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

Muhammed Hussein Ali[1], WasnaaJomaa Mohammed [2]

[1]Academic Nurse, Captain, Ministry of Defense, Iraq
E-mail:mohammed.hussein1206a@conursing.uobaghdad.edu.iq
[2]Assistant Professor, Doctor, University of Baghdad, College of Nursing, Basic Medical Sciences Department, Iraq.
E-mail: Wasnaa@conursing.uobaghdad.edu.iq

Abstract:
Objective(s): To assess healthcare providers' practicesrelated 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-Shaheedmubder military Clinic, Al-naser military Clinic, Military Medical School). Non-probability "purposive" sample of (223) health care providers' is selected selected for the present study.
Results: The results showed that half of the study service providers 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. The results of the study shows a summary statistics for "practice's knowledge related to new "Coronavirus" at directorate of military medical affairs unit's questionnaire ", which are consisting of 9 items forming due to binary dichotomous scored through using (Do, and Don't) options which symbolized by (1, and 0) respectively, as well as the first item of "It is located in crowded places inside the hospital" has a reversed scored of negative trend compared with leftover of others items. The results that most of the evaluations are high, meaning that they are among the category (66.67– 100)
Conclusion: The studyconcluded that the overall evaluation of practices healthcare providers is high.
Recommendation: The study recommended 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 practices of health care providers about Corona virus in military medicine.
Keywords: Practices, Health care providers, new coronavirus.

Introduction

It is a communicable sickness produced by the newly showing Corona virus, at that time a great amount of persons affected with the Coronavirus COVID-19 appear a respiratory infection and recover without the need for exceptional cure. Elder adults and those with underlying medical problems such as cardiovascular disease, diabetes, chronic respiratory disease and cancer are more likely to develop severe illnesses and awareness toward the COVID-19 virus is the best way to prevent and slow transmission of the virus also the illness that causes it and how it spreads. The emerging corona virus is mostly spread across sputum droplets or nose secretions while sick individual coughs or sneezes, therefore it is imperative that you also training breath protocol (For example, by covering the face with the elbow when coughing or sneezing) [1].

The first cases of pneumonia from a mysterious source were found in Wuhan, the capital of Hubei Province, at the beginning of December 2019, the microorganism was

identified as a new crown beta-RNA infection, and this is currently called the severe severe respiratory condition Covid 2 (SARS-) CoV-2), which is really similar to SARS-CoV, was discovered linked to the Huanan Fish Market in Wuhan, in Hubei Province, China, where aquatic organisms were additionally sold before the outbreak of the pandemic. [2, 3]

The disease is highly contagious and its main clinical manifestations include fever, dehydration, weakness, muscle pain, and shortness of breath, which are characterized by acute respiratory distress syndrome, septic shock, difficult-to-treat metabolic acidosis, bleeding and dysfunction. The incubation period for infection with the new coronavirus is about 2-5 days, after which symptoms begin to appear, but this period varies according to the immune system and the age of the patient [4, 5].

At the start of the crisis, health care systems in first world countries failed to provide medical care due to the rapidly increasing numbers of infected patients, not to mention developing or underdeveloped countries. In most cases, initiative and management in different countries appeared inconsistent, wasted, ill-equipped, and insufficient to contain disease. Unprecedented in history, the active participation of everyone on Earth, through testing, confinement, contact tracing, social segregation, staying home, self-isolation, improving personal hygiene and using individual defense equipment, for example, blankets and gloves, is essential. Access to containment of COVID-19, prevent medical staff from overcoming it, and give specialists time to devise treatment methodologies [6].

In order to curb the spread of the disease, China has taken some strict measures including the complete closure of public places and public transportation and the isolation of suspected cases. Authorities locked down the entire province of Hubei for months and days. Residents inside and outside Hubei Province are required to stay home and practice self-isolation to avoid any physical contact with others. The fight against the epidemic continues in China as well as around the world [7].

Several millions have sacrificed their self-sufficiency, health, place, occupations, 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 are based on a complete and microscopic understanding of separate regions and within each country [6].

Around the world, the main challenges lie in providing appropriate services to care for patients infected with the emerging coronavirus and limiting the spread of infection among healthcare providers and the general public. Adequate preventive measures for COVID-19 infection cannot be taken effectively in both settings and adherence to them is inconsistent. [8]

Additionally, the application of the updated instructions leads to a host of communication difficulties, guidance, availability of resources, and access to equipment, practices in the use of that equipment, simulation sessions, and a willingness to participate in implementing those trends. These factors are influenced by the knowledge and attitudes of health care providers regarding the disease and the updated guidance that should be provided for their routine work. [9]

Methods

A descriptive design is carried out in order to achieve the objectives of the study through the use of the technique for the determination of health care provider's practices toward new coronavirus for the period of from of January 28th 2021 to February 25th 2021. The present study Directorate of Military Medical Affairs Units (Al- Muthanna Military Hospital, al-Hussein military Hospital, Al-Shaheedmubder military Clinic, Al-naser military Clinic, Military Medical School). Non Probability "purposive" sample of (223) health care providers' has been selected for the present study. The data are collected through the utilization of a developed questionnaire (Arabic version) and the use of structured interview

technique with each health care provider as means of data collection. The questionnaire is composed of two main parts as follows:

Part I: health care providers' Socio-Demographic 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: health care providers' Practices Tool: This part is comprised of (9) item that measure practices of health care providers'. It is 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].

Content validity and Pearson correlation coefficient reliability are determined through a pilot study. The data of the present study are analyzed and assess the results of the study under application of the statistical package (SPSS) ver. (21.0).throughdescriptive statistics (frequency, percentage, mean, mean of scores, total of scores, range and standard deviation) and statistical inferential (T-test, multiple linear regressions, person correlation coefficient,Chi-Square test and analysis of variance ANOVA).

RESULTS AND DISCUSSION
The results of the present study showed that the practices of healthcare providers was high evaluated

1. Discussion of the Health Care Providers' Locations:
The analysis of the places of health care providers shows that the biggest sample is in Al-Muthanna Military Hospital (72) and Al-Hussein Military Hospital (66), and then in Mubadar Military Clinic (37) Al-Nasr Military Clinic (14) Military Medical School (34) (Table.1). It is possible to clarify the distribution of the studied sites "sites of health care providers - (HCPL)" for the studied sample according to the frequencies and the observed percentages, in addition to the important comparisons by comparing the observed distribution with the expected results in this variable, whether they have the same proportional distribution or not.

The result shows that the very large difference is calculated at P <0.01 between the observed distribution frequencies with their expected results, since the data collection took into account the concentration of the number of responders (service providers) in hospitals compared to other sites, which explains the high numbers of respondents in hospitals, Their percentage was 175 (78.5%), while the remains of other sites accounted for 48 (21.5%).

2. Discussion of Health care providers "Socio-Demographical Characteristics":
The analysis of the socio-demographic of health care providers, Regarding "gender", most of the studied respondents were male, with a number of 182 (81.6%). (Table.2) This result is expected due to the nature of society in Iraq, which dictates that most health care providers are males in the military.

This finding is consistent with a study by Ronald Ullum et al. (2020) in College of Health Sciences, Makerere University, Kampala, Uganda, Department of Medicine, College of Health Sciences, Makerere University, Kampala, Uganda, Department of Medical Microbiology and Immunology, College of Medicine, Gulu University, Gulu, Uganda. Which indicated that the sex of health care workers is about (68%) males, while about (33%) females. [10]

"Age groups" focus on the first and second classes (ie 20 - 39) years, as they represent 192 (86.1%), with a mean and standard deviation of 31.42, and 6.92 years old. respectively, (Table.3) This may be due to the fact that the majority of health care providers were appointed

after the year 2003 with the re-formation of military medicine, so that most of them were in the same age group. This study is a descriptive study conducted to assess the practices of health care providers and not to explain the age numbers of these people.

Samadipour et al. (2021) They conducted a study that somewhat agrees with this finding at Sabzivar University of Medical Sciences in Iran, portraying the risks to Iranian healthcare workers. With regard to the Covid-19 crisis and the factors affecting it: a cross-sectional study, where they were in the category between (20 - 49) years old. [11]

The "Occupational status" showed that the "dresser" staff represents twice the number of the remaining service providers, and more than half of the studied samples have a bachelor's degree. The degree they are 130 (58.3%). (Table.2) this is a result of the lack of specializations at the beginning of the re-establishment of the Military Medicine after 2003. As for the fact that more than half of the samples are bachelor's degrees, this may be due to the fact that the study participants are those who have this degree and to the lack of higher majors

This study is consistent with a study conducted by Olum et al. (2020) at College of Health Sciences, Makerere University, Kampala, Uganda, Department of Medicine, College of Health Sciences, Makerere University, Kampala, Uganda, Department of Medical Microbiology and Immunology, Which confirmed that about (51%) have a bachelor's degree. [11]

For years of service for health care providers, "years of service" showed that half of the providers surveyed had "1-5" years, and that they accounted for 111 (49.8%) (Table.2) this is a result of the new appointment of healthcare providers participating in the study

As for the courses related to Coronavirus disease, most of them did not attend courses about the disease, and the courses were often taken for short periods ranging from one to ten days, (Table.4) this result to the newness of the epidemic and to the lack of information about the virus with the continuous update of this information.

3. Discussion of Health care providers "The Source of Information on the new Coronavirus":

The analysis shows that the source of information for half of the studied health care providers about the emerging corona virus is that they rely on their information related to the diseases studied on the "World Health Organization, CDC", then 158 (70.9%) follow them based on their information on the disease under study on government websites The "official" and the media, then 109 (48.9%) rely on their information about diseases studied on "the media", then 148 (66.4%) rely on their information about disease study on "social media", then finally. 26 (11.7%) rely on their information on diseases studied in "journals" only. (Table.3) This result may be due to the prevalence of the Internet and the ease of access to the World Health Organization (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 (Novel Coronavirus (COVID-19) Knowledge and Perceptions: a survey on Health care workers) as they assert 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.Family and friends. [12]

4.Discussion of Provider's Practices Related To "Coronavirus" at Directorate of Military Medical Affairs Units:

An analysis of the practices of health care providers based on (Table-5) showed that health care providers have a high rate of practices towards the emerging corona virus, meaning

that they have good practices. This result is due to the full commitment of health care providers in the military institution to the instructions and directives issued For the Military Medical Affairs Directorate as the body responsible for the health aspect in the army

This study is consistent with a study conducted in Greece entitled (Assessment of Knowledge, Attitudes and Practices toward the Novel Coronavirus (SARS-CoV-2) for Healthcare Professionals in Greece before the outbreak period), where the study participants demonstrated a high response of practices towards the prevention of Coronavirus [13]

Conclusion and Recommendations

The studyconcluded that the overall evaluation of practices healthcare providers is high. The study recommended the continuation of research at the national level, to include a larger sample size of health care providers, with the need to prepare an educational program to increase the practices of health care providers towards the emerging corona virus within military medicine.

Table (1): Distribution of studied sites "Healthcare Provider's Locations-(HCPL)" with comparisons significant

HCPL	Locations (The Studied Sites)	No.	%	C.S. P-value
Healthcare Provider's Locations	Muthanna Military Hospital	72	32.3	χ^2= 51.910 P=0.000 (HS)
	Al-Hussein Military Hospital	66	29.6	
	Al-ShaheedMubder Military Hospital	37	16.6	
	Al-Naser Military Clinic	14	6.3	
	Military Medical School	34	15.2	
	Total	223	100	

[*] **HS: Highly Sig. at P<0.01;Testing based on One-Sample Chi-Square test**

Table (2): Distribution of the studied providers according to the source of information on the new Coronavirus with comparisons significant

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.**

Table (3): Distribution of the studied health care providers according to (SDCv.) with comparisons significant

General (SDCv.)	Groups	No.	%	C.S. P-value

Gender	Male	182	81.6	P=0.000
	Female	41	18.4	(HS)
Age Groups Yrs.	20 _ 29	116	52	χ^2= 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	χ^2= 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	χ^2= 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 yr.	24	10.8	χ^2= 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	

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

Table (4): Distribution of the studied health care providers according to "Courses and Training Duration" with comparisons significant

Courses and Training Duration	Groups	No.	%	C.S. P-value
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	χ^2= 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.**

Table (5): Summary Statistics of Provider's practices related to "Coronavirus" at directorate of military medical affairs unit's

Items	Responses	No.	%	MS	SD	RS%	EV.
*It is located in crowded places inside the hospital	Don't	111	49.8	0.51	0.53	51	M
	Done	112	50.2				
Refrain from shaking hands.	Don't	58	26	0.74	0.44	74	H
	Done	165	74				

He washes hands before and after handling each patient	Don't	29	13	0.87	0.34	87	H
	Done	194	87				
Fortress for patients with signs and symptoms suggestive of infection with the emerging corona virus.	Don't	112	50.2	0.5	0.5	50	M
	Done	111	49.8				
Dispose of medical waste in a safe manner	Don't	17	7.6	0.92	0.27	92	H
	Done	206	92.4				
Classification and evaluation of cases well to help early identification of potential cases of the emerging corona virus, immediate isolation and infection control	Don't	133	59.6	0.4	0.49	40	M
	Done	90	40.4				
Giving treatment to the infected patients according to the treatment protocols set by the World Health Organization	Don't	56	25.1	0.75	0.43	75	H
	Done	167	74.9				
Apply preventive measures such as (wearing gloves, masks, face mask) when providing care to patients	Don't	12	5.4	0.95	0.23	95	H
	Done	211	94.6				
Provides advice and guidance on preventing infection	Don't	69	30.9	0.69	0.46	69	H
	Done	154	69.1				

Ev. : Evaluated (0.00 – 33.33) Low (L) ; (33.34 – 66.66) Moderate (M) ; (66.67– 100) High (H).*Red color are reversed to the scoring scale evaluation

References

1. World Health Organization. (2020). Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations: scientific brief, 27 March 2020 (No. WHO/2019-nCoV/Sci_Brief/Transmission_modes/2020.1).
2. Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., ...& Cheng, Z. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. The lancet, 395(10223), 497-506.
3. Lu, R., Zhao, X., Li, J., Niu, P., Yang, B., Wu, H., ...& Bi, Y. (2020). Genomic characterisation and epidemiology of 2019 novel coronavirus: implications for virus origins and receptor binding. The Lancet, 395(10224), 565-574.
4. Novel, C. P. E. R. E. (2020). The epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19) in China. Zhonghualiuxingbingxuezazhi= Zhonghualiuxingbingxuezazhi, 41(2), 145.
5. Ren, L. L., Wang, M. M., Wu, Z. Q., Xiang, Z. C., Guo, L., &Xu, T. (2020). Identification of a novelcoronavirus causing severe pneumonia in human: A descriptive study. *Chinese Medical Journal.*https://doi.org/10.1097/CM9.0000000000000722
6. Paul, A., Sikdar, D., Hossain, M. M., Amin, M. R., Deeba, F., Mahanta, J., ...&Nath, T. K. (2020). Knowledge, attitudes, and practices toward the novel coronavirus among Bangladeshis: Implications for mitigation measures. Plos one, 15(9), e0238492
7. Zhong, B. L., Luo, W., Li, H. M., Zhang, Q. Q., Liu, X. G., Li, W. T., & Li, Y. (2020). Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during

the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. International journal of biological sciences, 16(10), 1745.

8. Suleiman, A., Bsisu, I., Guzu, H., Santarisi, A., Alsatari, M., Abbad, A., ...&Almustafa, M. (2020). Preparedness of frontline doctors in Jordan healthcare facilities to COVID-19 outbreak. International journal of environmental research and public health, 17(9), 3181.

9. Houghton, C., Meskell, P., Delaney, H., Smalle, M., Glenton, C., Booth, A., ...&Biesty, L. M. (2020). Barriers and facilitators to healthcare workers' adherence with infection prevention and control (IPC) guidelines for respiratory infectious diseases: a rapid qualitative evidence synthesis. Cochrane Database of Systematic Reviews, (4).

10. Olum R, Chekwech G, Wekha G, Nassozi DR and Bongomin F (2020) Coronavirus Disease-2019: Knowledge, Attitude, and Practices of Health Care Workers at Makerere University Teaching Hospitals, Uganda. Front. Public Health 8:181.doi: 10.3389/fpubh.2020.00181

11. Samadipour, E., Ghardashi, F., Zardosht, R., Borzoee, F., &Navipour, E. (2021). Risk Perception of the Iranian Healthcare Workers Concerning the Covid-19 Crisis and the Factors Affecting it: A Cross-Sectional Study.

12. Bhagavathula, A. S., Aldhaleei, W. A., Rahmani, J., Mahabadi, M. A., &Bandari, D. K. (2020). Novel coronavirus (COVID-19) knowledge and perceptions: a survey on healthcare workers. MedRxiv.

13. Papagiannis, D., Malli, F., Raptis, D. G., Papathanasiou, I. V., Fradelos, E. C., Daniil, Z., ...&Gourgoulianis, K. I. (2020). Assessment of knowledge, attitudes, and practices towards new coronavirus (SARS-CoV-2) of health care professionals in Greece before the outbreak period. International journal of environmental research and public health, 17(14), 4925.