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Nurse's Knowledge about managing COVID-19 Patients at Intensive Care Unit in Mosul Teaching Hospitals

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ABSTRACT— The workers in the field of health, especially nurses, are considered the first line of prevention (the White Army) in facing health challenges because of their direct contact with the disease and the patient. They play a fundamental role in preventing the spread of COVID 19 by providing appropriate care and required preventive measures. The study to assess nurse's knowledge about COVID-19 patients in the intensive care. To achieve the aims of the current investigation, a cross-sectional descriptive study design was used, with knowledge questions provided to 40 participants to complete beginning on (15 April 2020 to 20 August 2020). To achieve the ultimate aim and make use of the instrument of the electronic research questionnaire tailored to the purpose of collecting data for the research study connected to COVID-19, it is consist of two sections: Section one: Self-Administered Survey Sheet Regarding Descriptive Characteristics of the Nurse Working (age, gender, years of experience, location of employment, and level of education). Section two: the knowledge survey comprised (35) items about COVID-19. A total of (40) nurses were enrolled in this study, with a mean age of (34.17 ± 8.77) years, most of them were male (85 %), the majority of them had less than five years' experience (67.5%), the highest percentage of nurses (70%) working in the morning shift. The majority of them had a university education level (75%)—the most significant number of nurses working in Ibn Sina Hospital. Most nurses do not have a course of knowledge about the COVID 19 virus by 70%. They showed adequate knowledge about COVID 19. The significant majority of nurses have a sufficient understanding of COVID-19. The ministry of health authorities should put education interventions and campaigns required for healthcare workers in the hospitals and health centres to know and protect from COVID 19.

KEYWORDS: Knowledge, Nurses, COVID 19.

1. INTRODUCTION

One of the great group viruses is coronaviruses. These viruses are considered typical throughout the community. According to prior research, several coronaviruses, including severe acute respiratory syndrome-Coronavirus and Middle East Respiratory Syndrome-Coronavirus between 2003 and 2015, exhibit similarities to the new coronavirus-19 [1].

Wuhan, the capital city of Province Hubei in China, gained attention from the World Health Organization (WHO) because of the appearance of the first case of pneumonia of unknown causes earlier in December. On 31 December 2019, it increases cases in Wuhan, China [2]. WHO, on January 30, 2020, declared it a public health emergency of international concern (PHEIC). On 11 March 2020, WHO declared coronavirus disease 2019 (COVID-19) a global pandemic due to uncased fast spread, the severity of illness, and the continual escalation in the number of affected countries [3].

Seven Arabic countries are (Lebanon, Bahrain, Kuwait, Oman, Qatar, and Saudi Arabia, including Iraq) that happened a novel coronavirus-19 disease (COVID-19) via people who have visited Iran recently [4]. In February 2020, the ongoing COVID-19 pandemic was first confirmed to have spread to Iraq. On 27 March, shows reported cases have been confirmed in all 19 Iraqi Governorates. On 8 April, accounting for 309 (26%) of those cases in the Iraqi Kurdistan region [5]. On 22 February 2020, Iraq reported its first confirmed cases of SARS-CoV-2 infections in Najaf [6]. During the epidemic, the number of confirmed cases in Baghdad, Basra, Sulaymaniyah, Erbil, and Najaf surpassed the hundred mark in April [7].

According to history, these viruses were introduced to humans by birds and animals, resulting in viral infection and transmission [8]. COVID-19 is transmitted from person to person by droplets when an infected person sneezes and through direct touch, and the virus has a 4-14 day incubation period [9]. The aged and people with chronic medical disorders such as diabetes and cardiovascular disease are much more susceptible to getting a bad infection [9]. In humans, this leads to acute respiratory syndrome [10], which illustrates the first infected patient who had clinical high fever, coughs, and breathlessness [11]. At the moment, no antiviral medicine or vaccination has been officially indicated for COVID-19, and the major crucial treatment is the application of preventative measures to manage COVID-19 [12].

Consider Individuals infected with this highly transmissible disease are primarily cared for by healthcare professionals (HCPs) of all levels and types. COVID-19 has presented a severe occupational health concern to HCPs as a result of their frequent contact with infected patients [13]. HCP protection and avoidance of intra-hospital transmission of infectious agents are critical parts of the pandemic response, and this necessitates that HCPs have up-to-date knowledge about the source, information, symptoms, and preventative actions [14]. According to the literature, a lack of awareness and misconceptions among HCPs leads to delayed diagnosis, illness transmission, and poor infection control management [15]. Therefore, the study aims to assess nurse's knowledge about COVID-19 Patients in the intensive care unit in Mosul teaching hospitals.

2. Methodology

To examine nurses' understanding of COVID-19 patients in the intensive care unit, a descriptive cross-sectional survey design with a customized numerous survey was employed. This study is adopted and conducted in Mosul Teaching Hospitals started from (15 April 2020 to 20 August 2020). The instrument tools were constructed and developed by the researcher for the study and were a random sample comprised of (40) nurses who worked in the ICU at Mosul Teaching Hospital. The study's selection criteria were as follows: Nurses have at least one year of experience in adult critical care units and respiratory care units; both male and female nurses; Nurses at a higher educational level (Nursing College, Nursing Institute) to guarantee that all participants receive enough training and understanding about the qualities of ICU care for COVID-19 individuals.

To achieve the ultimate aim and make use of the instrument of the electronic research questionnaire tailored to the purpose of collecting data for the research study connected to COVID-19, it is consist of two sections: Section one: Self-Administered Survey Sheet Regarding Descriptive Characteristics of the Nurse Working (age, gender, years of experience, location of employment, and level of education). Section two: the knowledge survey comprised (35) items in the form of Multiple-Choice Questions (MCQ) that were divided into two categories: first; general knowledge about COVID-19 included (10) items; Second; specific questions concerning intensive care unit associated patients with COVID-19 included (25) items; The scoring method was as follows: 0 = no/incorrect response, 1 = correct answer.

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2.1 Statistical Analysis

The data were analyzed using the Statistical Package for Social Science (SPSS, version 22, IBM Inc.). For information on the demographic characteristics of nurses, descriptive statistics (mean and standard deviation) were employed to characterize the frequencies, measures of central tendency, and measures of variability. The averages of learning ratings for nurses across different hospital types were compared using a one-way analysis of variance (ANOVA). Pearson product of moment correlation coefficient tests was used to investigate the link between nurse's demographic characteristics and degree of knowledge.

3. Results

Table (1): Demographic characteristics of nurse's intensive care unit workers
(n = 40)

No	Demographic Variables		Frequency	Percent
1.	**Age**	20-29	7	17.5
		30-39	**29**	**72.5**
		40-49	4	10.0
Mean = 34.17			**SD = 8.77**	
2.	**Gender**	**Male**	**34**	**85.0**
		Female	6	15.0
3.	**Edu level**	Secondary	2	5.0
		Institution	4	10.0
		College	**30**	**75.0**
		Post graduate	4	10.0
4.	**Hospital name**	Al-Salam	11	27.5
		Ibn Sina	**18**	**45.0**
		General Mosul	11	27.5
5.	**Time working**	**Morning**	**28**	**70.0**
		Evening	12	30.0
6.	**Years' experience**	**less than 5 years**	**27**	**67.5**
		5-10	12	30.0
		11-15	1	2.5
7.	**Knowledge about COVID 19 virus**	Yes	12	30.0
		No	**28**	**70.0**
	Total		**40**	**100.0**

Table 1 shows that the average age of the 40 eligible individuals who answered by the respondents the survey in the research was (34.17 ± 8.77) years, most of them were male (85 %), the majority of them had less than five years' experience (67.5%), the highest percentage of nurses (70%) working in the morning shift. The majority of them had a university education level (75%)—the most significant number of nurses working in Ibn Sina Hospital. Most nurses do not have a course of knowledge about the COVID 19 virus by 70%.

Table (2): The Samples' general knowledge Level Results regarding COVID-19

NO	Estimate	Frequency	Percent
1.	Fail	0	0.0
2.	Not Acceptable	6	15.0
3.	**Acceptable**	**23**	**57.5**

4.	Good	11	27.5
5.	Excellent	0.0	0.00
	Total	**40.0**	**100.00**

Table (2): shows that the answers of the participant of the study were acceptable about general knowledge of Covid-19.

Table (3): The Samples' Specific Knowledge Level Results regarding COVID-19

No	Estimate	Frequency	Percent
1.	Fail	0	0.0
2.	Not Acceptable	17	42.5
3.	**Acceptable**	**21**	**52.5**
4.	Good	2	5.0
5.	Excellent	0.0	0.00
	Total	**40**	**100.00**

Table (3): shows that the answers of the participants of the study were acceptable regarding specific knowledge of Covid-19.

Table (4): Statistical differences of demographic characteristics result and samples' general and specific knowledge Level regarding COVID-19

No	Demographic Variables	Part 1		Part 2		Total	
		P-value	Signs	P-value	Signs	P-value	Signs
1.	Age	0.863	N/S	**0.030**	**S**	0.754	N/S
2.	Gender	0.867	N/S	0.351	N/S	0.965	N/S
3.	Edu level	0.335	N/S	0.524	N/S	0.397	N/S
4.	Hospital name	0.518	N/S	0.721	N/S	0.089	N/S
5.	Time working	0.794	N/S	0.773	N/S	0.542	N/S
6.	Service	0.733	N/S	0.706	N/S	0.144	N/S
7.	Course	0.187	N/S	0.143	N/S	0.542	N/S

Correlation is significant at the 0.05 level

Table (4): Show the statistical differences between characteristic demographic results and general Knowledge, specific knowledge regarding COVID-19. That the age is only significant with the particular knowledge regarding COVID-19. While not substantial with others.

4. Discussion

The coronavirus illness epidemic in 2019 has become a pandemic, which infected over 100,000 people and

caused over 3000 deaths worldwide, according to the [16]. The fact that health care workers are at threat of infections throughout the epidemic chain is a key concern since healthcare personnel contribute to the outbreak's management. As a result, all reasonable precautions must be done to restrict the transmission of the illness to health care providers, beginning with identifying disease risk factors and then adopting suitable measures to decrease these risks. Those nurses who had recent exposure to infected individuals had an adequate level of knowledge, which is the predicted outcome and highlights the need for healthcare insurance regulators to establish patient contact awareness campaigns that include their managing health team. The effective dissemination of information about COVID-19 through various media to the successful knowledge having. Our results are in line with a study conducted in Saudi Arabia by Muhammad and Akram 2014 that demonstrated strong awareness and a favourable attitude among healthcare staff concerning Middle East Respiratory Syndrome [17] and also congruent with another research conducted by [18] among 418 health college students in Najran, Saudi Arabia. Our study shows no significance between the demographical characteristic and knowledge excepted with age. These findings are consistent with past research performed in Pakistan, which found that age was substantially related to a great experience, with 95.5 %(n=284) HCPs aged less than 30 years having good experience compared to other age groups of healthcare professionals. Other studies have found that the overall knowledge score is unaffected by age or educational levels and that there is no significant difference between nurses with little or even more job skills. In keeping with our data, Saudi Arabian investigations on students from varied areas and education levels found no significant influence of age or education level on their knowledge [19]. In this aspect, the worldwide overbreak and higher incidence of infection of COVID-19 may have enhanced nurses' knowledge and awareness of this pandemic infection. Another study conducted in China that shows A total of 327 relevant hospital staff got a mean score of 8.17 ± 1.3 (range 4-10) and 1.86±0.43 (range 1-5) in knowledge and attitude, respectively [1]. Our study concluded findings were providing confidence as nurses have adequate knowledge regarding Covid-19. Our report suggested that the ministry of health authorities implement all COVID-19 safety precautions with an extensive training program that targets all health care workers, including physicians, pharmacists, and all ministry of health workers, not just nurses, to have rounded medical experience about COVID-19.

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