (odds ratio = 1/25 CI: 95% OR: 1 / 02-1 / 55) and dominance on the environment (OR: 0 / 649-0 / 894 95%: CI oddsRatio = 0.762) and the Reef Psychological Well-being Scale were introduced as the predictors of the occupational stress. **Conclusion:** According to the results, more extensive studies have been conducted about the sources of stress and investigation of the related areas so that more appropriate psychological working environments can be created and nurses have less stress in caring patients.

Keywords: Occupational stress, nurses, specialized departments, reef psychological well-being scale

Introduction

One of the main causes of stress in a person's life is occupation ^[1]. Having a job, human can meet their needs and wants ^[2], however, almost all types of occupations can be somewhat

stressful ^[3]. Studies have shown that stress is more common in professions where there is more human interaction ^[1].

Occupational stress is a stress occurring at a time of life ^[4, 5] and is the result of an individual's interaction and the working environment ^[2, 4]. 60 to 90 percent of the health problems occur when there is no correlation between the occupation needs and the individual's occupational talent and ability ^[6]. Occupational stress is a serious phenomenon that can be related to the characteristics of the working environment that may be threatening for the employees ^[7] and can also be attributed to poor management, unsatisfactory working conditions ^[7], and can reduce the employees' performance ^[3].

Nursing is one of the most stressful occupations in the world, dealing with human beings, health and life ^[2, 8]. The US National Occupational Safety Association has introduced nursing as the

Access this article online

Website: www.japer.in

E-ISSN: 2249-3379

How to cite this article: Soghra Jahangiri, Shirin Jafroudi, Tahere Khaleghdoost Mohamadi, Ehsan kazemnezhad Leily. Survey of occupational stress with an emphasis on psychological well-being and its related factors intensive care units nurses in educational and medical centers. *J Adv Pharm Edu Res* 2019;9(S2):187-195.
Source of Support: Nil, Conflict of Interest: None declared.

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top of 40 stressful careers ^[6, 9, 10], with 93% of nurses constantly being affected by stressful occupational factors. ^[6] Nurses are subject to the highest stress levels ^[10-12] in accordance with their job responsibilities and the specific working environment.

In order to increase the needs and progress in nursing, stress has also increased among nurses ^[13]. In the meantime, nurses in special sectors bear more stress due to the conditions of the working environment, the type of hospitalized patients, the illness of patients, the acquired high-level of knowledge and skills needed to work in these sectors, the need for nurses' prompt, accurate response to emergency situations, stress ^[2, 12]. Also, the need for continuous medical and nursing care, the presence of patients with unstable vital signs and the use of advanced technology ^[14] may lead to more stress in nurses.

Also, during a research carried out in Palestine, 90% of nurses declared that working in intensive care units was stressful ^[8]. Factors such as observing the patients' suffer from pain, lack of supportive resources, and ignoring the emotional needs of the patients and their families ^[6], professional responsibilities and administrative system issues, ^[10] inappropriate demand from colleagues and the superordinates, ambiguity in duty, poor management, low levels of social justice, and lack of knowledge of responsibilities ^[7] can cause stress in nurses.

Occupational stressors can be divided into two groups of intra-organizational factors including factors related to the working environment, physical conditions of work, type of occupation, labor-load and lack of support, and inter-organizational factors such as family and financial status, causing lots of costs and damages for both the individual and the organization and exposing the workforce at risk ^[6].

Therefore, the structure of the organization, gender, marital status, number of children, age, family support, decision-making power, period of employment, life events, time to rest, adequate holidays, employment status, physician's attitude, nurse's attitude, the caregiver's attitude and type of hospital can be the stressors in nurses ^[3]. Stress in work shows itself after some time in the form of physical, psychological and behavioral dimensions. In a physiological dimension, it reveals itself with weak immune system, cardiovascular disease, migraine, digestive problems, joint and muscle pain, high blood pressure and diabetes, and in the behavioral dimensions with disability in decision-making, disturbance in concentration, increased number of occupational errors, conflicts, and angry behavior with colleagues, family and friends, and motivation decrease, and in psychological dimension, it will be associated with depression, insomnia, anxiety and mood fluctuations ^[8, 10], which ultimately leads to reduced efficiency, being absent at work, decreased occupational satisfaction, increased occupational vacancy rates, increased mortality and dissatisfaction in patients ^[4, 8, 7].

Occupational stress in nursing can be accompanied with adverse effects. Some of these effects include cancers ^[3], increased suicidal rates in female nurses ^[14], peptic ulcer, susceptible to infection ^[12], emotional exhaustion ^[15], disappointment and frustration, myocardial infarction ^[13], and reduced emotional intelligence ^[16].

Stress in nurses, in addition to psychological problems such as anxiety and depression, can reduce professional efficiency and decrease the ability to communicate with patients ^[9, 17], and consequently the patients' psychological needs cannot be met. Among 130 jobs studied, nursing ranked 27th in referring to a physician for mental problems ^[18]. The complex nature of the nurses' work, the environmental factors of the working place, and the nurses' physical and psychological skills can affect their job ability, reducing their ability and one of the reasons for leaving the nursing profession ^[17]. In addition to environmental and organizational factors, human factors such as emotional and personality traits such as mood and inner readiness, which are essentially independent of the environmental influences, are effective on the nurses' performance and how they interact with patients and how they deal with stressful occupational factors and affect the patients' satisfaction ^[1, 9].

Considering that human psychological dimension is very influential in the control and management of stress, therefore, the concept of psychological well-being in the occupational and scientific environments is of interest to psychologists. Psychological well-being is a multi-component concept including: self-acceptance, positive relationships with others, autonomy, environmental domination, purposeful life, and individual growth. It seems that personality traits and high psychological well-being help nurses to experience less stressful situations and have more positive coping strategies to eliminate anxiety and stress. ^[18] Since in domestic research, the relationship between psychological well-being and nurses' occupational performance has been less studied and considering the importance and role of nurses' job performance in improving the nursing quality of patients and the important role that psychological well-being plays in their job performance, attention to this issue is necessary ^[9]. Therefore, the need for research in this regard, especially in the nursing profession, seems necessary to consider strategies for considering the psychological well-being of individuals in nurse-selecting process by sharing the results of this research with nursing managers.

Methodology

This research was an analytical cross-sectional study. The research was conducted in the intensive care units of Rasht medical-education hospitals affiliated to Guilan University of Medical Sciences. According to the study of Rafiee & Zarei, in which 50.5% of nurses had high stress, the sample size was determined based on the sampling and formula mentioned with 95% confidence, considering the absolute error rate of 5% and 384 persons. Number of nurses in special departments of educational centers of Rasht was 327, and the size was estimated to be ≥ 177 according to the sample size formula for a limited population. Out of 200 questionnaires that were distributed, 13 questionnaires were excluded due to misunderstandings and incompleteness. Finally, 187 nurses were randomly selected through stratified random sampling as the number of staff in each hospital and in the relevant units.

$$P=50.5\%, 1-\alpha=95\%, d=5\%, z_{1-\frac{\alpha^2}{2}}, z_{0.97} = 1.96^2$$

$$n_f \geq \frac{n_o}{1 + \frac{n_o}{N}} = \frac{384}{1 + \frac{384}{327}} = 177$$

$$n \geq \frac{z_{1-\frac{\alpha^2}{2}}^2 p(1-p)}{d^2} = \frac{1.96^2 \times \%50.5 \times (1 - \%50.5)}{\%5^2} = 384$$

The data collection tool was a questionnaire composed of relevant factors and Nursing Stress Scale (NSS) questionnaire. The relevant factors were personal, occupational, physical, psychological, and individual factors including age, gender, marital status, number of children, education, and life events during recent six months (family members' illness, close relatives' death, economic, social, and security problems, caring for the disabled and the elderly). Occupational factors included work experience, work experience in special sectors, type of special sector, having a second job, employment status, monthly income and occupational shifts, position, working hours per month, overtime per month, and physical factors including diseases in different systems such as cardiovascular, digestive, endocrine, neurological, muscular, skeletal, respiratory, urinary, skin, immune, and blood.

The Ryff Scale Psychological Well-Being Short Form (RSPWB-SF) was used for the psychological part. This scale was revised by Ryff in 1989, being revised in 2002 and includes 18 questions. The terms are based on the six-point Likert criterion, ranging from "totally disagree" to "completely agree" with a score of one to six. The minimum score in this test is 18 and the maximum score is 108 that the high score in this test indicates high psychological well-being and low score indicates low psychological well-being. Khanjani et al. have reported the Cronbach's α of this scale 0.71 and using a confirmatory factor analysis showed that all of the factors in this questionnaire fit well [19].

The second part is the Nursing Stress Scale (NSS) questionnaire, designed by Gray Toft & Anderson in 1981, which consists of 34 terms. It is the first tool that was quantified with a 4-point Likert scale (never, occasionally, much, very much), which ranges from zero to three. The maximum score in this questionnaire is 102 and the minimum score is zero, with high score indicating high stress and low score indicating low stress. In 2011, Murtaghi Ghasemi et al. reported the Cronbach's α of this tool as 0.854 [20].

The researcher referred to the units in the middle of the morning, noon, and night shifts, and provided the questionnaires to the nurses of the units and then collected them at the end of the shift. In order to observe ethical considerations, they were assured that all information was confidential and that there was no need to insert the name and the profile in the questionnaire, and participation in the study will mean informed consent to participate in this research.

The data were collected by SPSS version 21. The statistical indicators, i.e. mean, standard deviation, and median, were used to describe quantitative variables such as Ryff's nursing job

stress and psychological well-being. Frequency and percentage were used to describe qualitative variables. The quantitative variables of occupational stress and Ryff's psychological well-being did not follow the normal distribution, which was used by Spearman test ($p < 0.05$). Therefore, Kruskal-Wallis (multi-states) and Mann-Whitney (two-state) tests and Spearman correlation coefficients were used for comparison and correlation analysis. In a multiple analysis of the relationship between psychological stress in nursing occupational stress and adjustment of individual physical occupational variables, logistic regression model was used in the way of forward and LR with the inclusion and exclusion probability of the variable of 0.1 and 0.5. The significance level of the test results in this study was considered as $P < 0.05$.

Findings

The analysis of the data showed that most of the subjects (96.3%) were female and the rest were male. The mean age of them was 34.7 ± 63.01 , 92% had a bachelor's degree, 1% had an upper secondary school degree and 7% had master's degree, 68.4% were married, 30.5% were single and 1.1% were divorced, 50% had one child, 6/24% without children, and 25.4% had 2 or more children. 32.61% had family related illnesses, 6.8% had experienced close relatives' death, 26.2% had economic problems, 0.5% had security problems and 8% had cared for disabled or elderly patients in the last 6 months.

The majority of them (32.1%) had 10 to 14 years of work experience, 15.5% had less than 5 years, 31% had an experience of between 5 and 9 years, and 21.4% had more than 15 years, and 41.7% had 6-10 years of work experience. 19.3% had less than 3 years, 17.6% had an experience of between 3 and 5 years, and 21.4% had more than 10 years of experience in the specialist department. 79.9% worked in ICU, 12.3% experienced in the CCU and 8% experienced in dialysis.

70.6% of them had income less than 20 million Rials, and the rest had an income of more than 20 million Rials per month. 71.1% of them had a working time of less than 160 hours, and the rest had more than 160 hours per month. 64.2% of them had overtime worked less than 30 hours per month, 27.8% between 30 and 60 hours, and 8% more than 60 hours per month, and 85% of them were on rotating shift. 60.4% of them were formal, 8.6% treaty, 17.6% contractual, 13.4% projected, 92% normal nurses, 2.3% matron, 8% substitute nurses, and 89.3% had no second job. Most of the studied samples (17.6%) was working in General ICU, 9.5% in Pediatric ICU, 4.8% in Women ICU, 9.13% in Neonatal ICU, 6.8% in Neurology department, 10.7% in Emergency ICU, 8.4% in burn ICU, 3.2% in ENT-ICU, 10.2% in ICU open heart, 7% in dialysis, and 12.3% CCU.

The most frequent physical cases were gastrointestinal diseases (15.5%) and the least were respiratory diseases (2.1%). Other cases include: cardiovascular disease (4.6%), endocrine (6.8%), neurological and migraine (7.3%), musculoskeletal system (36.13%), urinary tract (2.4%) cases.

The mean score of total nursing occupational stress was 40.16 ± 14.57 . The highest mean scores and standard deviation were related to the patient's suffering and death (0.33 ± 0.52) and the least of which was due to the lack of support (0.89 ± 0.58) (Table 1). The majority of the studied units (61%) had a moderate occupational stress, 36.4% had low occupational stress, and 7.2% had high occupational stress (Figure 1). The mean total score of psychological well-being was 65.55 ± 3.78 . The highest mean scores and standard deviation are related to the target area (12.18 ± 1.2) and the lowest is related to their acceptance domain ($8.2 / 9 \pm 0.8$) (Table 2). There was no significant relationship between the mean score of total occupational stress in nursing and social psychosocial issues (Table 3).

Table 1: Statistical indicators of nursing occupational stress score in general and in terms of scopes

Nursing Occupational Stress Scope	Mean	Standard Deviation	Median	Minimum	Maximum
Patient's suffering and Death	1.33	0.52	1.29	0	3
Working Pressure	1.23	0.55	1.17	0	3
Conflict with Physicians	1.2	0.54	1.2	0	2.8
Uncertainty about treatment	1.19	0.5	1.2	0	3
Conflict with Nurses	1.08	0.6	1	0	3
Insufficient preparation	1.04	0.61	1	0	3
Lack of Support	0.98	0.58	1	0	3
Total score of Nursing Occupational Stress	40.16	14.57	40	0	97

The highest mean scores and standard deviation were related to the patient's suffering and death (1.33 ± 0.52) and the least of them was the lack of support (0.98 ± 0.58).

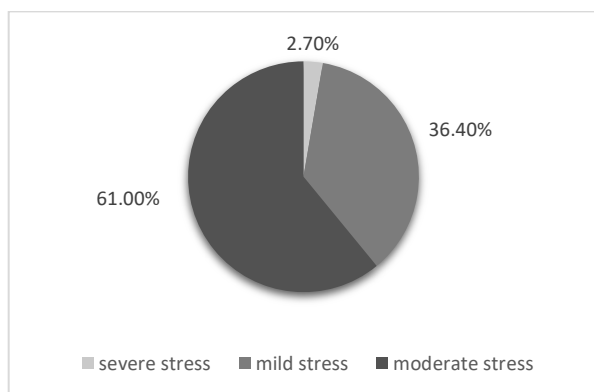


Figure 1: Distribution of occupational stresses of the studied units

Table 2: Statistical indicators of the scores of psychological well-being scale in general and in terms of scopes

Scope of Ryff Psychological Well-being	Mean	Standard Deviation	Median	Minimum	Maximum
Purposefulness in Life	12.18	2.1	12	8	18
Dominate the Environment	11.81	2	12	6	17
Autonomy	11.33	1.52	11	6	15
Personality Growth	11.28	1.53	12	7	18
Positive Relationship with Others	9.52	2.44	9	5	17
Self-Acceptance	9.43	1.8	9	5	14
Total Score of Reef Scale	65.54	3.78	66	54	77

The data show that the highest average score and standard deviation are in the scope of purposefulness in life (12.18 ± 2.1) and the lowest is related to self-acceptance (9.42 ± 1.8)

Table 3: Correlation between total score of nursing occupational stress with score of scopes and total psychological score

Total Score of Nursing , Occupational, Stress, Psychological, Scopes	r	P*
Autonomy	0.177	0.015
Dominate the Environment	-0.178	0.015
Personality Growth	-0.093	0.205
Positive Relationship with Others	0.251	0.001
Purposefulness in Life	-0.119	0.104
Self-Acceptance	0.041	0.577
Total Score of Reef Psychological Scale	0.042	0.565

* Spearman correlation coefficient is $p < 0.05$

The results of this table show that there is a statistically significant relationship between the three scopes of autonomy, domination of the environment, and positive relationships with others of the Ryff's psychological scale with the total score of occupational stress ($p < 0.05$), so that it has a positive relationship with two scopes of autonomy and positive relationship with others and has a negative relationship with the scope of the domination of the environment. By increasing the scores of autonomy and positive relationship with others scopes, the occupational stress score increased and with the increase in the score of the domination of the environment scope, the occupational stress was reduced ($p < 0.05$). There is no significant relationship between the total score of nursing occupational stress and the total scores of the Ryff's psychological scale.

The total nursing occupational stress has no significant relationship with any individual variables (gender, age, educational level, marital status, number of children, recent 6-

month issues such as family members' illness, close relatives' death, economic problems, and security problems such as rape happened for themselves or relatives, caring for disabled patient or elderly). Among the job variables, the total score of nursing occupational stress had a significant relationship only with the type of special section ($P = 0.017$), with the highest mean and standard deviation related to ENT-ICU (49.33 ± 24.93) (Table 4) and among physical factors, there was a significant relationship only with gastrointestinal diseases ($P = 0.023$) (Table 5).

Table 4: The Relationship between total score of nursing occupational stress and occupational variables

Total Score of Nursing Occupational Stress		Mean	Standard Deviation	Median	P
Occupational Variables					
	ICU Pediatrics	44.91	14.36	45	
	ICU Gynecology	35.11	6.72	34	
	NICU Babies	44.54	9.26	45	
	ICU General	38.36	16.8	40	
	ICU Nerves	37.06	13.86	36	
Special Section	ICU Emergency	34.60	11.77	35	*0.017*
	Dialysis	40.92	10.72	41	
	CCU	39.52	14.21	38	
	Pediatrics Dialysis	36.50	9.19	3.56	
	ICU Burn	29.33	8.62	29	
	ENT/ICU	49.33	24.93	4.52	
	ICU Cardiac	48.26	18.32	48	
	<5	39.28	17.21	38	
Work Experience (Year)	5-9	43.28	14.70	43	*0.337*
	10-14	38.15	12.24	38	
	>15	39.30	15.33	41	
Work Experience in the Special Section (Year)	< 3	40	16	39	
	3-5	42.15	15.23	42	*0.763*
	6-10	40.48	12.91	41	
	>10	38.05	15.96	3.57	
Type of Special Section	ICU	40.24	15.05	40	
	CCU	39.52	14.21	38	*0.961*
	Hemodialysis	40.33	10.34	41	
Income (Rials)	≤2000000	40.65	14.31	40	*0.715*
	>2000000	38.98	15.23	41	
Monthly Working Hours	≤160	40.15	14.6	40	
	>160	40.19	14.63	4.50	*0.844*
	< 30	39.47	13.19	40	

Overtime (Hour)	30-60	38.56	14.84	37	*0.096*
	>60	51.27	19.78	43	
Working Shifts	Morning Fixed	39.19	12.09	39	
	Evening Fixed	42	7.07	42	
	Night Fixed	36.8	6.72	34	
	In Turn	40.37	15.14	41	*8.884*
Employment status	Official	41.06	14.46	40	
	Conventional	40.06	9.54	4.51	*0.660*
	Contractual	39.12	14.15	38	
	Projective	37.52	18.22	35	
Position	Head Nurse	34.17	11.97	36	
	Nurse Successor	38.89	11.82	39	*0.624*
	Nurse Normal	40.44	14.79	4.50	
Having a second Job	No	39.67	13.68	40	*0.914*
	Yes	44.25	44.25	43	

The data showed that there is a significant relationship between the total score of occupational stress with the type of special section (0.017).

Table 5: The relationship between total score of nursing occupational stress according to physical factors

Total Score of Nursing Occupational Stress		Number	Mean	Standard Deviation	Median	P*
Physical factors						
History of cardiovascular and blood disease	No	175	40.30	14.91	40	
	Yes	12	38.08	8.21	38.5	0.623
History of digestive disease	No	158	39.13	14.63	38	
	Yes	29	45.79	13.08	46	0.023
History of endocrine disease (thyroid and diabetes)	No	171	40.09	14.73	40	
	Yes	16	40.94	13.12	43	0.781
History of neurological disease and migraine	No	180	40.1	14.61	40	
	Yes	7	41.71	14.3	45	0.531
History of musculoskeletal, skeletal, neck disks, back and neck disc surgery, back pain and Calcaneal Spur	No	162	39.98	14.97	40	
	Yes	25	41.32	11.78	42	0.414

History of respiratory disease	No	183	4.19	14.7	40	0.701
	Yes	4	39	6.48	40.5	
History of urinary and Gynecology disease	No	179	39.96	14.11	40	0.308
	Yes	8	44.63	23.46	47	
History of skin, eye and immune disease	No	178	40.08	14.8	40	0.640
	Yes	9	41.67	9.17	41	

* Mann Whithney Test

Data show that there is a significant relationship between total score of nursing occupational stress and gastrointestinal diseases ($p < 0/05$).

According to the results, the scores of autonomy ($p = 0.02$) and the score of environment domination ($p = 0.001$) with history of gastrointestinal disease ($p = 0.024$) were considered as predictors of nursing occupational stress. As a result, nurses with a history of gastrointestinal disease had an average of 2.8 times greater chance of higher stress scores. With the increase of each score in the autonomy scope of the Ryff's psychological scale, the chance of a nursing occupational stress score increased 1.31 times. By increasing the score of the scope of domination on the environment, the nursing occupational stress score is reduced to 0.76 (Table 6).

Table 6: Predictors related to nursing occupational stress

Predictors	Estimated regression coefficient	Standard Deviation	P	Odds Ration	95%ci for EXP(B)	
					Minimum	Maximum
Score of autonomy scope of Reef	0.251	0.108	0.020	1.285	1.041	1.587
Psychological Well-being Scale						
Score of environment domination scope of Reef	-0.269	0.082	0.001	0.764	0.650	0.898
Psychological Well-being Scale						
History of digestive disease	1.039	0.460	0.024	2.827	1.147	6.969
Invariant	0.152	1.495	0.919	1.164		

Discussion

The aim of this study was to determine the occupational stress of nurses in specialized units with emphasis on psychological well-being and its related factors in special departments of educational centers in City of Rasht, indicating that the average total score of nurses' occupational stress was $40.16 \pm$

14.57 out of 102, and 61% of nurses had average job stress. In the study of Dagget et al., The mean score of total nursing occupational stress was 58.64 ± 12.62 out of 104, indicating a medium occupational stress^[21]. In the study of Farhadi et al., The total score of occupational stress in Imam Khomeini Hospital was 121.36 ± 0.88 and 120.88 ± 18.61 out of 180 in the Shahid Motahari Hospital, indicating a severe occupational stress^[2].

In the study by Poursadaghian et al., 35% of nurses had moderate stress, 60% had moderate to high stress and 5% had high stress^[22]. The result of the present study was consistent with that study. The study by Latifzadeh and Zare showed that 50.5% of nurses had high stress, 41.6% had medium stress and 7.9% had low stress^[1]. In the study by Al-rasasi and Al-faisal, 44.9% of nurses had mild stress, 43.6% had moderate stress, 6.4% had high stress, and 5% did not have any stress.^[23] The present study is not consistent with any of these studies.

In this study, the mean score of occupational stress in the scope of patients' suffering and death was the highest score and the lowest mean score is related to lack of support. In the study by Farhadi et al, the mean occupational stress score in the scope of mortality is ranked first among the nine scopes^[2]. Mohammad Khayer et al considered the scope of mortality and death as the main source of stress in nurses working in specialized units in Khartoum, which ranked first among nine scopes^[24]. In the study by Mortaghi et al., the score for the lack of support among the scopes ranked seventh and ranked last among nurses^[20]. This study is consistent with the above studies. In the study of Al-Rasasi and El-Faisal, the range of suffering in the third rank among nine other scopes^[23]. According to Dagget et al., the mean score for lack of support among the 8 scopes ranked second^[21]. This study was not in line with the study by Al-Rasasi and Dagget.

In this study, the mean of total Ryff's psychological well-being was 65.54 ± 3.78 out of 108 and the highest mean scores and standard deviation were related to purposefulness and the lowest was related to the scope of self-acceptance. Kusha et al stated that the total psychological well-being score was 334.3 out of 504, and the scope of environment domination ranked first and the scope of autonomy had the lowest rank among the six scopes^[9]. In the study by Lukzadeh and Bafrouei in Yazd, the total psychological well-being score was 313.56 out of 504, and the score of positive relationship with others ranked first and autonomy score was the lowest of six scopes^[25].

Considering the use of Ryff's psychological well-being 18-item questionnaire in this study and the use of Ryff's psychological well-being 84-item questionnaire the in Kusha and Lokasdeh's study, the mean score of total psychological well-being in all three studies was higher than median and nurses had relatively good psychological well-being status. The reason for these differences may be the tool used to measure occupational stress and psychological well-being, the differences in the dominant policy on the health system of countries and even country's hospitals in different provinces in terms of organizational support, treatment system management, type of how superiors

deal with personnel, and the difference in the culture of society and the influence of personality traits of individuals in terms of the ruling culture in society.

In this study, there was no significant relationship between the mean score of total nursing occupational stress and the mean score of total psychological well-being. However, there was a significant relationship between nursing occupational stress, autonomy, environment domination and positive relationship with others. In the study by Karimi et al, in nurses, it was found that there is no statistically significant relationship between stress and nurses' well-being [26]. In a study among teachers in Nigeria, Salami found that occupational stress was negatively related to psychological well-being [27]. Given the high number of occupational issues that cause stress and the lack of correlation between occupational stress and psychological well-being, even though there is a significant relationship between some scopes of psychological well-being and occupational stress, this indicates the effect of a more powerful occupational factors in workplace.

In the present study, there was no significant relationship between total score of nursing occupational stress with any of the individual variables. Among occupational variables, only there was a significant relationship with the special unit with the highest mean and standard deviation was related to ICU of Otorhinolaryngology.

In the study by Ayed et al, In Palestine, it was found that there was no significant relationship between individual characteristics and sources of stress [8]. Kačgraj stated in his study that there was no significant relationship between demographic characteristics and occupational stress levels, and with work place and work experience there was a significant relationship with occupational stress levels [14]. Yu Yau et al, reported that there was no significant relationship between age, work experience and occupational stress score, and the highest stress score was related to the unit of pediatrics [28]. There was no significant relationship between occupational stress and age and sex in the study by Mohite et al, in Karad (India) [13].

The study by Latifzadeh and Zarei in Ahwaz showed that there was a significant relationship between occupational stress and gender, so that women were more stressed and there was a significant relationship between occupational stress and hospital type ($p < 0.002$) [1]. In the study by Faraji et al in Kurdistan, there was a significant relationship between occupational stress and individual factors such as age, gender, and educational level ($p < 0.05$). By increasing age, stress was increased and stress was higher among female nurses and undergraduates [5]. The study by Mortaghi et al showed a significant relationship between total score of occupational stress and occupational related factors [20].

Hashemian et al. In their study stated that individual factors such as age and marital status had a significant relationship with stress levels, as the stress level in married and divorced people was by 2 and 2.5 times higher than single people, and nurses over 33 year-old had less stress [29]. In the study by Mohammad Khayer et al., it was found that there was a significant relationship between occupational stress, marital status and

work experience, and the type of specialized unit had a remarkable effect on the total score of occupational stress [24]. The present study is not in line with the above studies. Perhaps the reason for this is the difference in culture, people's personality type and the management system.

In this study, only gastrointestinal diseases were associated with occupational stress. In the study by Ayed et al. conducted in Palestinian nurses in governmental hospitals, 62.2% complained of the stomach ache and 68.3% complained of gastroesophageal reflux disease and there was a significant relationship between physical problems and sources of occupational stress [8]. Another study by Koh who was conducted in nurses and nurses' assistants in Korea found that the prevalence of irritable bowel syndrome and Functional dyspepsia increased significantly with increased psychological risk and increased digestive dysfunctions with a high prevalence of psychological stress in nurses who had shifting-turns are the same [30]. Since nurses play an important role in the development of care and treatment affairs, Improvement and promotion of community health, it is evident that they must have the strength, ability, and high physical and mental health. Occupations where social and interpersonal relations are widespread and their staff are responsible for the care and treatment affairs, naturally is a suitable context to the growth of a variety of physical illnesses that will increase stress in nurses.

In this study, two scopes of autonomy and domination of the environment, Ryff's psychological well-being scale and gastrointestinal diseases were introduced as the predictors of occupational stress.

The increase in occupational stress in the field of autonomy may be expressed as follows: nurses are more stressful because of care and rapid decisions that are tailored to the specific circumstances of patients in the special department and the consequences of the responsibilities of quick decisions in critical and emergency situations. Regarding the increase in the score of environmental domination that reduces occupational stress, it can be said that individuals experience lower work stress due to their surroundings and the awareness of work-related problems, and people with digestive problems may be more stressful people, thus they also experience more occupational stress in the workplace.

Results

As the results of this study indicated, nurses reported the highest levels of stress in terms of mortality. Providing appropriate educational programs to improve the level of nurses' health and empowering them in dealing with mortality in patients can provide a framework for planning and dealing with it. Researchers with more sample size and more variables that overcome and predict occupational stresses of nurses and more extensive studies on the relationship between nursing occupational stress and psychological well-being are suggested. Repeating the similar studies can verify the findings of the research and increase their generalizability. The conditions of the working environment and the improvement of the

workplace indices, also observing the principles of constructive communication, the development of positive personality traits, stress management training, and supporting the nurses in creating an appropriate environment for professional support can be effective in reducing occupational stress among nurses.

Among the limitations of this study, the nurses' psychological state at the time of completing the questionnaire, nurses' personality type, and the conditions of the unit during filling out the questionnaire, may affect the nurses' response and maybe using the questionnaire cannot provide deep data regarding the individual's attitudes and beliefs. Therefore, it is suggested that in addition to the questionnaire, a face-to-face interview to be conducted.

Acknowledgment

This study was based on a research project approved by Guilan University of Medical Sciences with the code IR.GUMS.REC.1396.94 and hereby we appreciate the support and cooperation of all Nursing Personnel and Authorities helping us in this research.

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