

Research Article

DETERMINATION OF ANXIETY, DEPRESSION LEVELS AND FEARS ABOUT COVID-19 OF NURSES IN IRAQ

Harith Hakeem Hameed^{#}, Sati Dil^{**}, Younus Khudur Bae^{*}*

^{*}Department of Nursing, University of Kirkuk, Kirkuk, Iraq;

^{**}Cankiri Karatekin University, Faculty of Health Sciences, Department of Psychiatric Mental Health Nursing, Turkey

Abstract

The study aims to determine the levels of anxiety, depression, and fear among nurses during the COVID-19 pandemic.

This descriptive cross-sectional study's Non-probability (convenient) sample included 129 nurses working in isolation centers for COVID-19 patients in a hospital in Baqubah, Iraq. Data collection was conducted through a questionnaire consisting of four parts: (1) Demographic information, (2) Patient Health Questionnaire (PHQ-9) to assess depression levels, (3) Fear of COVID-19 Scale (FCS-7) to measure fear levels, and (4) General Anxiety Disorder Scale (GAD-7) to evaluate anxiety levels. Descriptive and inferential statistical analyses were performed using SPSS version 23.0.

The study's findings indicated that 37.2% of the nurses had mild depression, 35.7% had mild anxiety, and 31.8% experienced mild fear related to COVID-19. The study suggests the need for more research focusing on the psychological state of nurses in Iraq, with larger sample sizes and representation from different regions to ensure the generalizability of the results.

This study provides valuable insights into the mental health status of nurses during the COVID-19 pandemic. The results highlight the prevalence of mild levels of depression, anxiety, and fear among nurses and emphasize the importance of addressing the psychological well-being of nurses in similar settings. The study also calls for further research to expand the knowledge base on nurses' psychological experiences in Iraq and other regions. *ASEAN Journal of Psychiatry, Vol. 25 (1) January, 2023; 1-8.*

Keywords: Anxiety, COVID-19, Depression, Fears, Nurses

Introduction

Infectious illnesses are the third most common reason for death globally, according to the World Health Organization (WHO). Emerging world pandemics pose a significant risk to humans and society. COVID-19 is currently considered to be a pandemic. It is extremely dangerous to a person's life and health because it rapidly spreads from person to person. It can sometimes be fatal, especially in dangerous situations, as well as the lack of treatment options. The coronavirus disease 2019 generates varying degrees of emotional distress due to its widespread impact on the

general public's mental health [1].

On Feb 24, 2020, in Iraq, the first case of the coronavirus disease 2019 was recorded and was an Iraqi visitor from Iran. COVID-19 infections were confirmed in 4469 people on May 24, 2020, with 160 deaths and 2738 people cured of the disease. Authorities have used important public health tactics to confront and control the outbreak across the country. The number of instances continues to rise rapidly [2].

Nurses suffered a lot on the psychological side during the Coronavirus period due to their close

contact with patients infected with the virus, the pressured work environment, and the burdens of confronting the virus. As a result, many nursing staff suffered from depression, fear and anxiety. Studies in many countries prove this. Including a study conducted in China on 4,692 nurses in hospitals during the Coronavirus period to assess their psychological state, as it showed a general weakness in the psychological status of nurses on the front lines, 9.4% of whom were suffering from depression and 6.5 had suicidal thoughts, and 8.1 had anxiety [3]. In a study conducted in the US, about a third of 684 nurses had symptoms of anxiety and depression; symptoms of mood disorders were particularly prominent in nurses. Infected nurses by COVID-19 have had more roles in symptoms of anxiety and depression than in dealing with coronavirus patients. Factors that played a role in the decline in both anxiety and depression included the proper use and accessibility of personal protective equipment as well as the presence of adequate, unstressed co-workers as well as family support [4].

Evidence-based information is critical for healthcare providers and the government to plan for pandemics like the coronavirus disease 2019. Furthermore, future organizational and governmental efforts are needed to address the pandemic's associated issues and improve the mental condition of front-line nurses [5]. So it is critical that governments systematically identify groups that are at risk of experiencing major symptoms of depression, anxiety, and also stress, such as nursing staff, and provide early assistance. Educating non-psychiatric health workers regarding mental health assessment will help ensure quick diagnosis [6].

Understanding the mental health problems experienced by nurses, especially those working in high-risk environments such as centers for COVID-19 patients is crucial for providing appropriate support and developing targeted interventions to safeguard their well-being. During the COVID-19 pandemic, there has been limited research specifically focusing on the psychological effects, including anxiety, depression, and fear, experienced by Iraqi nurses working in isolated units and centers for COVID-19 patients. Most available studies have primarily focused on epidemiological, clinical aspects of the disease and global health control challenges. The study aims to determine the levels of anxiety, depression,

and fear among nurses during the COVID-19 pandemic.

Materials and Methods

Design of the study

A descriptive cross-sectional study was conducted on nurses working in isolation centers for COVID-19 Iraq.

Setting of the study

The study was conducted in isolation centers of a teaching hospital in Baqubah city, Iraq, which is the city's primary hospital and has three isolation centers: Al-shifaa Center, Epidemiological center, and Dar Al-Diaffa center. These centers are located in different regions.

Sample of the study

A nonprobability (convenient) sample was used in our study. The total sample of the study consists of 192 nurses working in Baquba Teaching Hospital, which includes three centers: Al-Shifa Center, which contains 58 nurses, the other center, which is the Dar-Al Diaffa, which contains 51 nurses; and the Epidemiological Center, which contains 83 nurses the care of COVID patients.

The questionnaire was distributed to 180 nurses. 129 of these nurses completed filling out the questionnaire. Furthermore, 51 did not complete filling it out due to the work pressure; some did not want to complete the questionnaire, while 12 nurses were outside the sample because they refused to participate. All participants in this study filled out the questionnaire in Arabic language after the importance and objectives of the study were explained to them.

Data collection

The researcher used all international standard protective precautions during data collection, including Personal Protective Equipment (PPE). The Arabic version of the reporting questionnaire with a face-to-face interview technique and online (e-mail document) were used to collect data from nurses working in the COVID-19 wards. The data collection procedure began on April 16th, 2022, until June 29th, 2022. Each nurse spends approximately (15-20) minutes to complete the reporting questionnaire.

The study instrument

The tools that were used to collect the data consisted of four parts:

- A list of common items for assessing the demographical data of the participant nurses.
- A Patient Health Questionnaire (depression in providing care for Patients with novel coronavirus PHQ-9).
- Fear of COVID-19 Scale (fear arising from caregiving for Patients with coronavirus FCS-7).
- General Anxiety Disorder scale patients for nurses in providing care for with the novel coronavirus (GAD-7).

The research instrument design, including demographic characteristics selected from previous studies similar to this study's variables, and scales for assessing and evaluating the psychological status, including (depression, anxiety and fear) depended on international standards from previous studies, and the validity and reliability of all these scales have been done previously in the Arabic version. I have relied on them.

Ethical consideration

After taking the measuring tools, a conversation was conducted with their owner to permit them to use them, and the answer was that they were public and available to everyone without permission. After that, the research proposal was submitted, and the Institute of Health Sciences at the University of Cankiri in Turkey approved it. Then the approval of the Ethics Committee of the Diyala Health Department in Iraq was obtained (No:62, Date:11.04.2022) to facilitate the data collection task in Baquba Teaching Hospital. Finally, obtaining the consent of the nurses before participating in filling out the questionnaire by clarifying the objectives and importance of the study and emphasizing the preservation of the privacy of all nurses who participated.

Data analyses

The data were analyzed using basic statistical methods, including the descriptive statistical data analysis approach with the Social Sciences Statistical Package (SPSS) version 23.0. Data analysis includes the following:

Descriptive statistics: Include Frequency (F), Percentage (%), Mean score (M), and Standard Deviation (SD), were used to the assessment of nurses' anxiety, depression and fear levels during COVID-19 and socio-demographic data of them.

Results

Results in Table 1 shows that 78.3 percent of the study sample were aged from 21 to 30 years old. In addition, 57.4% of the study samples were male, and 66.7% were single.

Table 1. Distribution of socio-demographic characteristics of the sample (n=129).

Variable		No.	%
Age Groups	21-30	101	78.3
	31-40	21	16.3
	41 years and over	7	5.4
	Total	129	100
Gender	Male	74	57.4
	Female	55	42.6
	Total	129	100
Marital Status	Married	38	29.5
	Single	86	66.7
	Widowed	1	0.8
	Separated	4	3.1
	Total	129	100
Family type	Big	57	44.2
	Small	72	55.8
	Total	129	100
Education level	Preparatory in nursing	11	8.5
	Diploma in nursing	69	35.5
	Bachelor's in nursing	45	34.9
	Higher degree in nursing	4	3.1
	Total	129	100

Years of experience in healthcare institutions	1-5 years	97	75.2
	6-10 years	22	17.1
	11-15 years	7	5.4
	16 years and over	3	2.3
	Total	129	100
Sharing in training sessions concerning pandemic isolation units	Yes	69	53.5
	No	60	46.5
	Total	129	100
previous work in pandemic isolation units	Yes	81	62.8
	No	48	37.2
	Total	129	100
Source of information about Pandemic Isolation units	Television	11	8.5
	Internet	69	53.5
	Other sources	49	38
	Total	129	100
Duration of work in pandemic isolation units	4 weeks or less	66	51.2
	More than 4 weeks	63	48.8
	Total	100	100
Duration of official daily work	7 hours	52	40.3
	More than 7 hours	77	59.7
	Total	129	100
Previous infection by COVID 19	Yes	64	49.6
	No	65	50.4
	Total	129	100
Number of infection by COVID 19	One time	40	31
	Two times	24	18.6
	No	65	50.4
	Total	129	100
History of psychiatric disease	Yes	7	5.4
	No	122	94.6
	Total	129	100

Do you use:	Alcohol beverage	9	7
	Drugs	9	7
	Smoking	39	30.2
	No	72	55.8
	Total	129	100

Regarding family type, 55.8% of the study sample was within a small family type. Moreover, 53.5% of the study samples have a diploma in nursing, and 34.9% have a bachelor's degree in nursing. In addition, 75.2% of the study samples have 1-5 years of experience in healthcare settings, in which 53.5% of them were sharing training sessions related to pandemic isolation units, and 62.8% of the study samples have previously worked in pandemic isolation units.

Additionally 53.5% of the study sample learned about pandemic isolation units online. Also, 51.2% of the study samples have four weeks or less of work in isolation units. Related to previous infection by COVID-19, this disease infected 49.6% of the study sample, and 31% of the study sample had a one-time infection by COVID-19. 94.6% of the study sample did not have a history of psychiatric diseases. Most of the study sample (55.8%) did not use alcohol, drugs, or smoking, while 30.2% were smokers.

Table 2 shows that 32.6% of the nurses had minimal depression, and 37.2% had mild depression. 17.8% of nurses had moderate depression. While only 7% had moderately severe depression and 5.4% had severe depression.

Table 2. Frequency and relative distributions of the nurses according to their level of depression.

Percentage	Number of nurses	Depression scores	Depression level
32.60%	42	0-4	Minimal
37.20%	48	9-May	Mild
17.80%	23	14-Oct	Moderate
7%	9	15-19	Moderately severe
5.40%	7	20-27	Severe
100%	129	-	Total

Table 3 shows that 46.5% of nurses had a minimal level of fear, followed by 31.8% with mild fear, 14% with moderate fear, and 7.8% of nurses had severe fear.

Table 3. Frequency and relative distributions of the nurses according to their level of fear.

Fear level	Fear scores	Number of nurses	Percentage
Minimal	13-Jul	60	46.50%
Mild	14-20	41	31.80%
Moderate	21-27	18	14%
Severe	28-35	10	7.80%
Total	-	129	100%

Table 4 shows that 40.3% and 35.7% of nurses had minimal and mild anxiety, respectively. 16.3% had moderate anxiety, and 7.8% of nurses had severe anxiety.

Table 4. Frequency and relative distributions of the nurses according to their level of Anxiety.

Anxiety level	Anxiety scores	Number of nurses	Percentage
Minimal	0-4	52	40.30%
Mild	9-May	46	35.70%
Moderate	14-Oct	21	16.30%
Severe	15-21	10	7.80%
Total	-	129	100%

Discussion

Results of the present study revealed that 78.3% of the study samples were aged from 21 to 30 years old. (2020) research showed that most of the study sample (39%) was in the age range of 31-40 years. Regarding the age distribution of the study sample, the current study and the study conducted by Al-Hamoodi, Hadi, and Al Asadi are comparable [7].

However, the age distribution of the research sample in the current investigation differs from that in the studies by Farrukh et al., and Lu et al. [8,9]. In contrast to Lu et al., study, which revealed the highest percentage to be between the ages of 31 and 40, the majority of participants in the current study are between the ages of 21 and 30. Comparably, Farrukh et al., study revealed

that 39% of the study sample’s participants were between 31 and 40.

The gender distribution of the study sample is identical in the present study to the study by Al-Hamoodi, Hadi, and Al Asadi.

A sizable component of the study sample in the current study and in the studies by Mohammed and Bakey and Al-Hamoodi, Hadi, and Al Asadi belonged to small family types the current study, along with those by Li, et al., Farrukh et al., and Mohammed and Bakey, provides data on the experience levels of nurses in healthcare settings [7,8,10,11]. All three studies-this one, Mohammed and Bakey, Farrukh et al., and this one-reported a sizable proportion of nurses with 1-5 years of experience working in healthcare facilities [8,10].

According to the current study and Mohammed and Bakey, a sizeable portion of nurses relied on the Internet to learn about COVID-19 or pandemic isolation units. According to Bhagavathula et al., a sizeable percentage of nurses found information on social media and official government websites.

The study that was presented discovered that a sizable majority, or 94.6% of the study population had no history of psychiatric illnesses. Similar findings were found in Mohammed and Bakey’s study, which revealed that 96% of nurses had no history of mental illness. This indicates the overall mental health of the healthcare professionals engaged because it reveals that most participants in both studies did not have pre-existing psychiatric problems.

Most of the study sample in the current study also reported not utilizing drugs, alcohol, or tobacco. In particular, only 42% of nurses in Mohammed and Bakey’s study reported smoking, compared to 54% who did not drink alcohol or use drugs. Only 2% of the population also engaged in substance addiction and excessive alcohol consumption. These results imply that by abstaining from alcohol, drugs, and smoking, a significant proportion of research participants maintain a healthy lifestyle. Overall, the findings from both studies show the relatively low prevalence of psychiatric disorders and the majority of healthcare professionals’ abstinence from alcohol, drugs, and smoking. These findings underline the need to maintain sound mental health and establish healthy lifestyle habits, which can improve healthcare professionals’ general well-being and efficiency, particularly in trying times like the COVID-19 epidemic.

According to the current study's findings, a sizable fraction of the study sample had signs of depression. The majority of participants about 37.2% were categorized as having mild depression, while only 5.4% showed signs of severe depression. The study by Faisal et al., found that 40% of the individuals had moderate to severe anxiety, 72% had depressive symptoms, and 53% had moderate to poor mental health conditions [12]. These findings are comparable with their findings. These findings highlight the high frequency of mental health issues, such as depression, among healthcare professionals. The interpretation of the results should consider the potential influence of various factors on healthcare workers' mental health, such as the availability of support systems, working conditions, and individual coping mechanisms.

Result in this study declared that 35.7% of the study samples have mild anxiety and less than 10% have severe anxiety. In a comparison, Cai also reported that approximately 61% of nurses in China have minimal level of anxiety during pandemic of COVID-19 [13]. In contrast, Hu et al., declared that 58.6% of nurses in regional healthcare settings in China had no anxiety during pandemic of COVID-19. The prevalence of anxiety among nurses during the COVID-19 pandemic can be multifactorial. Several factors may contribute to the varying levels of anxiety observed in different research studies. Such as work environment: The work environment plays a significant role in determining the level of anxiety experienced by nurses. Factors such as the availability and adequacy of Personal Protective Equipment (PPE), staffing levels, and workload can influence anxiety levels. In settings where there is a shortage of PPE or high patient-to-nurse ratios, nurses may experience heightened anxiety. Access to information: The availability and quality of information about the pandemic can impact anxiety levels.

This study presented that about third of the study sample have mild fear and 7.8% have severe fear. In contrast, Alnazi et al., reported that more than half of nurses had a moderate level of fear in Jordan and similarly Hu et al., reported moderate to high level of fear among nurses [5,14]. The spread of fear among nurses during the COVID-19 pandemic can be attributed to various reasons. Some factors that contribute to the spread of fear, along with the potential reasons for the different levels of fear reported in different studies: uncertainty and

novelty of the virus: The emergence of a new and unknown virus like the coronavirus can generate fear and anxiety.

Conclusion

Our study demonstrated the prevalence of mild anxiety, mild depression and minimal fear among nurses working in isolation centers for COVID-19 patients in Iraq. Our study suggests conduct of more research studies that focus on the psychological aspect of nurses in Iraq. These studies should involve larger numbers of participants and cover multiple regions to ensure the generalizability of the results. Provide nurses with training and education about managing stress, coping mechanisms, and self-care strategies.

Recommendations

Based on the findings of our study regarding to the prevalence of mild anxiety, mild depression, and minimal fear among nurses working in isolation centers for COVID-19 patients in Iraq can be made:

- **Increasing Research Studies:** Encourage and support the conduct of more research studies that focus on the psychological aspect of nurses in Iraq. These studies should involve larger numbers of participants and cover multiple regions to ensure the generalizability of the results.
- **Mental Health Support for Nurses:** Given the prevalence of anxiety, depression, and fear among nurses during the COVID-19 period, it is crucial to prioritize mental health support for nurses in Iraq. Healthcare organizations should develop and implement programs that promote mental well-being, reduce stress, and provide psychological support for nurses on the frontline.
- **Training and Education:** Provide nurses with training and education about managing stress, coping mechanisms, and self-care strategies. Equipping nurses with the knowledge and skills to handle the psychological impact of the pandemic can help them better manage their mental health and provide optimal patient care.
- **Developing Comprehensive Crisis Management Plans:** The Ministry of Health in Iraq should

develop scientific and moral plans for managing the COVID-19 crisis. These plans should include strategies to encourage nurses to work under pressure and challenges while maintaining their psychological well-being. It is important to consider practical and emotional support for nurses during crises.

- **Educating the Community:** The Ministry of Health should develop plans to educate the general community about the COVID-19 crisis and the sacrifices made by nursing staff in Iraq. This education can help reduce the pressure and misconceptions surrounding the work environment, leading to better support and understanding from the population.
- **Supportive Leadership and Positive Work Environment:** Increase support for nursing staff from leaders and managers within the healthcare system. This includes creating a positive work environment that supports nurses' well-being and provides them with the necessary resources and recognition. Effective leadership and support can contribute to maintaining psychological peace for nurses.
- **Collaborating with Mental Health Professionals:** Collaborate with mental health professionals, psychologists, or psychiatrists to offer counseling services and establish referral systems for nurses who require more specialized support. This multidisciplinary approach can ensure comprehensive care for nurses' mental health needs.
- **Implementing these recommendations** can contribute to better support for nurses in Iraq, enhance their psychological well-being, and improve the overall quality of care during crises such as the COVID-19 pandemic.

Acknowledgement

First and foremost, I express my gratitude to Allah, whose kindness, mercy, and benevolence enabled me to complete this thesis. I also extend my sincere thanks and appreciation to my supervisor. I want to thank all the faculty members at the Institute of Health Sciences at Jankiri University and my colleagues, who provided me with assistance and guidance throughout the research process. I am especially grateful to my beloved and supportive family, particularly my mother and father, who deserve the utmost credit and gratitude. Their

unwavering support, help, and guidance have been instrumental in my journey during the study period.

References

1. Akinin LB, Andretti B, Goldszmidt R, Helliwell JF, Petherick A, et al. Policy stringency and mental health during the COVID-19 pandemic: A longitudinal analysis of data from 15 countries. *Lancet Public Health.* 2022;7(5):e417-e426.
2. Alhilfi RA, Majeed YY, Banoosh AK, Ali SS, Shnan AB, et al. Epidemiological characteristics of confirmed COVID-19 cases in Iraq, three months situation analysis. *Iraqi N Med J.* 2020;6(12):1.
3. Morgado-Toscano C, Gomez-Salgado J, García-Iglesias JJ, Fagundo-Rivera J, López-López D, et al. Levels of anxiety and fear among nurses during the COVID-19 pandemic: A systematic review. *J Nurs Manag.* 2023;2023.
4. Burstyn I, Holt K. A cross-sectional survey of the workplace factors contributing to symptoms of anxiety and depression among nurses and physicians during the first wave of COVID-19 pandemic in two US health-care systems. *Ann Work Expo Health.* 2022;66(3):312-333.
5. Hu D, Kong Y, Li W, Han Q, Zhang X, et al. Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. *EClinicalMedicine.* 2020;24:100424.
6. Sampaio F, Sequeira C, Teixeira L. Impact of COVID-19 outbreak on nurse's mental health: A prospective cohort study. *Environ Res.* 2021;194:110620.
7. Al-Hamoodi AA, Hadi B, Al Asadi KM. Psychological Problems among the Health Workers during Pandemic COVID-19. *Med Legal Update.* 2021;21(1):118-124.
8. Farrukh M, Meng F, Sajid M, Shahzad I. Does strategic fit matter in measuring organizational performance? An empirical analysis. *Corp Soc Responsib Environ Manag.* 2020;27(4):1800-1808.

9. Lu W, Wang H, Lin Y, Li L. Psychological status of medical workforce during the COVID-19 pandemic: A cross-sectional study. *Psychiatry Res.* 2020;288:112936.
10. Mohammed DA, Bakey SJ. Psychological status of nurses providing care for patients with COVID-19 at baqubah teaching hospital. *Ann Romanian Soc Cell Biol.* 2021;25(4):10127-10137.
11. Li R, Chen Y, Lv J, Liu L, Zong S, et al. Anxiety and related factors in frontline clinical nurses fighting COVID-19 in Wuhan. *Medicine.* 2020;99(30):e21413.
12. Faisal RA, Jobe MC, Ahmed O, Sharker T. Mental health status, anxiety, and depression levels of Bangladeshi university students during the COVID-19 pandemic. *Int J Ment Health Addict.* 2022;20(3):1500-1515.
13. Cai Q, Feng H, Huang J, Wang M, Wang Q, et al. The mental health of frontline and non-frontline medical workers during the coronavirus disease 2019 (COVID-19) outbreak in China: A case-control study. *J Affect Disord.* 2020;275:210-215.
14. Alnazly E, Khraisat OM, Al-Bashairh AM, Bryant CL. Anxiety, depression, stress, fear and social support during COVID-19 pandemic among Jordanian healthcare workers. *PLoS One.* 2021;16(3):e0247679.

Corresponding author: *Harith Hakeem Hameed, Department of Nursing, University of Kirkuk, Kirkuk, Iraq*

E-mail: *harth1642@gmail.com*

Received: 22 November 2023, Manuscript No. AJOPY-23-120724; **Editor assigned:** 27 November 2023, PreQC No. AJOPY-23-120724 (PQ); **Reviewed:** 18 December 2023, QC No AJOPY-23-120724; **Revised:** 26 December 2023, Manuscript No. AJOPY-23-120724 (R); **Published:** 04 January 2024, DOI: 10.54615/2231-7805.47340.