

Nurses Clinical Knowledge About Personal Protective Equipment Donning And Doffing Methods At Al-Hayat Wards In Holy Kerbala'a City

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Abstract

Background: Due to the dependence of personal protective equipment's efficacy on user behavior, it is thought that personal protective equipment should be placed at the bottom of the infection control hierarchy. Personal protective equipment should be used in accordance with standards and transmission to prevent the spread of healthcare-associated diseases, according to the Healthcare Infection Control Practices Advisory Committee (HICPAC). -related illness prevention measures.

Methods: A descriptive quantitative method was used to evaluate the knowledge of 40 nurses working in the Al-Hayat Wards in the holy city of Kerbala, Iraq, regarding the donning and donning of personal protective equipment. The study started on January 15, 2022, and it concluded on May 25, 2022. The tool was divided into two sections. The first section dealt with the sample's socio-demographic characteristics, including age, gender, education level, years of nursing experience, and participation in particular training courses connected to PERSONAL PROTECTIVE EQUIPMENT. Part two deal with the nurses clinical knowledge about donning and doffing methods of personal protective equipment which involved 18 questions. The validity of the measurement tool was obtained from 11 experts, reliability was =0.8, data were analyzed through the use of SPSS program edition 22, the analytical approaches used in this study is description and inferential analyses.

Results: outcomes of the study confirmed that know answers was 24.30%, while don't know and not sure both answers was 25.69%.

Conclusions: the study concluded that nurses' clinical knowledge toward PERSONAL PROTECTIVE EQUIPMENT donning and doffing is very good.

Keywords: Nurses, Clinical Knowledge, Personal Protective Equipment, Donning, Doffing, Methods.

INTRODUCTION:

Caretakers must properly utilize personal protective equipment in order to reduce the risk of hospital acquired infection (HAI) spread through medical staff ^(1,2). Despite wearing personal protective equipment, it is still possible for skin and medical apparel to become infected due to carelessness when taking off contaminated PPE. Therefore, the precise use of personal protective equipment is a crucial tactic to protect healthcare employees from contamination and to prevent the spread of pathogens to vulnerable patients ⁽³⁾., Healthcare workers must wear personal protective equipment (PPE) consistently and properly to stop the spread of diseases within healthcare facilities as well as to stop the direct and indirect exposure to and transport of infectious agents into their bodies. The use of personal protective equipment inadvertently or incorrectly has been linked to the Ebola Virus Disease (EVD) transmission of two nurses in Dallas, Texas ⁽⁴⁾. White lab coats have recently come under fire for various causes. When working with certain medical equipment, such as in the psychiatric field, it has become customary to wear casual attire and refrain from wearing even a white suit in order to get closer to the patient area ⁽⁵⁾.

METHODS:

This study's inception was approved using a descriptive quantitative methodology. The consent forms from both the study participants and the hospital administration were obtained by the researcher. Study location in Iraq's Holy Karbala City's Al-Hayat neighborhoods. a (40) nurse purposive, non-probability selection from the Al-Hayat isolation wards. The instrument had two parts; the first part contained six items that reflected the characteristics of the study group, and the second part contained eighteen items. With the help of 11 experts, the instrument's veracity was established. By using Cronbach's Alpha, which was equivalent to 0.8, the reliability was estimated. Descriptive and inferential data studies were performed using the Package of Social Sciences SPSS edition 22⁽⁶⁻¹⁷⁾.

Results:

Table (1) Distribution of The Study Sample According to Their Socio- demographic Characters (No. = 40)

No.	Characteristics	Freq.	%	
1	Age /years	18 – 24	20	50.0
		25 – 34	17	42.5
		35 – 44	3	7.5
2	Gender	Male	14	35.0
		Female	26	65.0
3	Level of education in nursing	Bachelor degree	30	75.0
		Diploma degree	10	25.0
4	Years of experience in isolation rooms	Six months to one year	29	72.5
		One to two year	9	22.5
		two years and above	2	5.0
5	Specific Training course	No	24	60.0
		Yes	16	40.0

No: Number, Freq.: Frequency, %: Percentage

According to the chart above, the study's demographic characteristics, 58% of the sample's age is between 25 and 34 years old. About 63% of the nurses who participated in this research were female. About 35% of the research sample's participants are graduates of nursing preparatory schools. 53% of the study sample have between 1 and 5 years of nursing expertise. The bulk of the nurses, 75 percent, took part in a training session on donning and doffing personal protective equipment.

Table (2) Nurses' Clinical Knowledge about PERSONAL PROTECTIVE EQUIPMENT donning and doffing for the Study Sample

No.	Items		F.	%
1.	The first wearing of protective suits by caregivers was by monks and nuns in church hospitals	Don't know	7	17.5
		Not sure	17	42.5
		know	16	40.0
2.	Personal protective equipment is handled and prepared outside patient areas and isolation and quarantine areas	Don't know	3	7.5
		Not sure	13	32.5
		know	24	60.0
		Don't know	2	5.0

3.	Correct sequence for wearing personal protective equipment as follows: a gown, a protective mask, safety glasses, then gloves.	Not sure	2	5.0
		know	36	90.0
4.	Wear basic personal protective equipment when touching or eating things suspected to be contaminated with germs, viruses, or dirt, and after performing hand hygiene.	Don't know	3	7.5
		Not sure	7	17.5
		know	30	75.0
5.	Donning and doffing personal protective equipment must be under the supervision and assistance of a fellow trainee from among the team members	Don't know	1	2.5
		Not sure	9	22.5
		know	30	75.0
6.	Wear rubber shoes (boots), if available. Or wear closed-sided medical shoes that are not impermeable to fluids, and wear shoe covers over them	Not sure	8	20.0
		know	32	80.0
7.	Wear a single-use, non-permeable gown over a scrub suit	Don't know	3	7.5
		Not sure	4	10.0
		know	33	82.5
8.	Another name for protective suits is the lab coat.	Don't know	10	25.0
		Not sure	19	47.5
		know	11	27.5
9.	Protective suits should be long enough to cover the clothes	Don't know	1	2.5
		Not sure	1	2.5
		know	38	95.0
10.	Put on a face mask and then put on a face shield or safety goggles	Don't know	3	7.5
		Not sure	6	15.0
		know	31	77.5
11.	Putting on the head cover later, if available, and finally wearing gloves	Don't know	1	2.5
		Not sure	7	17.5
		know	32	80.0
12.	After completing the supplies, you should not touch any area of them or try to adjust their position	Don't know	2	5.0
		Not sure	6	15.0
		know	32	80.0
13.	Adjusting the place of the protective mask, head cover, shoe cover, or even touching the protective suit from the outside) should avoided while providing clinical care to the patient.	Don't know	1	2.5
		Not sure	5	12.5

		know	34	85.0
14.	Gloves should be removed and replaced if they are torn or damaged	Not sure	1	2.5
		know	39	97.5
15.	Hand cleaning activity should be performed before putting on new gloves	Not sure	2	5.0
		know	38	95.0
16.	Non-sterile gloves are the same as clean gloves.	Don't know	9	22.5
		Not sure	9	22.5
		know	22	55.0
17.	Wear a face mask in all sick cases	Don't know	6	15.0
		Not sure	12	30.0
		know	22	55.0
18.	The protective equipment must be doffed slowly and focused, and within the correct sequence as follows: gloves, safety glasses, suit, protective mask, which prevents the spread of pollution.	Don't know	1	2.5
		Not sure	4	10.0
		know	35	87.5
	Total	Know		74.30 %
	Total	Don't know and not sure		25.69 %

Table (4-2) presented the nurses' clinical knowledge of the study sample towards Personal Protective Equipment donning and doffing procedure and care. It was 74.30% of know answers, while don't know and not sure both answers was 25.69%. Nurses' level of knowledge about Personal Protective Equipment donning and doffing is very good.

DISCUSSION:

The sociodemographic characteristics of this research revealed that 58% of the study sample was between the ages of 25 and 34. About 63% of the nurses who took part in the current research were female. 35% of the study population had graduated from a nursing prep school, which is a significant proportion. 53% of the study sample have between one and five years of nursing expertise. The majority of nurses—75 percent—participated in a training session on wearing and doffing personal protective equipment. This study similar with another study in Iraq⁽¹⁸⁻²¹⁾. Table 2 displayed the clinical expertise of the study sample's nurses regarding the maintenance and donning of personal protective equipment. In the study sample, the evaluation of nurses' knowledge of PPE donning and doffing techniques showed that the know response was 74.30%, while the not sure and don't know response was 25.69%.

CONCLUSIONS:

This research found that nurses have very good knowledge of donning and doffing personal protective equipment.

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