

Assessment of Nurses' Awareness toward Preventive Measures of Infection Control at Primary Health Care Centers in Al-Ramadi City



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ABSTRACT

Objective: To assess nurses' awareness working in the primary health care field towards preventive measures for infection control in primary health care centers in Ramadi city.

Methodology: A descriptive study was conducted during the period from 10 April to 15 August 2021. The instruments was constructed by the researcher to reach the aims of the study using a non-probability sampling: purposive sample consist of (60) nurses

الخلاصة:

الهدف: تقييم وعي الممرضين العاملين في مجال الرعاية الصحية الأولية تجاه الإجراءات الوقائية لمكافحة العدوى في مراكز الرعاية الصحية الأولية في مدينة الرمادي.

المنهجية: اجريت دراسة وصفية خلال الفترة من 10 أبريل إلى 15 أغسطس 2021. تم إنشاء الأداة من قبل الباحث للوصول إلى أهداف الدراسة باستخدام عينة غير احتمالية: عينة غرضية تكونت من (60) ممرضة وممرض يعملون في مراكز الرعاية الصحية الأولية. تم استخدام استبيان في الدراسة يحتوي على جزئين الجزء الاول يحتوي على معلومات حول البيانات الديموغرافية للممرضين في مراكز الرعاية الصحية والجزء الثاني يحتوي على أسئلة مختارة حول وعيهم ومعرفتهم فيما يتعلق بإجراءات مكافحة العدوى. تم تحليل البيانات عن طريق الإحصاء الوصفي والاستنتاجي (اختبار t والإحصاءات الارتباطية) باستخدام برنامج SPSS.

النتائج: أظهرت نتائج الدراسة أن غالبية عينة الدراسة (85.7%) كانوا من الذكور، (34.3%) في الفئات العمرية (30-39) سنة، (71.4%) متخرجين من المعهد، (52.9%) حوالي (1-5) سنوات، (75.7%) لم يكن لديهم دورة تدريبية خاصة حيث أن معظم الممرضين العاملين في مجال الرعاية الصحية يتمتعن بمستوى منخفض من الوعي فيما يتعلق بمكافحة العدوى.

الاستنتاجات: خلصت الدراسة الحالية إلى أن معظم الممرضين العاملين في مجال الرعاية الصحية في مراكز الرعاية الصحية الأولية يتمتعون بمستوى ضعيف من الوعي فيما يتعلق بمكافحة العدوى.

التوصيات: أوصت الدراسة الحالية بوضع وتنفيذ برنامج تعليمي شامل لمكافحة العدوى في مراكز الرعاية الصحية الأولية من أجل ضمان الامتثال لتدابير مكافحة العدوى من قبل الممرضات العاملات في الرعاية الصحية الأولية

working in the field of primary health care. A two-part questionnaire was used in the study, the first part contains information about the demographic data of nurses in healthcare centers and the second part contains selected questions about their awareness and knowledge regarding infection control procedures. Data were analyzed by descriptive and inferential statistics (t-test and correlational statistics) using SPSS software.

Results: The study found that the majority of the study sample (70 percent) were male, (50 percent) were in the age groups (30-39 years), (53.3 percent) were in the preparatory nursing, (50 percent) were about (16-20) years of the employee, and (76.7 percent) did not have a special training course, indicating that most nurses working in the healthcare field have a low level of infection control practice. The study concluded that nurses' awareness of preventive measures for infection control was at a low level.

Conclusion: According to the findings of this study, the majority of nurses working in primary health care

INTRODUCTION

The infection control measures were numerous and the diverse, but they were all intertwined, and they must be administered precisely and without impurities to assure the provision of a sterile the environment. In this regard, whether for the health care personnel working in health centers, patients, or even tourists, education is critical, as well as workshops and the training courses were held for several the departments to educate them on new infection control strategies ⁽¹⁾.

Healthcare providers can be infected with many of the infectious diseases that patients suffer from. In some outbreaks, primary health care providers are severely affected, and they account for a large number of cases registered with the authorities responsible for them. For example, 36%-64% of cases were recorded during the SARS epidemic in some countries that were at risk of

centers had a poor level of awareness toward infection control.

Recommendation: In order to ensure compliance with infection control measures by nurses working in basic health care, the current study advocated the establishment and execution of a comprehensive infection control program in primary health care centers.

Keyword: Awareness, Preventive measures, Infection control, Primary healthcare centers.

infection among healthcare personnel. During the three outbreaks of Ebola hemorrhagic fever in the Middle East Region, authorities were reported to have reported infection of 76 primary health care providers in 2004 while providing health care to patients ⁽²⁾.

The cost of healthcare-related infection kills thousands of lives every year, so a program must be developed to prevent infection caused during health care provision, by adhering to the available and inexpensive preventive measures to combat infection such as wearing a mask, hand hygiene and wearing medical gloves. Globally, standard precautions for infection control are an effective way to protect health care workers, patients, and the community ⁽³⁾.

Nurses' role in preventive health care is to enhance patients' health by making evidence-based recommendations and encouraging people to get preventive services such checkups, counseling, and

preventative medicines. Through public health education, nurses can inspire a larger group of people to engage in healthy lifestyles and ultimately live longer. Preventive healthcare nurses are encouraged to collect and analyze infection data in order to make evidence-based decisions, as well as educate medical and public health professionals on infection prevention protocols to aid emergency preparedness, isolation, and treatment of infected people in order to keep infectious diseases from spreading. Assist in the development of action plans in the event of a disease outbreak in the community or hospital, collaborating with government agencies such as the centers for disease control and prevention (CDC) to ensure infection control practices are in place and enforced, and studying pathogens to determine the source in order to prevent future outbreaks (4).

AIMS OF THE STUDY

The study aims to assess nurses' awareness working in the primary health care field towards preventive measures for infection control in primary health care centers in Ramadi city.

METHODOLOGY

A descriptive study was conducted on a sample of 30 nurses working in primary health care from April 10 to August 20, 2021. This study's tool was derived from one based on a review of related literature (5, 6). A two-part questionnaire was used in the study, the first part contains information about the sociodemographic data of nurses in healthcare and the second part contains selected questions about their awareness toward infection control procedures. Using SPSS software, descriptive and inferential statistics (t-test and correlational statistics) were used to examine the data.

RESULTS

Table (1): Distribution of the Sample According to their Socio-demographic Characteristics

Demographic characteristics	F	%	Chi-Square
Gender			
Male	42	70	X ² =1.429 df=1 p-value=0.238
Female	18	30	
Total	60	100	
Age (year)			
20-29	10	16.7	X ² =1.071 df=3 p-value=0.78
30-39	30	50	
40-49	14	23.3	
50-59	6	10	
Total	60	100	
Marital status			
Single	4	6.7	X ² =6.042 df=4
Married	48	80	

Divorced	4	6.7	p-value=0.196
Widowed	2	3.3	
Separated	2	3.3	
Total	60	100	
Educational level			
Preparatory nursing	32	53.3	X ² =7.553 df=2 p-value=0.023
Nursing Institute	22	36.7	
College graduate	6	10	
Postgraduate	0	0	
Total	60	100	
Years of employee			
Less than 1 – 5	4	6.7	X ² =2.500 df=4 p-value=0.645
6 – 10	6	10	
11 – 15	10	16.7	
16 – 20	30	50	
21 - and more	10	16.7	
Total	60	100	
Participate in training course			
Yes	14	23.3	X ² =3.961 df=1 p-value=0.046
No	46	76.7	
Total	60	100	

f: Frequency, %: Percentage, X²: Chi, df: Degree of freedom

This table shows that nurses in the study sample are with gender variable refers to 70% of male nurses and 30% of female nurses in the study sample. Age years in which the highest percentage is reported with 30 – 39 years (50%). Regarding marital status, 80% of nurses in the study sample are married. Concerning the qualification of nurses; the highest percentage among study sample is refers to 53.3% of nurses are preparatory nursing. Regarding years of experience in nursing profession, 50% of nurses in the study sample. Only 23.3% of nurses in the sample are participated of training course.

Table (2): Assessment of Nurses' awareness about infection among study sample

Items = 20		Mean of Score				
		Know	Uncertain	don't know	M.S	Ass.
1	Infection is the susceptibility of an infected host to transmit infection or disease to another host.	20	2	38	1.70	M
2	The infection is diagnosed at least within 48-72 hours.	10	2	48	1.36	L
3	Causes of infection are the host, the environment, and the agent Causative.	4	16	40	1.40	L
4	The incubation period indicates the entry of infection agents into the body and the first appearance of symptoms and signs of disease.	20	6	34	1.76	M
5	There are two types of infection: internal (self) and external (external)	18	0	42	1.60	L

	infection.					
6	The infection is transmitted during contact with the patient or other patient tools.	10	6	44	1.43	L
7	The hands of health workers are the most common means of transmitting infection.	8	0	52	1.26	L
9	Many germs can live on inanimate objects, such as tabletops, doorknobs, or faucets	26	0	34	1.86	M
10	Disease prevention is the process of eliminating the impact of a disease on an individual, family, or group	6	16	38	1.46	L
11	The national health system is based on three main levels of providing health care services (primary, secondary and tertiary).	10	2	48	1.36	L
12	The use of personal protective equipment such as a mask, vest, and paws is the most clearly visible control used in the prevention of infection.	26	4	30	1.93	M
13	Host protection factors against infection through (vaccination, preventive treatment, improving nutrition and general health)	10	6	44	1.43	L
14	Pathogenic factors by airborne transmission are rubella virus, tuberculosis, smallpox.	14	0	46	1.46	L
15	Examples of pathogens that are transmitted through contact are Hemophilus influenza and herpes simplex.	30	8	22	2.13	M
16	Examples of pathogens transmitted by respiratory droplet method are: German measles, Coronavirus	4	16	40	1.40	L
17	Examples of pathogens that are transmitted through body fluids (blood) are: hepatitis B virus, acquired immunodeficiency virus (AIDS)	16	2	42	1.56	L
18	Vaccinating health center workers against infectious diseases such as viral hepatitis, influenza, typhoid	2	10	48	1.23	L
19	When a health center employee suffers from a respiratory disease or any contagious disease that prevents him from working until he is cured	14	12	34	1.66	L
20	When an infection occurs inside the health center, the infectious disease control unit official must be immediately notified	14	6	40	1.56	L
Total		272	120	808	1.55	L

M.S = Mean of Score, Low = (1 - 1.66), Moderate = (1.67 – 2.33), High = (2.34 – 3). Ass. = Assessment.

This table presents nurses' awareness in the study sample shows clearly that nurses' awareness in the study sample is low level (poor).

Table (3): Overall assessment of nurses' Awareness towards preventive measures for infection control

Levels of Awareness	Mean of Score		
	F	%	M.S
Poor	48	80	1.20
Fair	12	20	
Good	0	0	
Total	60	100	

Poor = 1-1.66, Fair = 1.67 -2.33, Good = 2.34-3, F: Frequency, %: Percentage, MS: Mean of score.

Displays the overall assessment nurses' awareness towards preventive measures for infection control; the table shows that nurses in the study sample are showing a poor level of awareness

DISCUSSION

Table (1): The results of the study showed that the majority of the study sample (70%) were male, (50%) in the age groups (30-39 years), (53.3%) preparatory nursing, (50%) about (16-20) years of employee, (76.7%) did not have a special training course as most of the nurses working in the healthcare field have a low level of practice regarding infection control. The study concluded that nurses' awareness of preventive measures for infection control was at a low level. This finding agrees with ⁽⁷⁾ whose study shows that (85.7%) of nurses are male and (14.3%) are female. Also, this study shows that (34.3%) of the sample aged 30- 39 years. Also, the study findings disagree with study of ⁽⁸⁾ that show (57.8%) of health care workers did not participated in training course about communicable diseases control. These findings reported that the poor nurses' awareness related to lack of interest and motivation in participating in training course about communicable diseases control.

Table (2): The table shows the total mean of the score for nurses' awareness, which shows that the study sample has low awareness (1.55). This means that nurses did not acquire enough awareness about infection control, therefore, the researcher insists on providing nurses with adequate knowledge and awareness towards infection control to improve their knowledge. This finding is consistent with ⁽⁸⁾, who conduct a study to assess of nurses' knowledge and practice toward infection control strategic at obstructed gynecological in hospitals in Baghdad city.

These findings reported that the poor nurses' knowledge related to lack about communicable diseases control.

Table (3): The table displays the overall assessment nurses' awareness towards preventive measures for infection control; the table shows that nurses in the study sample are showing poor level awareness. These results were supported by ⁽⁹⁾, who conduct a study to awareness of healthcare workers regarding preventive measures of communicable diseases among Hajj pilgrims at the entry point in Western Saudi Arabia, reported that nurses' awareness was a poor about infection control.

CONCLUSION

According to the findings of this study, the majority of nurses working in primary health care centers had a poor level of infection control awareness.

RECOMMENDATIONS

In order to ensure compliance with infection control measures by nurses working in basic health care, the current study advocated the establishment and execution of a comprehensive infection control program in primary health care centers.

Ethical Clearance: All experimental protocols were approved under the College of Nursing and all experiments were carried out in accordance with approved guidelines.

REFERENCES:

1. The Arab Hospital Magazine (AHM). Infection Control in Hospitals, 2018.
2. Masur, H. Emanuel, E. Lane, HC.: Severe acute respiratory syndrome: providing care in the face of uncertainty. *Journal of the American Medical Association*, 2013, 289, pp: 2861–2863.
3. Wasswa, P. Nalwadda, C. Buregyeya, E. Gitta, S. Anguzu, P. & Nuwaha, F.: Implementation of infection control in health facilities in Arua district, Uganda: A cross sectional study. *BMC infectious Diseases*, 2015; 15(268), pp: 25-33. doi: 10.1186/s12879-015-0999-4.
4. Christiansen, Jen.: Global Infections by the Numbers, *Scientific American*, May 1, 2018: <https://www.scientificamerican.com>
5. World Health Organization (WHO): Core components of infection prevention and control programs in health care Standard principles of infection prevention and control, CH-1211 Geneva-27, Switzerl,2011.
6. Ministry of Health and World Health Organization (MOH / WHO): National Guideline for Infection Control in Health Facilities. Ministry of Health (MOH) collaborative with WHO, Iraq, 2009, P.15-32.
7. Al-Kerity, S. H. F. and Najji, A. B.: Evaluation of Healthcare Workers' Practices Concerning Infection Control Measures at Primary Health Care Centers, *Scientific Journal of Medical Research*, 2017; 1(2), pp: 63- 68.
8. Al-Ghamdi, A.S. and Kabbash, I. A.: Awareness of healthcare workers regarding preventive measures of communicable diseases among Hajj pilgrims at the entry point in Western Saudi Arabia. *Saudi Med J*, 2011; 32(11), pp:1161-1167.
9. Yar, K. D.: Assessment of nurses' knowledge and practice toward infection control strategic at obstructed gynecological in hospitals in Baghdad city, master thesis, maternal and child health nursing, College of Nursing, Baghdad university, 2010; pp:5.