Advanced Medical Journal, Vol.6, No.2, P.60-69, 2022 /https://doi.org/10.56056/amj.137

Depression, anxiety and stress among nurses in Duhok City hospitals

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Abstract

Background and objectives: Nursing practice is one of the most stressful professions in the world. This study aims to find out the level of stress, anxiety and depression of the nurses at Duhok City hospitals.

Methods: A cross-sectional study was conducted on nurses in governmental hospitals in Duhok City from Oct 2018 to Jun 2019 in which 310 nurses from all hospitals of Duhok city were selected in systematic randomization method. Their sociodemographic data were analyzed against self-interviewed Depression Anxiety and Stress Scale.

Results: A cross-sectional study was conducted on nurses in governmental hospitals in Duhok City from Oct 2018 to Jun 2019 in which 310 nurses from all hospitals of Duhok city were selected in systematic randomization method. Their sociodemographic data were analyzed against self-interviewed Depression Anxiety and Stress Scale.

Conclusion : This study showed that a significant proportion of nurses were stressed, anxious and depressed. Working in emergency departments was a risk factor for anxiety while nurses from rural areas were more prone to develop depression.

Key words: Depression, Anxiety, Stress, Nurses, Duhok

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Introduction

Nursing is characterized by vulnerability to a vast range of potentially stressful positions in the workplace[1]. The sources of these stressors in the nursing profession have been attributed to interactions with both patient's family and other nursing staff [2]. Nurses have too many tasks to be done as compared to other professions. Working in long-term healthcare services, a stressful work environment, role conflict, an unequal position comparing to other healthcare professionals and limited staffing resources were all related to job stress[3].Numerous studies have demonstrated that nurses with high job stress display decreased job gratification, minor hospital commitment, elevation of absenteeism and turnover intentions [2, 4-5]. Stress may harm professional competence through decreased attention and concentration, inability to use problem solving skills and poor communication with patients[6]. In addition, nurses with frequent job stress could experience numerous psychological and physical problems; also female nurses are more prone to anxiety then male nurses[7]. The nursing profession is associated with anxiety, and the hospital departments where the nurses work either increase or keeps their anxiety under manageable control. In addition, the gender is related to the differences in anxiety manifestations and management[8]. Depression is a common mental disorder; it's predicted to be the second most common cause of disability in the world by 2020 [9–10]. Women are especially at risk of becoming depressed[9,11]. Nurses are largely suffered from anxiety, stress, and depression, and this is based mainly on their personal characteristics and type of hospital work[12].The present study aims at finding out the level of stress, anxiety and depression of the nurses at Duhok City hospitals with reference to different socio-demographic variables.

Subjects and methods

A cross-sectional study was conducted on nurses working in hospitals in Duhok City - Kurdistan Region of Iraq (KRI), including Azadi Teaching Hospital, Emergency Hospital, Gynecology and Obstetrics Hospital, Hevi Hospital, Burn and Plastic Surgery Hospital, and Duhok Eye Hospital) from Oct 2018 to Jun 2019. Three hundred and ten (310) nurses were selected randomly through systematic random sampling in

which every another nurse was selected from the formal list of the nurse's names from each hospital. The minimum included number of nurses supposed to be more than 244 nurses according to Sample Size Calculator. (The total number of nurses in Duhok City hospitals was 668, according to the statistics from General Directorate of Health in Duhok /Ministry of Health–KRI in 2018). However, 310 questionnaires were distributed among the selected nurses in order to overcome those who dislike participating, incorrectly completed the questionnaire or met the exclusion criteria. The sample was taken from different departments in each governmental hospital in Duhok City. The Departments were divided into emergency and non-emergency; the emergency departments consist of (Intensive care unit, coronary care unit, and reception departments) while the non-emergency included (The wards, operation rooms, and out-patient consultation departments). Finally, 300 nurses have successfully completed the questionnaire and met the inclusion criteria. The inclusion criteria of the sample were the registered and volunteer nurses from both genders who worked in Duhok City hospitals. While the exclusion criteria were the nurses who have chronic diseases (medical and mental disorders).Data were collected through self-interviewed Depression Anxiety and Stress Scale (DASS21)[13]. The questionnaire translated to Arabic. The sociodemographic data were collected through prepared questionnaire by the Shabu SA, Al-Tawil NG, in which the gender, age, marital status, level of education, working department, and socioeconomic status had been included. The socioeconomic status was measured through a specific scale consists of the educational level of father and mother, type of housing, possession of a car and the income. The calculated scorings were classified as the low socioeconomic state (scoring of 1-7), medium (scoring of 8-14) and high (scoring of 15-20)[14]**.** Data were analyzed using the Statistical Package for Social Sciences (SPSS, version 25).The work has been approved by ethical committee from General Directorate of Health in Duhok, the form was filled by the participants (nurses) which include their code and phone number.

Results

More than fifty percent of the nurses were complaining from stress 166 (55.3%), while 221(73.7%) of them showed having anxiety; and 213 (71.0%) were depressed, table(1).

Table (1): Prevalence of stress, anxiety and depression among study sample

Variables		Frequency	Percentage %
Stress	Normal	134	44.7
	Mild	61	20.3
	Moderate	54	18.0
	Severe	51	17.0
	Total stress with different severity	166	55.3
Anxiety	Normal	79	26.3
	Mild	18	6.0
	Moderate	68	22.7
	Severe	135	45.0
	Total anxiety with different severity	221	73.7
Depression	Normal	87	29.0
	Mild	40	13.3
	Moderate	82	27.3
	Severe	91	30.3
	Total depression with different severity	213	71.0
Total		300	100

No significant association between sociodemographic data and the stress was found, table (2).

Table (2): The association between sociodemographic data and the stress.

Variables		Normal No.(%)	Stressed No.(%)	Total No.(%)	p-value
Gender	Male	72(41.6)	101(58.4)	173(100)	0.240
	Female	62(48.8)	65(51.2)	127(100)	
Age group	18-29	59(45.7)	70(54.3)	129(100)	0.776
	30-39	48(41.4)	68(58.6)	116(100)	
	40-49	22(51.2)	21(48.8)	43(100)	
	50-59	5(45.5)	6(54.5)	11(100)	
	60-69	0(0.0)	1(100.0)	1(100)	
Education background	Nursing preparatory	28(46.7)	32(53.3)	60(100)	0.765
	Nursing institute	67(45.9)	79(54.1)	146(100)	
	Nursing college	39(41.5)	55(58.5)	94(100)	
Residency	Rural	40(42.6)	54(57.4)	94(100)	0.707
	Urban	94(45.6)	112(54.4)	206(100)	
Marital	Single	63(47.4)	70(52.6)	133(100)	0.415

status	Married	71(42.5)	96(57.5)	167(100)	
Department	Emergency	58(39.5)	89(60.5)	147(100)	0.082
	Non-emergency	76(49.7)	77(50.3)	153(100)	
Socioeconomic	Low	53(38.7)	84(61.3)	137(100)	
	Medium	73(51.8)	68(48.2)	141(100)	0.064
	High	8(36.4)	14(63.6)	22(100)	

However, a significance relationship between the department of the work and anxiety was found, in which nurses from emergency departments were more anxious 118 (80.3%), and 103(67.3%) of the nurses working in non-emergency departments were anxious, (p-value = 0.013). While no significant relationship between the other sociodemographic data and anxiety was found, table(3).

Table (3): The association between sociodemographic data and the anxiety.

variable		Normal No.(%)	Anxious No.(%)	Total No.(%)	p-value
Gender	Male	45(26.0)	128(74.0)	173(100)	0.895
	Female	34(26.8)	93(73.2)	127(100)	
Age group	18-29	28(21.7)	101(78.3)	129(100)	0.357
	30-39	32(27.6)	84(72.4)	116(100)	
	40-49	15(34.9)	28(65.1)	43(100)	
	50-59	4(36.4)	7(63.6)	11(100)	
	60-69	0(0.0)	1(100.0)	1(100)	
Education background	Nursing preparatory	20(33.3)	40(66.7)	60(100)	0.393
	Nursing institute	36(24.7)	110(75.3)	146(100)	
	Nursing college	23(24.5)	71(75.5)	94(100)	
Residency	Rural	18(19.1)	76(80.9)	94(100)	0.066
	Urban	61(29.6)	145(70.4)	206(100)	
Marital status	Single	30(22.6)	103(77.4)	133(100)	0.191
	Married	49(29.3)	118(70.7)	167(100)	
Department	Emergency	29(19.7)	118(80.3)	147(100)	0.013
	Non-emergency	50(32.7)	103(67.3)	153(100)	
Socioeconomic	Low	37(27.0)	100(73.0)	137(100)	0.191
	Medium	38(27.0)	103(73.0)	141(100)	
	High	4(18.2)	18(81.8)	22(100)	

In regards to depression, nurses from rural areas were significantly more depressed 77(81.9%) than those from urban areas 136 (66.0%) (p-value = 0,006), while no significant association between other sociodemographic data and depression were found, table (4).

Table (4): The association between sociodemographic data and the depression.

Variable		Normal No.(%)	depressed No.(%)	Total No.(%)	p-value
Gender	Male	43(24.9)	130(75.1)	173(100)	0.072
	Female	44(34.6)	83(65.4)	127(100)	
Age group	18-29	38(29.5)	91(70.5)	129(100)	0.458
	30-39	29(25)	87(75)	116(100)	
	40-49	15(34.9)	28(65.1)	43(100)	
	50-59	5(45.5)	6(54.5)	11(100)	
	60-69	0(0.0)	1(100.0)	1(100)	
Education background	Nursing preparatory	23(38.3)	37(61.7)	60(100)	0.166
	Nursing institute	41(28.1)	105(71.9)	146(100)	
	Nursing college	23(24.5)	71(75.5)	94(100)	
Residency	Rural	17(18.1)	77(81.9)	94(100)	0.006
	Urban	70(34.0)	136(66.0)	206(100)	
Marital status	Single	33(24.8)	100(75.2)	133(100)	0.161
	Married	54(32.3)	113(67.7)	167(100)	
Department	Emergency	35(23.8)	112(76.2)	147(100)	0.057
	Non-emergency	52(34.0)	101(66.0)	153(100)	
socioeconomic	Low	34(24.8)	103(75.2)	137(100)	0.188
	Medium	48(34.0)	93(66.0)	141(100)	
	High	5(22.7)	17(77.3)	22(100)	

Discussion

The current study showed that 166(55.3%) of the nurses were stressed, 221(73.7%) of them were anxious, and 213 (71%) were depressed. these results contradict a study reported in Al-Hussein and Al-Mteiwty study in which 25(10%) of the nurses were stressed, 52(20.8%) were anxious, and 40(16%) were depressed[15.]This study revealed high level of stress, anxiety and depression among nurses which could be due to the overload of the work, in which there is too much patients, with inadequate numbers of nurses in most of the wards and departments.The present study indicates that there is no significant relationship between socio-demographic data and the level of stress. Similarly, Boya et al. study reported that the sex as a demographic variable did not have any significant effect on any of the emotional states including the stress[16]. However, this result is inconsistent with other findings that male nurses are more likely to be stressed since nursing is traditionally considered a woman's

profession. It also runs counter to the assertion that males experience role conflicts when they are in predominantly female occupation[17-19].In addition, our result contradict what had been reported by other studies where they identified the age as a predictor of stress, in which the higher the age of the nurses the more they exposed to these emotional conditions[17, 20-21].Our finding disagrees with the results of Adzakpah et al study in which a significant level of stress at the rehabilitation unit was reported[21]. Also, Abdi & Shahbazi study reported the working in intensive care unit (ICU), as the most important sources of stress[22].The present study revealed that there is a significant relationship between the level of anxiety and the clinical department, in which the nurses working in emergency departments were significantly more anxious. This finding agrees with the results of other study which found that nurses in the intensive care unit suffer from more anxiety than those in the non- intensive care unit[23]. This could be explained by the burden of dealing with difficult and serious cases in emergency departments. However, Adzakpah et al reported that there is no significant relationship between the level of anxiety of nurses and hospital units they work [20]. While, no association found between other sociodemographic variables and anxiety in current study. This result is consistent with the findings which revealed that gender has no effect on anxiety[16]. However, current results contradict the result of a study done by Uwaoma et al found that sex had a significant effect on nurse's anxiety with females showing a greater degree of anxiety than males[23]. The current study showed that there is a statistical significant association between residency and the level of depression; in which the nurses from rural area were significantly more depressed. This could be explained by that nurses from rural area were living in nurses' residence houses in the hospitals away from their families and relatives with less social communication in addition to generally difficult conditions there. In current study no association between other sociodemographic variables and depression appeared. However, other study on nurses reported that there is a significant association between the age and depression and stated that male nurse was more depressed then female nurses[24]. Also our results are incongruent with a study which showed a significant relationship between marital status and depression level. Similarly, Kaplan documented that depression was observed more among the

divorced. Moreover, Asad revealed that single and employed women were more likely to develop depression than married employed women[25]. Furthermore, a significant association between depression and clinical department appeared in a study done by Vafaei et al [26]. The difference between the results among different researches in regards of depression and other sociodemographic variables in nurses may be attributed to methodological differences from one study to another, including the sample size and hospitals where the researches had done, in addition to the different atmosphere of the hospitals and health systems under which the nurses work.

Conclusions

A significant proportion of nurses were stressed, anxious and depressed. Working in emergency departments was a risk factor for anxiety while nurses from rural areas were more prone to develop depression. Living in such difficult emotional status might affect nurses' performance and this necessitates paying attention to this aspect more seriously.

Conflicts of interest

The authors report no conflict of interest.

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