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Evaluation of Nursing Staff Practices about Prevention of Corona Virus Disease

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الخلاصة:

خلفية البحث: فيروسات كورونا هي مجموعة ضخمة من الفيروسات التي تسبب الأمراض للحيوان أو الإنسان. اكتشف مرض فيروس كورونا 19 في مدينة ووهان الصينية. أوصى مركز السيطرة على الأمراض (CDC) باتباع وتطبيق ممارسات الوقاية من العدوى ومكافحتها (IPC) لأنها تتعلق بتجنب المخاطر على المريض والموظفين، وتقليل العبء المالي للأنظمة الصحية وتقليل فترة الاستشفاء.

الاهداف: تهدف الدراسة إلى تقييم ممارسات الملاك التمريضي فيما يتعلق بالوقاية من مرض فيروس كورونا.

منهجية البحث: تصميم كمي (دراسة وصفية) أجري في جناح العزل بمستشفى الديوانية التعليمي في الفترة من (13 أكتوبر 2021 إلى 4 مارس 2022) على عينة غير احتمالية (هادفة) مكونة من (34 ممرضة). تتكون أداة الدراسة من جزأين: الجزء الأول هو البيانات الديموغرافية لعينة الدراسة. الجزء الثاني هو أداة المشاهدة التي تتكون من 5 مجالات و 29 عنصرًا.

النتائج: بينت نتائج الدراسة أن ممارسات الملاك التمريضي في المجالات المتعلقة بالوقاية من مرض فيروس كورونا كانت ضعيفة بمتوسط درجة (M = 1.51 عند قيمة p 0.0001).

الاستنتاج: لم يكن مستوى ممارسات الطاقم التمريضي بالشكل المطلوب (ضعيف) ليتناسب مع طبيعة هذا القسم.

الكلمات المفتاحية: ممارسات الملاك التمريضي، الوقاية من مرض فيروس كورونا.

Abstract

Background: Coronaviruses are a huge group of viruses that cause illnesses in animals or humans. Coronavirus disease 19 discovered in Wuhan, China. CDC recommended following and applying infection prevention and control (IPC) practices since it concerns about avoiding risks for patient and staff, minimize the financial burden of health systems and decrease period of hospitalization.

Objectives: The study aims to evaluate the practices of nursing staff regarding the prevention of coronavirus disease.

Methodology: A quantitative design (descriptive study) conducted at Isolation Ward in Al-Diwaniyah Teaching Hospital from (13 October, 2021 to 4th

March, 2022) on a non-probability (purposive) sample consisting of (34 nurses). The study instrument consists of two parts: first part is demographic data for study sample. Second part is the observation check-list tool which consists of 5 domains and 29 items.

Results: The results of the study indicated that the practices of nursing staff in the domains related to the prevention of corona virus disease were weak with a mean score (M = 1.51 at p value of 0.0001).

Conclusion: The level of nursing staff practices was not as required (poor) to fit with the nature of this ward.

Keywords: Nursing staffs Practices, Prevention of Corona Virus Disease.

INTRODUCTION

Coronaviruses are a huge group of viruses that cause illnesses in animals or humans. In humans there are six known species of coronaviruses that can lead to human diseases. Four of these coronaviruses cause common cold symptoms, while severe acute respiratory syndrome (SARS-CoV1) and Middle East respiratory syndrome (MERS) can cause severe illnesses. Severe acute respiratory syndrome (SARS-CoV2) COVID-19 have similar characteristics with SARS-CoV1 [(1)].

COVID-19 is spread from person-to-another by respiratory droplets. Droplets are loosed if a person with COVID-19 sneezes, coughs, or talks. Droplets containing virus can land on the mucus membranes of mouths or noses of people who are closed or may be breathed into the lungs. A social distancing of at least 1 meter (3 ft.) between people is suggested by the World Health Organization (WHO) to prevent infection, while CDC suggests that a physical distance of at least 1.8 meters (6ft) between persons. Respiratory droplets may land on hands, things or surfaces near the person during they cough, sneeze, or talk, and then persons can be infected with COVID-19 by touching hands, objects or surfaces contaminated with droplets and then touching their eyes, nose, or mouth [(2)].

Hand hygiene; wearing PPE (e.g., gloves, gowns, facemasks, face shield); respiratory hygiene and cough etiquette; safe injection practices; medical waste management; cleaning, disinfection, and sterilization of patient care equipment" are represent the preventive measures of infection control which consider the first defense wall [(3)].

In its quest to prevent and control the spread of COVID 19 inside the hospital, CDC recommended following and applying infection prevention and control (IPC) practices for both infected and suspected patients. These practices include (patient placement, personal protective equipment (PPE), aerosol generating procedures (AGPs), limit visitation and environmental infection control) in addition to transmission-based precautions such as contact and droplet precautions [(4)].

Aims of the Study

The study aims to evaluate the practices of nursing staff regarding the prevention of coronavirus disease.

METHODOLOGY

A quantitative design (descriptive study) has been conducted from (13 October, 2021 to 4th March, 2022). The researcher used a non- probability (purposive) sampling method on (34) nurses working at isolation ward in Al-Diwaniyah Teaching Hospital.

The study instrument consists of two parts: the first part is demographic data for study sample which of age, gender, educational level, years of experience, years of experience in isolation ward, training courses related infection control and

prevention and task of self-educating about Corona virus disease and ways to prevent it. The second part is the observation check-list tool which consists of 5 domains and 29 items. The validity of the instrument and the interventional program were identified by presenting it to 11 experts. Descriptive and inferential statistics were used to analyze the results of the study using the Statistical Package of Social Sciences (SPSS) version 25 and Microsoft Excel (2010).

Ethical considerations: Approval achieved from the Council of the Nursing College/ University of Baghdad and Ethical Researches Committee for the study. Then the researcher submitted a detailed description including the study objectives and methodology (questionnaire) in order to obtain official permission from the Ministry of Planning (Central Statistical Organization) and to Al-Diwaniyah Health Directorate to carry out the study. After that in order to ensure the agreement and cooperation, the researcher sent a permission to Al-Diwaniyah Teaching Hospital. Written informed consent has been obtained from each nurse.

RESULTS

Table (1) shows the demographic characteristics of the study sample. The study results show that the dominant age group of nursing staff was (50%) of the age group (20-29) years old. Regarding gender, the table shows that (64.7%) of nurses were males. concerning years of experience in employment, the table reveals that (38.2%) of the nurses have (6-10) years of experience in nursing. In regards to years of experience in the isolation ward, the table shows that the majority of nurses (47.1%) have (1-5) years of experience in the isolation ward. The table shows that all the study sample (100%) did not have training sessions about infection control. Regarding self-education about COVID-19, the table shows that (61.8) of the study sample were educated.

Table (2) shows that the overall nurses' practices to the domains of COVID-19 prevention were poor practices at mean score (1.51).

DISCUSSION

The study demonstrated that the majority of nursing staff were males at percentage (64.7%). These findings are in line with a study conducted in Iraq regarding some sterilization techniques and found that more than half of the nursing staff are males at percentage 70% and 30% of females [5].

Regarding years of experience in nursing, (38.2%) of nursing staff have (6-10) years in nursing field. These results confirmed by Egyptian study who found that about half of nurses (51.4%), their experience ranged from 5-10 years. (47.1%) of participants have (1-5) years of experience in isolation ward [6].

The study revealed that the total number of nurses (100%) have not participate in any infection prevention courses. This totally agreed with a study done at critical care units in Al-Najaf AL-Ashraf City hospitals to evaluate nurses practices concerning sterile techniques and found that (100%) of the nurses did not take training sessions about infection control strategies [7].

The study showed that (61.8 %) of nurses have information about the disease from different sources. As reported by a study in China that (91.1%) of study subject earned information about COVID-19 from social media [8].

The highest percentage of study sample (47.1%) were graduated from college of nursing which confirmed by a study in Iraq, who found that 50% of participants had bachelor of nursing [5].

Findings of study showed that the overall evaluation of nurses' practices to the domains of

COVID-19 prevention in which most of study sample were poor practices in ratio (88.2%).These results agreed with a study that evaluate infection control practices among health care workers in a specialty hospital, who found that more than half of the study sample were poor practices related to infection control measures [9].

Results revealed that the overall nurses' practices to the domains of COVID-19 prevention at pre-test were poor practices at mean score (1.51) as show in table (2). These findings are along with a study performed about hand hygiene practices and infection control measures among emergency units health care providers, which found that the practices of healthcare workers recorded poor levels related to infection control measures [10].

These primary results may be due to new emergence of the virus. Also, nurses did not keep reading and updating themselves about prevention and control strategies in addition to the weak role of continuous education unit in hospitals.

CONCLUSION

The level of nursing staff practices was not as required (poor) to fit with the nature of this ward.

RECOMMENDATIONS

Providing training courses regarding prevention of COVID-19 for all nurses especially in isolation ward which is the role of the continuous medical education unit. Working under the Iraqi National Guide to Infection Control in Health Institutions, which was issued in 2009 in cooperation with the World Health Organization. .In order to implement of infection prevention strategies and continuous monitoring, the study recommend to establish an infection prevention department in every hospital.

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Tables and Figures:

Table (1): Study Sample Demographic Data N=34

Demographic data	Rating and intervals	Frequency	Percent
Age / years	20-29	17	50
	30 – 39	10	29.4
	40 – 49	5	14.7
	50 +	2	5.9
Gender	Male	22	64.7
	Female	12	35.3
Educational level	Technical Institute Nursing	9	26.5
	Secondary Nursing School	9	26.5
	College of Nursing	16	47.1
Years of Experience in Employment	1-5	12	35.3
	6-10	13	38.2
	11-15	3	8.8
	16-19	3	8.8
	20 +	3	8.8
Years of Experience in Isolation Ward	1-5	16	47.1
	6-10	9	26.5
	11-15	7	20.6
	16-19	2	5.9
Number of Training session about infection control	Yes	0	0
	No	34	100
Self-education about COVID-19	Yes	21	61.8
	No	13	38.2

Table (3) Summary Statistics of the Overall Nurses' Practices about Prevention of COVID-19.

Main studied domains	Statistical Parameter		Evaluation
	Mean	Std. Deviation	
Hand Washing	1.54	.38666	Poor Practices
Personal Protective Equipment	1.48	.37440	Poor Practices
Instrument and Equipment	1.5	.40585	Poor Practices
Medical Waste Management	1.48	.55712	Poor Practices
Other Strategies	1.65	.32203	Poor Practices
Overall Nurses' Practices	1.51	.13506	Poor Practices

Mean, Good practices (mean 2.34 – 3); Fair practices (mean 1.67-2.33), poor practices (mean 1-1.66).std = standard deviation