

## DEPRESSION AMONG NURSES WORKING IN MINISTRY OF HEALTH HOSPITALS IN RAS AL KHAIMAH UNITED ARAB EMIRATES

By

AHMED JAMIL \*

KUMARADHAS VIJAYA \*\*

SALGADO ARNEL B. \*\*\*

\*-\*\*\* RAK College of Nursing, RAK Medical and Health Sciences University, United Arab Emirates.

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### ABSTRACT

Nurses are front line workers in the healthcare services. A heavy workload as a career can leave them overworked and stressed which gives high risk of developing negative mental states like depression. For individuals with depression, the severity of depressive symptoms increases and their ability to function is affected as well. A high standard of nursing care is only possible if nurses can maintain sound physical and mental health. In the United Arab Emirates, there are no published data regarding the prevalence of depression among nurses. Hence, this study sought to identify the prevalence of depression among nurses working in the Ministry of Health (MOH) hospitals in Ras Al Khaimah, United Arab Emirates, and to assess the association of demographic variables with the prevalence of depression. The selected MOH hospitals were Saqr Hospital, Ibrahim Bin Hamad Obaidullah Hospital, and Obaidullah Geriatric Hospital. A cross-sectional descriptive study design was used and the data was collected from 136 nurses through a self-administered Beck Depression Inventory-II (BDI-II). The overall prevalence of depression, according to the BDI-II, was 17.6% in the present study, mild depression was 6.6%, moderate depression was 8.8%, and severe depression was 2.2%. Overall results showed that the prevalence of depression among nurses working in the MOHAP hospitals of Ras Al Khaimah were low. A significant association ( $p < 0.05$ ) with nationality, work experience, marital status, and financial dependence of family members of the nurses were found with depression. In order to conclude the prevalence of depression among nurses working in MOHAP hospitals of Ras Al Khaimah, the findings provided useful baseline data for policymakers regarding decisions that can positively affect the health of nurses and patients. Encouraging nurses' mental wellbeing will help optimize patient health outcomes too.

Keywords: Depression, Beck Depression Inventory-II, Nurses, Health Hospitals.

### INTRODUCTION

Depression is a common, but serious mood disorder. The clinical features of depression affect the way individuals feel, think, and handle daily activities, such as sleeping, eating, and socializing, can cause individuals to have difficulty concentrating, getting easily fatigued, and show a marked decline in their capabilities at work (Abbas et al.,

2012). Nurses are an essential part of the healthcare team, and their sound physical and mental health is of the utmost importance and has a direct correlation to their work performance. The quality of a healthcare organization depends on the quality of the nursing care provided at each facility. Patients often choose a healthcare facility or hospital based on the nursing services offered there, and nurses are often challenged with a demanding and stressful role. There are many stressors in the nursing role, including working various shifts and long hours, handling difficult patients and sometimes aggressive family members, taking on increasing numbers of patients, and navigating legal documentation. There can also be low salaries, a



This paper has objectives related to SDG



lack of autonomy, the risk of hospital-acquired infections, and potential harassment by other healthcare employees. All of these stressors can negatively affect the mental and physical health of nurses. It is vital for nurses to remain mentally and physically healthy in order to achieve the goal of a high standard of nursing care for their patients; therefore, it is a primary concern of hospitals and nursing managements that their nurses remain healthy.

## 1. Materials and Methods

A cross-sectional study was conducted in three Ministry of Health (MOH) hospitals in Ras Al Khaimah, United Arab Emirates (UAE). The selected hospitals were Saqr Hospital (a 220-bed surgical hospital), Ibrahim Bin Hamad Obaidullah Hospital (a 112-bed medical hospital), and Obaidullah Geriatric Hospital (a 126-bed hospital). A two-part data collection questionnaire was given—the first section consisted of participant demographic data, and the second section included the self-administered Beck Depression Inventory-II (BDI-II). Data were collected from April 4, 2016, to May 10, 2016. All nurses working in the three selected MOH hospitals in Ras Al Khaimah, who fulfilled the inclusion criteria, and comprised the study population of 260 registered nurses.

Inclusion criteria included that participants must work at one of the three selected MOH hospitals in Ras Al Khaimah and had received a diploma from at least a three-year nursing program. Exclusion criteria included nurses working in a management position or having work experience of fewer than six months, nurses working in clinics, and nurses who were not on duty. Also excluded were nurses who were pregnant during the study or had given birth during the previous year, as well as nurses who were currently enrolled in a bachelor's, master's, or PhD study program. Those who were diagnosed with depression before joining the hospital as a nurse were also excluded.

## 2. Sample Size and Sampling Method

World Health Organization software for sample size determination was used for the sample size calculation, which was based on the assumption that the prevalence

of depression among nurses working in the UAE was not known, therefore, a prevalence rate of 50% was assumed. With a 95% confidence interval and bound on error of 5%, the sample size was 384. However, since the eligible number of nurses working in the MOH hospitals in Ras Al Khaimah was 260, a population correction factor was applied, and a final sample of 152 nurses were required. A total of 260 nurses were given the questionnaire, of whom 136 responded. A purposive sampling method was used to select the participants from the selected hospitals. Purposive sampling is a nonprobability sampling technique that requires a predetermined idea (knowledge). Inclusion and exclusion criteria were selected based on this theoretical knowledge. The head nurses were approached for the list of all eligible nurses working in the selected wards and in the given hospitals. Relevant information regarding the participants was obtained from the head nurses to screen the participants based on the eligibility criteria. Eligible nurses were approached for consent and participation in the study.

## 3. Data Collection Procedure

A previously reliable and validated BDI-II was used. Depression is categorized according to the BDI-II as minimal depression is a 0-13 score, mild depression is a 14-19, moderate depression is a 20-28, and severe depression is a 29-63 score. The reliability of the BDI-II was determined with a coefficient of 0.89 (Cheung & Yip, 2016). After fulfilling all legal and ethical requirements of the study, data were collected for one month. The researchers visited Saqr Hospital during the first week of April 2016. The head nurses of the selected wards were approached, and the purpose of the study was explained to them. After receiving permission from the head nurses, the questionnaire was distributed among the participants. The researcher explained the questionnaire to the participants individually and in the group as well. The researcher distributed a survey tool in Saqr Hospital during the first and second weeks of April 2016, in Ibrahim bin Hamad Obaidullah Hospital during the third week of April 2016, and in Obaidullah Geriatric Hospital during the last week of April and the first week of May 2016. The

questionnaire was collected from participants within one week of its distribution.

#### 4. Pilot Study

The pilot study was conducted with seven participants working in a special care baby unit at Saqr Hospital. The inclusion and exclusion criteria of the study, as well as the purpose of the study, were explained to the participants. They were informed that their participation in the study was on a voluntary basis and were assured that all information would remain confidential. Informed consent was taken. Participants were able to understand and select the appropriate options for the demographic variable information and the BDI-II.

#### 5. Data Analysis

Data were analyzed through descriptive statistics using the IBM SPSS Statistics for Windows, Version 23.0. (Armonk, NY: IBM Corp.). Participants were categorized as mildly depressed, moderately depressed, or severely depressed. Any association of the demographic variables (nationality, age, gender, nursing qualification, designation, areas of work, working experience as a nurse, monthly salary, marital status, spouse employment status, and number of financially dependent family members) with the severity of depression was identified with the help of cross-tabulation and a chi-square test. A p-value of  $< .05$  was used as the cutoff value to determine if there was any significant association with the demographic variables. Results were communicated through a graphic presentation.

#### 6. Results

More than half (56.30%) of the participants in the study were Indians, 17.4% were non-local Arabs, 17.04% were Filipinos, 7.41% were local Arabs, and 1.48% were other nationalities. The majority (50%) of the participants were 30 to 39 years old, while the lowest percentage (13.97%) of the participants was between 20 to 29-year age group. The majority of the participants were women (86.67%), while men comprised 13.33% of study participants. In 76.74% of the nurses, their prior education level was twelfth grade, while 15.50% held a bachelor's degree before joining the nursing profession, and 7.75%

completed tenth grade before joining the profession. The majority of the participants had received a Bachelor of Science in Nursing degree, and only a few had received a Master of Science in Nursing degree. Approximately 54.17% of the participants were working in a noncritical care area, while 45.83% of nurses were working in a critical area. The majority (62.0%) of participants were staff nurses, and 72.22% received a monthly salary between 7000 dirhams (AED) and 8999 AED. Further, 83.58% of the participants were married, 15.67% were single, and 0.75% were widowed. Only 15.91% of the participants' spouses were unemployed, and approximately 80% of participants were responsible for the financial support of another member of the family.

The overall prevalence of depression, according to the BDI-II, was 17.6% in the present study, where mild depression was 6.6%, moderate depression was 8.8%, and severe depression was 2.2% whereas Minimal depression was not included as a type of depression. Table 1 shows the distribution of nurses according to severity of depression. A significant association ( $p < 0.05$ ) with nationality, age, years of work experience, marital status, and financial responsibility of participants for other family members was observed with depression. The remaining demographic variables of the BDI-II showed no significant association with depression. Table 2 shows the association of participant demographic variables with prevalence of depression.

#### 7. Discussion

The first objective of the study was to assess the prevalence of depression among nurses. Depression is categorized according to the BDI-II as minimal depression is a 0-13 score, mild depression is a 14-19, moderate depression is a 20-28, and severe depression is

	Severity of Depression	Frequency (n)	Frequency (%)	Cumulative Percent
Valid	Minimal depression	112	82.4%	82.4%
	Mild depression	9	6.6%	89.0%
	Moderate depression	12	8.8%	97.8%
	Severe depression	3	2.2%	100.0%
	Total	136	100.0%	

Table 1. Distribution of Nurses According to Severity of Depression

Participant Demographic Variables	Value	df	P-value
Nationality	26.061 <sup>a</sup>	12	.011
Age	12.236 <sup>a</sup>	6	.057
Gender	3.338	3	.342
Nursing education	2.754	6	.839
Designation	10.081	9	.344
Ward	3.806	3	.283
Years of working experience	16.903 <sup>a</sup>	9	.050
Monthly salary	4.322	9	.889
Marital status	19.350 <sup>a</sup>	6	.004
Spouse employment status	8.485	6	.205
Financial responsibility of participants for others	13.641 <sup>a</sup>	3	.003
Number of people financially dependent on nurse	19.339	15	.199

**Table 2. Association of Participant Demographic Variables with Prevalence of Depression**

a 29-63 score.

According to the results, depression was less prevalent when compared to the findings of a study conducted in the United States by Skinner et al., where the depression rate among nurses was 27% (Dervic et al., 2012). According to a study by Mealer et al., depression among nurses was documented at 13% (D'Souza, 2012). There is currently no published research available on nonclinical depression among the UAE population. However, according to October 18, 2012, Gulf News, more than 4% of the UAE population is experiencing clinical depression (Farinde, 2013).

The next objective was to assess any significant association between the participants' demographic variables and the prevalence of depression. A significant association with depression was found with nationality, age, work experience, marital status, and financial responsibility of participants for other family members. More than 50% (56.6%) of the nurses participating in the study were Indians, 17.8% were non-Emirati Arabs, 7.4% were Emirati Arabs, 17% were Filipinos, and 1.5% were other nationalities. Moderate depression (41.7%) was high among Indian participants, followed by 33.3% in Filipinos, 16.7% in local Arabs, 8.3% in other nationalities, and 0% among non-local Arab participants. Of the three patients who were rated as severe depression, two were non-local Arabs, and one was Indian. Nationality was significantly associated ( $p < .01$ ) with depression. The results were somewhat supportive of the Dervic study (Kinser & Lyon, 2014), quoted by the Sheikh Saud bin Saqr

Al Qasimi Foundation for Policy Research, where 75% of the population who committed suicide in the UAE were of Indian nationality. The results contrasted the research conducted in Saudi Arabia by Mealer et al. (2009), where depression was more prevalent among Middle Eastern nurses.

Age was significantly associated ( $p < .05$ ) with the prevalence of depression. Moderate and severe depression were less prevalent among 20 to 29-year-old participants, followed by the 40 years and older age group; however, in comparison to the early age categories, it was more prevalent among 20 to 29-year-old participants. This finding may be attributed to higher satisfaction with the nursing job when the nurses are not very experienced, with the satisfaction level declining over time due to fewer growth opportunities in the field of nursing.

Another demographic variable was work experience. Mild, moderate, and severe depression rates were determined to be zero among participants who had six months to two years of work experience. With two to five years of work experience, mild depression occurred in one (12.5%) of eight, moderate depression in two (20%) of 10, and severe depression in zero of three. Among participants whose work experience was five to 10 years, mild depression occurred in five of eight (62.5%), moderate depression in five of 10 (50%), and severe depression in three of three (100%). Depression rates gradually increased among nurses as their years of experience increased. However, a decline was observed after 10 years of experience, where mild depression was reported in two (25%) of eight participants, and moderate depression was reported in three (30%) of 10. This result contradicted research conducted by Skinner & Scott, (1993) where age was not significantly associated with depression. However, according to the same study, gender was not significantly associated with depression, which was similar to the finding of this study.

Marital status was another variable that was significantly associated ( $p < .05$ ) with the prevalence of depression. Moderate and severe depression were seen in nine of 10 (90%) and three of three (100%) married participants of the study, respectively. A significant association ( $p < .05$ )

financial dependency on nurses by their family members was seen with the prevalence of depression. Moderate depression was seen in 10 of 11 (90.9%) participants, and severe depression was seen in three of three (100%) patients whose family members were financially dependent on them. Among nurses who were not responsible for the financial support of others, the moderate depression rate was 9.1%, and the severe depression rate was 0%. No significant association was found with gender, nursing education, and area of work, salary, spouse employment status, and designation of the participants. In this research, depression was more common in individuals with five to 10 years of work experience compared to those with less than five years of work experience, which suggests that five to 10 years of their work experience was more exhausting. The decline in the depression score after 10 years of work experience may be a reflection that if nurses remain longer than 10 years in their profession, they find ways to cope with their challenges and stressors.

According to the conceptual framework of "individual stress vulnerability, depression and health outcomes" increased in acute or chronic burdens, responsibilities, or low socioeconomic support can put an individual at risk for depression (Townsend, 2014). Overall responsibilities and family expectations increased in the 30 to 40-year age group, which increased the stress level of an individual. In this study, the 30 to 39-year age group was significantly associated with depression. Marital status was associated with depression according to the findings of this study, which seemed unlikely, but may be due to the responsibilities of being a nurse combined with the added responsibilities of being married. It was determined that too much of an increase in responsibilities would make an individual exhausted. Similarly, financial responsibility was also a contributing factor to the increased prevalence of depression among the participants' studying strengths and limitations.

To the best of our knowledge, this is the first study conducted on depression among nurses in the UAE. Strict exclusion criteria were helpful in controlling the confounding variables. The study was conducted from

April 3, 2016, to May 10, 2016; notably, according to the literature, depression is more common during the winter months. The findings of this study cannot be generalized due to the small sample size. Nurse response was 53% due to their busy work schedules. The genetic predisposition of the participants was not assessed for depression.

### Conclusion

The purpose of this study was to identify the prevalence of depression among nurses working in MOH hospitals in Ras Al Khaimah. The BDI-II was used to identify the prevalence of depression among the participants. A significant association of depression was found with nationality, age, work experience, marital status, and financial responsibility of the nurses for other family members. Hospital policy makers should consider the insights from this study regarding the mental wellbeing of nurses. Decision makers should consider the factors which are identified by this study to affect positive change in supporting the mental health of their nurses. Instituting policies supportive of nurse mental health will likewise contribute positively to patient outcomes.

### Declarations

The authors declared no potential conflicts of interest with respect to the research, authorship, or publication of the article.

Participant Consideration Approval was obtained from the institutional review board of Ras Al Khaimah Medical and Health Sciences University, the Ras Al Khaimah Research and Ethics Committee, and the nursing research department of Dubai Ministry of Health. After receiving approval from the ethics committees, permission from the hospital directors and nursing directors were obtained, then the head nurses were contacted. Head nurses were informed of the fulfillment of legal formalities before accessing them, and they were informed by the nursing office regarding the approval of research. Then, the nurses were approached for participation in this study. The purpose of the study and the inclusion and exclusion criteria were explained to the nurses. The nurses were informed of their voluntary participation in the study, and their consent was obtained.

## Informed Participant Consent

The participants were informed that their participation in the study was voluntary. There was no possibility of direct physical harm to the participants, as no intervention was used, however participants could experience emotional responses due to the sensitive issue of depression. They were assured that their anonymity and confidentiality would be strictly maintained. Data were collected anonymously, and confidentiality was maintained by keeping the data within locked cabinets, to which only the principal investigators had access.

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## ABOUT THE AUTHORS

Jamil Ahmed got his nursing qualification from Aga Khan University in 2004. After graduation, he joined the Aga Khan University Hospital as a registered nurse in the pediatric department. In 2005, he joined Shifa International Hospital and College of Nursing Islamabad as a Clinical Instructor. He was responsible for lecture delivery to the undergrad nursing students, supervision of undergraduate nursing students in clinical wards, and continuous nursing education for newly joined nurses of the hospital besides teaching clinical skills. In October 2006, he moved to Shalamar Hospital and College of Nursing Lahore as a clinical coordinator and instructor. His responsibilities, while he was working in Shalamar Hospital and college of nursing, were to deliver lectures to the BSN, RN-BSN students, and staff nurses, assigned student duties in the hospital, supervision of students in the clinical area, interview students for enrollment in the nursing programs, external examiner for the University of Health Sciences (UHS) students. In 2008, he joined RAK Medical and Health Sciences University as a clinical instructor. After two years of completion of graduate studies (MSN), at the RAK College of Nursing, he was promoted to the post of lecturer.



Vijaya Kumardhas is known for being the pioneer in establishing and flourishing nursing in UAE, through her dedication and hard work. Dr. Vijaya Kumardhas has influenced nurses as a role model in all the areas of Nursing. Her ability to foresee the arena of growth possibilities in nursing and to realize each one of them has led to the progress of graduate to post-graduate nursing education. Dr. Vijaya Kumardhas is currently working as Dean, and Professor in RAK College of Nursing, RAK Medical & Health Sciences University, Ras Al Khaimah, UAE. She is a leader par excellence in the area of nursing education, nursing scholarship, nursing services, and administration. Her commitment, dedication, enthusiasm, intelligence, loyalty, and spirituality has led her to contribute selflessly to the development of the nursing profession.



Arnel Bañaga Salgado has over 29 years of experience as a bedside nurse, nurse administrator (chief nurse), clinical instructor, founding dean of a college, and a nurse-academic teaching various courses in basic and advanced nursing programs. He earned his nursing qualifications (B.Sc. Nursing), Master of Arts in Nursing (MAN), and Doctor of Education (Ed.D.) degrees from the Philippines which are all equalized in 2015 by the Ministry of Higher Education in the United Arab Emirates. As a nurse-psychologist with a Doctor of Psychology qualification, and a licensed professional teacher, he taught courses to undergraduate and doctoral students in many recognized schools, university colleges, and universities all over the world, helping them to be trained in their chosen careers and achieve their full potential.

