Knowledge of Healthcare Providers toward New Corona Virus at Directorate of Military Medical Affairs Units

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Abstract

Background: Coronavirus is a rapidly spreading disease also known as COVID-19. The epidemic is caused by a new human coronavirus, previously known as (SARS-COV-2), new coronavirus disease it first appeared in December 2019 among patients who had symptoms of viral pneumonia in Wuhan, China. This study aims to determine healthcare providers' knowledge related to coronavirus.

Methods: A descriptive design is carried throughout the present study Directorate of Military Medical Affairs Units (Al- Muthanna Military Hospital, Al-Hussein military Hospital, Al-Shaheed Mubder Military Clinic, Al-Naser Military Clinic, Military Medical School) for the period from January 28th, 2021 to February 25th, 2021. The study included a non-probability "purposive" sample of (223) health care providers. The questionnaire encompasses two main parts (Health Care Providers Socio-Demographic Characteristics, and Health Care Providers' knowledge's Tool).

Data were analyzed using the statistical package for social science. The descriptive statistical measures of frequency, percent, mean, Relative Sufficiency, Percentile Grand Mean of Score, Percentile Global Mean of Score, Pooled Standard Deviation, and Grand/or Global Relative range, standard deviation, and inferential statistical measures of T-test, Chi-Square test, Binomial test, Mann-Whitney test, Contingency Coefficients test, and Wilcoxon Signed Ranks test.

Results: The study results showed that half of the study participants depend on their information about the studied diseases on the "Center for Disease Control of the World Health Organization", then 158 (70.9%) depend on government websites and official media, then 109 (48.9%) depend on news media about 148 (66.4%) rely on Social media. About 26(11.7%) rely on Journals" only.

Conclusion: The researchers concluded that the overall evaluation of healthcare providers' knowledge is moderate.

Recommendation: The researchers recommend that there is a need to conduct further studies on larger sample at the national level with the need for an educational program to increase the knowledge of health care providers about Corona virus in military medicine.

Keywords*: Coronavirus; Healthcare Providers, Knowledge*

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Introduction

Coronavirus is a rapidly spreading disease also known as COVID-19. The epidemic is caused by a new human coronavirus, previously known as (SARS-COV-2), new coronavirus disease it first appeared in

December 2019 among patients who had symptoms of viral pneumonia in Wuhan, China [1-2].

The first cases of pneumonia of unknown source were discovered in Wuhan, capital of Hubei Province, in early December 2019, the pathogen was identified as the new, enveloped beta-corona RNA virus. This is now called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which is fairly similar to SARS-CoV. It was found linked to the Huanan seafood market in Wuhan, in Hubei Province, China, where Aquatic animals were also sold before the outbreak [3-4]

The disease highly contagious, its main clinical manifestations include fever, dry, weakness, muscle pain and shortness of breath, which Characterized by acute respiratory distress syndrome, septic shock, difficult-to-treat metabolic acidosis, bleeding and dysfunction. The incubation period for a novel coronavirus infection is about 2-5 days, after which symptoms begin to appear, however, this period varies according to the immune system and the age of the patient [5-6].

Health care systems in first world countries have failed to provide medical care due to the rapidly increasing numbers of infected patients, not to mention the developing or underdeveloped countries. In most cases, the initiative and management in the various countries appeared inconsistent, wasted, ill-equipped, and inadequate to contain the disease. Unprecedented in history, the active participation of everyone on earth, through testing, confinement, contact follow-up, social segregation, staying home, self-isolation, improving individual hygiene and using individual defense equipment, for example, blankets and gloves, is essential access to containing COVID- 19, prevent medical service workers from overcoming it, and give specialists time to establish treatment methodologies [7].

To control Outbreaks, China has taken some strict measures Includes complete closure of public places, Public transportation and isolation of suspected cases. Authorities have locked down the entire Hubei province for months and days. Residents inside and outside Hubei Province are being asked to stay home and practice self-isolation to avoid any physical contact with others. Fight against the epidemic continues in China as well as around the world [8].

Many millions have sacrificed their self-sufficiency, well-being, position, jobs, transformation, and education. However, deliberate self-cooperation methods of responding to COVID-19 have led to difficulties in various countries due to changing information degrees and perspectives. As needed, the plan and implementation of antiviral activities is based on a complete and microscopic understanding of separate regions and within each country [7].

Around the world, the main challenges lie in providing the right services Caring for COVID patients and preventing the spread Infection among health care workers and the public General. Appropriate preventive measures for COVID-19 Infection are not effectively carried out both places and adherence to them is inconsistent [9]

In addition, implementation of the updated guidelines brings a host of communication challenges and guidance, availability of resources, access to equipment, and practice in using that equipment, simulation sessions and a willingness to participate in the application of those directions. These factors Influenced by the knowledge and attitudes of health care providers regarding the disease and updated guidelines to be provided for their routine work [10].

Materials and Methods

A descriptive design was used to guide this study. The study included a purposive sample of 223 healthcare providers. The study was conducted at the Directorate of Military Medical Affairs Units (Al- Muthanna Military Hospital, al-Hussein military Hospital, Al-Shaheed Mubder Military Clinic, Al-Naser Military Clinic, Military Medical School) for period of from of January 28th, 2021 to February 25th, 2021. Data were collected through a self-reported questionnaire using the structured interview as a way of data collection. The questionnaire encompasses two main parts as follows:

Part I: healthcare providers' sociodemographic characteristics: This part includes items of Workplace, gender, age, service Years, Occupation, level of education, have you participated in a course on methods of preventing the emerging corona virus, Duration of the course and socioeconomic status which are calculated through use Testing based on One-Sample Chi-Square test, and Binomial test.: where Non-significant at P>0.05, Significant at P<0.05 and Highly significant at P<0.01

Part II: healthcare providers' knowledges: This part is comprised of 12 items that measure knowledge of healthcare providers' knowledge which are measured as [(0.00 – 33.33) for Low (L) evaluation; (33.34 – 66.66) for Moderate (M) evaluation; and (66.67– 100) for High (H) evaluation].

The content validity and Pearson correlation coefficient reliability were determined through a pilot study.

Data Analyses/Statistics

Data were analyzed using the statistical package for social science (SPSS) ver. (21.0). The descriptive statistic measures of frequency, percent, mean, and standard deviation and inferential statistical measures of T-test, multiple linear regressions, person correlation coefficient, Chi-Square, and analysis of variance (ANOVA) were used.

Results

Table 1. ***Participants' distribution*** **according to the source of information on the new Coronavirus**

Source of information	Response	No.	%	C.S. P-value
World Health Organization, CDC	No	112	50.2	P=1.000 (NS)
	Yes	111	49.8	
Official government websites and media	No	65	29.1	P=0.000 (HS)
	Yes	158	70.9	
News media	No	114	51.1	P=0.789 (HS)
	Yes	109	48.9	
Social media	No	75	33.6	P=0.000 (HS)
	Yes	148	66.4	
Journals	No	197	88.3	P=0.000 (HS)
	Yes	26	11.7	

(*) HS: Highly Sig. at P<0.01; Testing based on Binomial test.

There are significant differences between observed distribution with their expected outcomes in each source of information, except with "World Health Organization, CDC" source.

A half of participants rely on their information regarding Covid-19 on "World Health Organization, CDC", followed by 158(70.9%) who rely on their information on "Official government websites and media", followed by 109(48.9%) who rely on "News

media", then followed with 148(66.4%) rely on their information regarding studied disease on "Social media", followed by 26(11.7%) who rely on "Journals" only.

Table 2. Participants' distribution according to the (SDCv.) with comparisons significant

General (SDCv.)	Groups	No.	%	C.S. P-value
Gender	Male	182	81.6	P=0.000 (HS)
	Female	41	18.4	
Age Groups (Years)	20 _ 29	116	52	$\chi2$= 134.543 P=0.000 (HS)
	30 _ 39	76	34.1	
	40 _ 49	26	11.7	
	50 _ 59	5	2.2	
	Mean ± SD	31.42 ± 6.96		
Occupation	Dresser	63	28.3	$\chi2$= 24.345 P=0.000 (HS)
	Nurse	31	13.9	
	Pharmacist	30	13.5	
	Dentist	25	11.2	
	Laboratory	37	16.6	
	Physician	37	16.6	
Level of education	Fast course	63	28.3	$\chi2$= 248.816 P=0.000 (HS)
	Diploma	12	5.4	
	B. Sc.	130	58.3	
	M.Sc.	9	4.0	
	Ph.D.	9	4.0	
Years of Service	< 1	24	10.8	$\chi2$= 143.076 P=0.000 (HS)
	1-5	111	49.8	
	6-10	45	20.2	
	11-15	37	16.6	
	> 16	6	2.7	
Have you participated in a course on methods of preventing the emerging corona virus	No	179	80.3	P=0.000 (HS)
	Yes	44	19.7	
Duration of the course Days	Non applicable	179	80.3	$\chi2$= 13.818 P=0.001 (HS)
	1-5	16	36.36	
	6-10	24	54.55	
	> 10	4	9.09	

(*) HS: Highly Sig. at P<0.01; Testing based on One-Sample Chi-Square test, and Binomial test.

Regarding gender, most of participants were males (n = 182; 81.6%), "Age Groups" are focusing at the first and second classes (i.e. 20 – 39)yrs., since they accounted 192(86.1%), with mean and standard deviation 31.42, and 6.92 yrs. respectively, "Occupational status" showed that "Dresser" staff were formed twice the number of the leftover providers, more than half of studied sample had "B.Sc." degree, and they are accounted 130 (58.3%), "Years Service", showed that half of studied providers had "1-5 years, and they are accounted 111(49.8%), most of them did not take the courses on Coronavirus disease, and finally who were taken the courses their cycle times were mostly short, since ranged from one to ten, and they are accounted days 40(90.91%).

Table 4. Participants' knowledge about Coronavirus at directorate of military medical affairs unit's

Items	Responses	No.	%	MS	SD	RS%	EV.
Clinical symptoms of the emerging Coronavirus are:	Don't know	1	0.40	0.78	0.48	78	H
	False	51	22.9				
	True	171	76.7				
Early detection of infection with the emerging Coronavirus can help treat the infected:	Don't know	4	1.8	0.22	0.42	22	L
	False	170	76.2				
	True	49	22				
People who become seriously ill with the emerging Coronavirus:	Don't know	6	2.7	0.24	0.43	24	L
	False	164	73.5				
	True	53	23.8				
The emerging corona virus is transmitted mainly through:	Don't know	2	0.9	0.32	0.47	32	L
	False	150	67.3				
	True	71	31.8				
The emergence of one of the symptoms of the emerging corona virus (such as fever, dry cough, shortness of breath) with contact with a confirmed infection within 14 days:	Don't know	0	0.00	0.32	0.47	32	L
	False	151	67.7				
	True	72	32.3				
The incubation period for the emerging corona virus is:	Don't know	1	0.4	0.43	0.5	43	M
	False	126	56.5				
	True	96	430				
Replace the medical mask when:	Don't know	3	1.3	0.32	0.47	32	L
	False	149	66.8				
	True	71	31.8				
It is necessary to protect the eyes when dealing with people infected or suspected of being infected with the emerging Coronavirus, in order to:	Don't know	2	0.9	0.61	0.49	61	M
	False	86	38.6				
	True	135	60.5				
One of the important ways to prevent infection with the emerging corona virus:	Don't know	1	0.40	0.83	0.38	83	H
	False	38	17.0				
	True	184	82.5				
Hand disinfection is done by using:	Don't know	0	0.00	0.66	0.47	66	M
	False	75	33.6				
	True	148	66.4				
Medical protective equipment used on infected or suspected persons is disposed of as such:	Don't know	2	0.9	0.92	0.27	92	H
	False	15	6.7				
	True	206	92.4				
In the absence of places for isolation, it must take place:	Don't know	6	2.7	0.82	0.39	82	H
	False	35	15.7				
	True	182	81.6				

Ev. = Evaluated (0.00 – 33.33) Low (L); (33.34 – 66.66) Moderate (M) ; (66.67– 100) High (H).

The observed responses of high evaluating assigned are accounted 4(33.33%) items, and responses of assigned a moderate evaluate are accounted 3(25. 0%) items, while the leftover items were a assigned low evaluation, and accounted 5(41.67%), through using differentiated intervals, such that: [(0.00 – 33.33) for Low (L) evaluation; (33.34 – 66.66) for Moderate (M) evaluation; and (66.67– 100) for High (H) evaluation].

For summarizes preceding results, it could be conclude that "Providers' Knowledge towards" coronavirus at directorate of military medical affairs units items were non assigned at the established level in which that achieving the goal of this study, also results observed concerning estimates of the percentile grand mean of score due to knowledge main domain having a moderate evaluating

Discussion

The source of information for half of participants about Covid-19 is that they rely on their information on the "World Health Organization, CDC", followed by governmental websites "official" and the media, followed by the media, the social media, and finally journals only.

This result may be due to the prevalence of the Internet and the ease of access to the WHO website, the Centers for Disease Control and Prevention, official government websites, the media, social media sites and magazines. This finding contradicts a study conducted by researchers from the United Arab Emirates, India, and Iran who stated that the main sources of participants' information are official government websites Social media, with about 30% of them saying they used the news Media (TV/video, magazines, newspapers, radio) and social media (Facebook, Twitter, Whatsapp, YouTube, Instagram and Snapchat) for information about COVID-19. Moreover, nearly 40% of respondents occasionally discussed topics related to COVID-19 with family and friends.[11]

Concerning participants' knowledge, most have a moderate knowledge. This result may be due to the fact that the epidemic is modern and occurred suddenly, which caused confusion in most health systems in the world, not only Iraq, in addition to the lack of scientific resources related to the prevention of this disease and the frequent updating of information related to this disease.

This finding is consistent with a study conducted by Al-Thaqafi et al., 2020 in terms of lack of knowledge about the emerging corona virus[12].

Conclusion

The researchers concluded that the overall evaluation of knowledge healthcare providers is moderate.

Recommendations

The researchers recommend that more research be conducted at the national level on the size of a large sample of health care providers, with the need for an educational program to increase the knowledge of health care providers about Corona virus in military medicine.

Conflict of Interest: The researchers confirm that there is no any conflict of interest.

Source of Funding: This study is self-funded.

Ethical Clearance: The researchers obtained the ethical approval from the University of Baghdad, College of Nursing

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