Detection of Depression among Nurses Providing Care for Patients with COVID-19 at Baqubah Teaching Hospital

الكشف عن الإكتئاب الملاك التمريضي مقدمي الرعاية لمرضى مرض فايروس كورونا في مستشفى بعقوبة التعليمي

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المستخلص

الاهداف: تهدف الدراسة الحالية الى الكشف عن إصابة الملاك التمريضي مقدمي الرعاية لمرضى فايروس كورونا بالإكتئاب، وإيجاد العلاقة بين الإكتئاب وصفاتهم الديموغرافية كالعمر والجنس ونوع العائلة والمستوى التعليمي وسنوات الخدمة لهذا الملاك في المؤسسات الصحية و إصابتهم بمرض فايروس كورونا والمشاركة بالدورات التدريبية.

المنهجية: أجريت دراسة وصفية للمدة من ١٠ تشرين الأول ٢٠٢٠ إلى ١٥ نيسان ٢٠٢١. أجريت الدراسة على عينة غرضية (غيرإحتمالية) تكونت من (١٠٠) ملاك تمريضي يقوم على تقديم الرعاية الصحية لمرضى فايروس كورونا حيث تم إختيارهم من ردهات العزل الوبائي في مستشفى بعقوبة التعليمي. وتم إعداد إستبانة لتحقيق أهداف الدراسة تكونت من مقياس صحة الملاك التمريضي النفسية. تم تحديد صدق المحتوى لأداة القياس من خلال مجموعة الخبراء والإتساق الداخلي من خلال البحث الإستقرائي. تم تحليل البيانات من خلال تطبيق الأساليب الإحصائية الوصفية و الإستدلالية والتي تم تطبيقها بإستخدام الحزمة الإحصائية للعلوم الإجتماعية، إصدار ٢٢.

النتائج: أظهرت نتائج الدراسة الحالية أن الملاك التمريضي الذين يقدمون الرعاية الصحية لمرضى فايروس كورونا كانوا ضمن الفئة العمرية (٣٠-٣٩) بنسبة (٣٧%)، الذكور أكثر من الإناث بنسبة (٨٧%)، المتزوجون كانوا أعلى بنسبة (٧٧%). (٥٩%) كانوا ذوي أسر صغيرة، (٦٤%) المستوى التعليمي لديهم دبلوم، ولديهم (١-٥) سنوات خبرة في المؤسسات الصحية وبنسبة (٤٠%)، و كذلك (٦١%) من الملاك التمريضي لم يشاركوا بدورات تخص الأمراض الوبائية، و(٥٨ %) من هذا الملاك كانوا يعملون سابقا في ردهات العزل، (٣٩%) منهم حاصل على مصدر معلومات عن فايروس كورونا من الإنترنيت، كانت مدة العمل في ردهات العزل تتراوح أكثر من أربعة أسابيع (٨٣%)، (٧٠%) منهم لم يصابوا بمرض فايروس كورونا، (٩٦%) لم يكن لديهم إصابات بالأمراض النفسية، (٥٤%) لم يتعاطوا العقاقير ولم يدمنوا على تناول الكحول وليسوا مدخنين، و من خلال إستخدام مقياس الصحة النفسية لهم، وجد بأن الإكتئاب كان لدى الملاك التمريضي بنسبة (٤٣%).

التوصيات: أوصت الدراسة إلى أهمية الإستشارات والتوجيه نحو الرعاية النفسية لزيادة قوة وقابلية الصحة العقلية التي تساعد على التكيف للأعباء الناتجة عن الجائحة.

الكلمات المفتاحية: الإكتئاب، الملاك التمريضي، مرض فايروس كورونا

Abstract

Objectives: The present study aims at detecting the depression among nurses who provide care for infected patients with corona virus phenomenon and to find out relationships between the depression and their demographic characteristics of age, gender, marital status, type of family, education, and years of experience of nurses in heath institutions, infection by corona virus, and their participation in training courses.

Methodology: A descriptive study is established for a period from October 10th, 2020 to April 15th, 2021. The study is conducted on a purposive (non-probability) sample of (100) nurse who are providing care for patients with COVID-19 and they are selected from the isolation wards. The instrument of the study is developed from Patients' Health Questionnaire (PHQ) to achieve the study objectives. Content validity of the instrument is determined through panel of experts and internal consistency reliability is obtained through pilot study. Data are collected through the use of the questionnaire and analyzed through the application of descriptive and inferential statistical approaches which are applied by using SPSS version 22.

Results: The results of the present study showed that nurses who were providing care for patients with COVID-19 age group (30-39 years) (37%), males constituent the higher percentage than female 87%, (77%) of them is married, (59%) Small family of Nurses, (64%) level of education among nurses have diploma in nursing, and they have (1-5) years of experience in heath institutions among nurses about (40%), also (61%) of nurses not sharing in epidemiological training courses, and (58%) of nurses had previous work in isolation wards, (39%) of nurses have source of information from network, duration of work in isolation wards is (83%) of nurses who are work for more than four weeks, (70%) of nurses are not infected with corona virus, (96%) of nurses are having no history of mental disorders, (54%) of nurses are not drinking alcohol and having no problem with drug abuse. By using PHQ-9, the study finds that depression among nurses is (43%).
Recommendations: Psychological care counseling and guidance are necessary to increase nurses' vulnerability and strengthen their mental health which helps to encounter any psychological burden caused by COVID 19 pandemic.
Keywords: Depression, Nurses, Corona Virus Disease.

Introduction

Throughout history, infectious diseases had destroyed communities. Infectious disease outbreaks were happening at an unprecedented rate. Related to World Health Organization (WHO), the realm had perceived numerous emergence disease and epidemics produced a further twenty infectious disease in the last decade. Particular epidemics were affected by unusual infectious organisms as the Middle East respiratory syndrome-related coronavirus (H1N12 and MERS). In the last two decades, SARS and MERS novel of COVID caused worldwide defy to systems of public health [(1)].

Registration of the Iraq Ministry of Health and Environment in Iraq has mentioned about 394,566 confirmed cases with 9,683 deaths on May 2020 related to COVID-19 pandemic. The mean age of dead patients in Iraq is 71 years and more than half of these had diabetes mellitus, heart diseases, or malignancy disease, or using tobacco. Therefore, the truth these patients had original health disorders, while it was a value stating that they had respiratory distress syndrome (ARDS) produced by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pneumonia, required support for respiration, and not to die then [(2)]

Nurses are the most exposed group of healthcare provider who cared for patients with COVID-19. Those considered at the war zone of the COVID-19 pandemic. Nurses had been vulnerable to coronavirus and were facing different somatic and psychological problems, even death. In USA there were nurses about four million and twenty million crosses the world, and however, more requirement for nurses [(3)].

Depression is a widespread psychological disorder, including depressive mood, lack of interest or enjoyment, Power

loss, feelings of blame or poor self-worth, Sleep or appetite disturbances, and poor concentration. Depression is being described as impairing work performance and quality as found among Australian workers in 2017, it increased the turnover of workers who experienced depression [4].

In the COVID-19 outbreak, several researches have examined the epidemiology of frontline health care workers with psychological problems. For instance, recent cross-sectional research documented the incidence of depression 50.4 percent in frontline physicians, respectively, Nurses included [5].

Worldwide approximate 322 million people have been identified with depressive symptoms. In addition, the nurses had a higher rate of depression relative to the general population, particularly in terms of health emergencies during SARS epidemic [6].

There is no known information on the psychological impact and mental health on first line Iraqi nurses who are providing care in isolated units and centers during the peak of the COVID-19 epidemic. Most of the research related to this epidemic focuses on detecting the epidemiology and clinical features, the genomic categorization of the virus, and challenges for global health control. However, there are no research articles examining the psychological impact on COVID-19 on Iraqi nurses especially the aspect of depression (The researcher)

Methodology

Design of the Study

A descriptive design is conducted on nurses' working at isolation wards of covid-19 in Baqubah City for the period of October 10th, 2020 to March 20th, 2021.

The Setting of the Study

The isolation wards with COVID-19 at Baqubah teaching hospital.

The sample of the study includes non-probability (purposive) sample of (100) nurses, which are selected from nurses working in isolation wards according to the inclusion criteria.

Ethical Consideration

The ethical consideration of this study is accomplished by obtaining the agreement from the Scientific Research Ethical Committee at the College of Nursing, University of Baghdad. Finally; the informed content is signed by all the nurses who participate in this study prior to the data collection.

Instrument of the Study

The scale which is adopted to measure or discover the depression among nurses is Patient Health Questionnaire. Which no change was doing in PHQ-9 items, it is adoptive to community language (Depression

in providing care for patients with novel corona virus PHQ-9).

Patient Health Questionnaire contains (9) items. These items were categorized as not at all, several days, more than half the days, nearly every day questions. These were scored as (0) for not at all, (1) several days, (2) more than half the days, (3) nearly everyday. The time of the questionnaire answer list for each nurse took about (10-15) minutes. The PHQ was developed by Spitzer, total score which divided into four levels: Scores represent Minimum depression (0-4), Mild depression (5-9) Moderate depression (10-14), Moderately severe depression (15-19), and Severe depression (20-27).

Validity of the Study Instrument

Content validity of the instrument is determined through panel of experts. The instrument is presented to a panel of (12) experts who have more than ten years of experience in the field. No changes are made according to the experts' because of that the instrument is standardized scale.

Reliability of the Study Instrument

Internal consistency reliability has shown that the items of the PHQ-9 are highly consistent (Chronbach's alpha correlation coefficient = .88).

Data Collection

The data is gathered throughout the utilization of self-report questionnaire 'Arabic version' and as mean for data collection and through self-report with nurses who work in COVID-19 wards, except some of them have refused to participate in the study.

Data Analysis

Data are analyzed through the use of IBM SPSS Statistics version 22.0, a statistical kit for social science. To achieve the study's goals, data processing was used in conjunction with descriptive and inferential statistical approaches.

Results

Table (1): Assessment of Depression Status among Nurses Working in Isolation Wards for COVID-19

Depression	Frequency F	Percentage %
Minimal depression	43	43%
Mild depression	32	32%
Moderate depression	12	12%
Moderately severe depression	12	12%
Severe depression	1	1%
Total Mean= 1.96 SD= 1.06	***100***	***100%***

f: Frequency, %: Percentage, M: Mean for total score, SD: Standard Deviation for total score. Minimal depression = 0-4, Mild depression = 5-9, Moderate depression = 10-14, Moderately severe depression =15-19, and Severe depression = 20-27

The presented table shows that (43%) of nurses had minimal depression and (32%) of them have mild depression according to the score of Patient Health Questionnaire Scale.

Table (2): Correlation between depression and Demographic Characteristics among Nurses in Isolation Wards during Pandemic COVID-19:

List	Demographic Characteristics	Contingency Coefficient	P-value	Significance
1	**Age**	0.32	0.75	Not significant
2	**Gender**	0.31	0.023	Significant
3	**Marital status**	0.37	0.03	Significant
4	**Type of family**	0.3	0.04	Significant
5	**Level of education**	0.16	0.9	Not significant
6	**Years of experience**	0.32	0.45	Not significant

7	**sharing in training courses for isolation wards**	0.18	0.49	Not significant
8	**Previous work in isolation wards**	0.2	0.3	Not significant
9	**sources of information about covid-19**	0.2	0.9	Not significant
10	**Duration of work in isolation wards**	0.14	0.6	Not significant
11	**Duration of work in the day**	0.15	0.6	Not significant
12	**Infection with COVID-19**	0.2	0.35	Not significant
13	**history of mental disorders**	0.17	0.9	Not significant
14	**Drinking Alcohol, Substance Abuse, and Tobacco Use**	0.39	0.3	Not significant

This table presents that there is no significant correlation between age, educational level, years of experience, participation in the isolation wards training courses, previous work in isolation wards, a source of knowledge about Coronavirus, duration of work in isolation ward, infection with COVID-19, history of psychological disorders, using tobacco, alcohol drinking, drug abuse during COVID-19 toward depression except gender, marital status, type of family showed significant correlation with depression.

Discussion

Table 1 shows that (43%) of nurses had minimal depression and (32%) of them have mild depression according to the score of patient health questionnaire scale. A study which is conducted in China to assess the level of the psychological status and risk factors association between nurses in isolation wards, finds that (39.7%) have minimal depression were in frontline nurses at outbreak period, and (38.5%) are having mild depression[8]. A study is done in China to assess Psychological effect of the COVID-19 on HCWs, showed that 53.85% have minimal depression, 34.13% have mild depression[9] A study conducted in Singapore on 470 HCWs to assess prevalence of depression, anxiety during the COVID-19, showed 8.1% had depression.[10] A study had done in KSA to assess depression, anxious, and stress in HCWs in Egypt and Saudi Arabia experienced during the COVID-19, showed that 426 HCWs

(24.2%) nurses (69%) have depression.[11]. A study which is conducted in China reports a high incidence of depression (50.4%) among (1257) frontlines Chinese HCWs during the pandemic.[12]. This result indicates that (43%) of nurses have minimal depression due to their interest to provide health care for patients with COVID-19, their willingness to provide service to heal patients that lead to feel comfortable psychologically and socially.

Discussion of the Correlation between Demographic Variables of the Study Sample with Depression toward COVID 19:

The result that were no significant correlation between age, educational level, years of experience, participation in the isolation wards training courses, previous work in isolation wards, a source of knowledge about Coronavirus, duration of work in isolation ward during COVID-19 toward depression, except gender, marital status, type of family showed significant correlation with depression. A study is conducted in Egypt and Saudi-Arabia to assess depression, anxiety, and stress in HCWs experienced during the COVID-19, showed gender, age ≤ 30 years, working in night shifts, and watching/reading COVID-19 news associated with worse depression, anxiety, and stress between HCWs [11]. A study which is carried out in Brazil to evaluate anxiety and depression disorders between medical students during COVID-19 shows a positive significant correlation between GAD-7, PHQ and social distancing affecting finances, and females [13]. A study has conducted a systematic review of psychological problems faced during COVID-19 by using databases: PubMed, Google Scholar, Embase, all articles published from January 2020 to April 2020 which declines some socio-demographic variables, such as gender, profession, age, workplace, working in different wards and psychological variables, such as reduced community support, self-efficacy are correlated with elevated anxiety, depressive, stress, and insomnia in HCW. The study explains that the result of this research has indicates that most of nurses have been coexisted with the presence of COVID-19 [14].

Recommendations

1. The Ministry of Health and Environment should develop plans for training courses about COVID 19, stress management, and self-care strategies should be established for all nurses, especially who are in contact with COVID-19 infected patients.

2. The study recommends that further studies can be carried out to measure a large population, so that, results can be generalized.

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