COVID-19 Attitudes and Practices of Health Care Workers in Mosul City / Iraq

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Abstract:

Background: The "Coronavirus Disease 2019" (COVID-19) that produced by "Severe Acute Respiratory Syndrome- Coronavirus -2" (SARS-CoV-2) is emergent as a major worldwide communicable disease epidemic**Objectives**: To determine the level of attitudes and practices of health care workers regarding covid-19 in Mosul city. **Subjects and Methods**: A descriptive; cross sectional study performed at 28 hospitals and health care centers randomly selected (multistage sampling) in Mosul city, included 517 health care workers. **Results**of demographic data of HCWs: the age range was between 22 -63 years, The Mean±SD of the ages was 39.5±9.9, the highest percentage of ages (38.9%) that was in the age group 30-39 years and the lowest percentage (16.2%) was in the group 20-29 years. The percentage of male in a sample was (52.8%), and females was (47.2%). Regarding educational qualification, the highest percentage (46.8%) was from diploma, whereas the lowest percentage (18.8%) was from secondary school. Regarding occupational level, the majority of studied sample was from Paramedical staff (44.5%). Regarding years of experience, the highest percentage (61.5%)was for those who had equal or greater than 11 years of experience. The most sample of HCWs (82.8%) was married.**Conclusion**, this study concluded that the highest proportion of the study sample had a good score of attitudes and practices regardingCOVID-19 in Mosul city during the period of study. **Recommendation**: Establish training programs for HCWs about correct practices in prevention of COVID-19 pandemic by health institutions**.**

Key words: *COVID-19, attitudes, practices, health care workers, Mosul city*.

Introduction

In December 2019, a new coronavirus-induced pneumonia (SARS-CoV-2) appeared in Wuhan, China and since then has spread quicklyeverywhere in the world (Lvet.al.,2020). COVID-19 is an infection of the respiratory tract caused by a new emerging coronavirus that was first known in the last month of 2019 in Wuhan city, China. While most people with COVID-19 only develop mild or uncomplicated disease, about 14 percent develop a serious disease that needs hospitalization and oxygen, and 5% may need an intensive care unit to be admitted, in serious cases, COVID-19 can be

complicated bymulti-organ failure, acute respiratory distress syndrome (ARDS), sepsis and septic shock.(Gómez et.al.,2020).The accurate origin, location, and potential reservoir of the 2019-nCoV remain currently unclear, although the virus is assumed to be zoonotic and bats could be the culprits because of the bat-CoV sequence identity (Zhu et.al.,2020).SARS-COV-2 is transmitted by close contact (within about 6 feet) from person to person through respiratory discharges in coughs or sneezes, or by touching surfaces or objects contaminated with viruses. Possible risk factors for serious illness and mortality have been established as old age and pre-existence of chronic diseases (Li et.al.,2020).The incubation time for the disease is 2-14 days, for most patients (80%) have minor symptoms requiring no medical attention. Approximately 20 percent of the COVID-19 patients had extreme diseases such as dyspnea, organ failure, sepsis, and septic shock, and could be fatal in about 2% of cases (CDC., 2020).As well as the upper respiratory tract and the lungs the disease affects the liver, gastrointestinal tract, heart, and other organs, to penetrate host cells, the virus uses ACE2 as a receptor. A major cytokine response is followed by vasculitis, thromboembolism, endothelial injury, and organ failure. There is still no effective antiviral therapy, Dexamethasone and the early treatment of complications are likely tohelp chronically ill patients(Hemmer et.al.,2020).

Objectives: To determine the level of attitudes and practices of health care workers regarding covid-19 in Mosul city.

Subjects and Methods

Study Design: The study is a descriptive cross sectional study that was conducted in Mosul city at 28 hospitals and health care centers that were randomly selected (multistage sampling).

Duration of Study: The duration of data collection lasted three months, starting on December 10, 2020, and ending on March 7, 2021.

Place of Study: The place of study was in 4 hospitals, 2 health sectors and 24 primary health care centers in Mosul city.

Inclusion and Exclusion criteria of study: Inclusion criteria: health care workers randomly selected in health care centers and hospitals in Mosul city. Exclusion criteria: health care workers out Mosul city and health care workers who does not have the desire or refuses to participate

Statistical analysis: Analysis of data was carried out using the available statistical package of SPSS-27 "(Statistical Packages for Social Sciences- version 27)". Data were presented in simple measures of frequency, percentage, mean, standard deviation, and range (minimum-maximum

values).The significance of difference of different percentages (qualitative data) were tested using Pearson Chi-square test (χ2-test). Statistical significance was considered whenever the P value was equal or less than 0.05.

Results
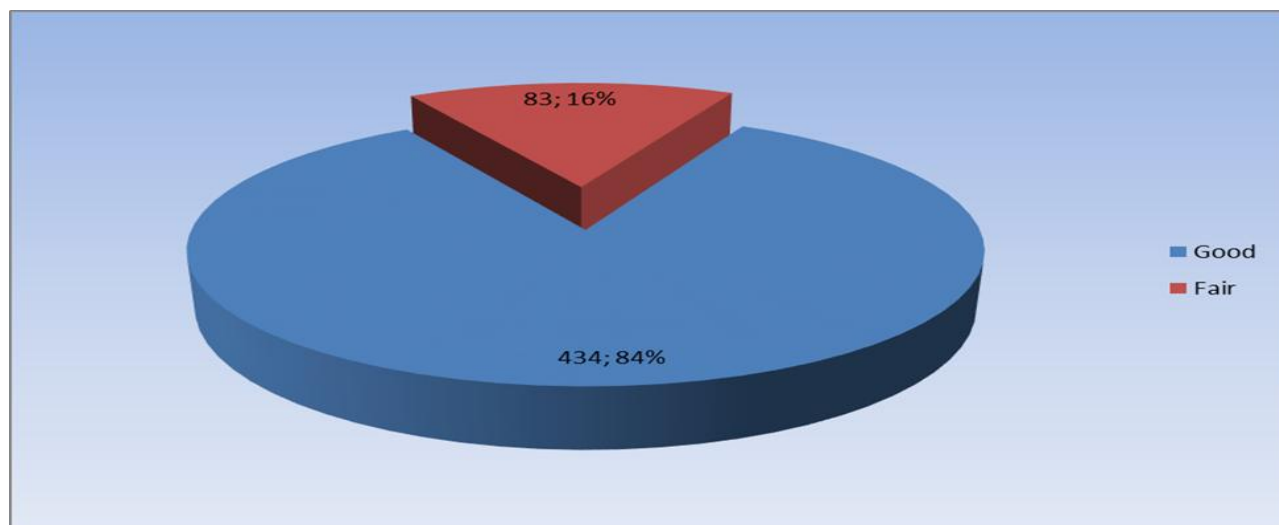
Table 1: Distribution of sample according to their attitudes regarding COVID-19

Attitude	Negative		Positive	
	No	%	No	%
Think a pharmacy or local drug can effectively treat a person with COVID-19	383	74.1	134	25.9
Think public health post/health facility can effectively treat person with COVID-19	255	49.3	262	50.7
Want to remain privacy/a secret matter, if somebody in the family were to get COVID-19	145	28.0	372	72.0
Feel that if person gets COVID-19, they and their family should be discriminated or stigmatized because of it	39	7.5	478	92.5
Think that a vaccine against COVID-19 is important	128	24.8	389	75.2
Worried that he/she or one of their family become infected	352	68.1	165	31.9
Agree that COVID-19 will eventually be controlled successfully	97	18.8	420	81.2
Think quarantine of suspected COVID-19 cases for 14 days can reduce the spread of the infection	29	5.6	488	94.4
Seek help directly, in case he/she feel any symptoms of COVID-19 virus	46	8.9	471	91.1
Would get corona virus vaccine when it is available	203	39.3	314	60.7

More than half of studied sample (50.7%) believe that the health institution has the ability to treat a person infected with the covid-19, while majority of sample (74.1%) believe that no treatment can work effectively against the virus, (72.0%) of studied sample don't want to remain a secret matter, if somebody in the family get COVID-19, the highest percentage (92.5%) disagreed that infection is a stigma, regarding vaccine (75.2%) think that a vaccine against COVID-19 is important,highest percentage of sample (68.1%) worried that he/she or one of their family get infection, while the majority of sample (81.2%) agree that COVID-19 will eventually be controlled, the highest proportion of sample (94.4%) believe that quarantining is important in reducing the spread of the virus, also highest proportion of them (91.1%) would seek help if they have symptoms of COVID-

19 virus, highest percentage of them (60.7%) of them have desire to take the vaccine when available.

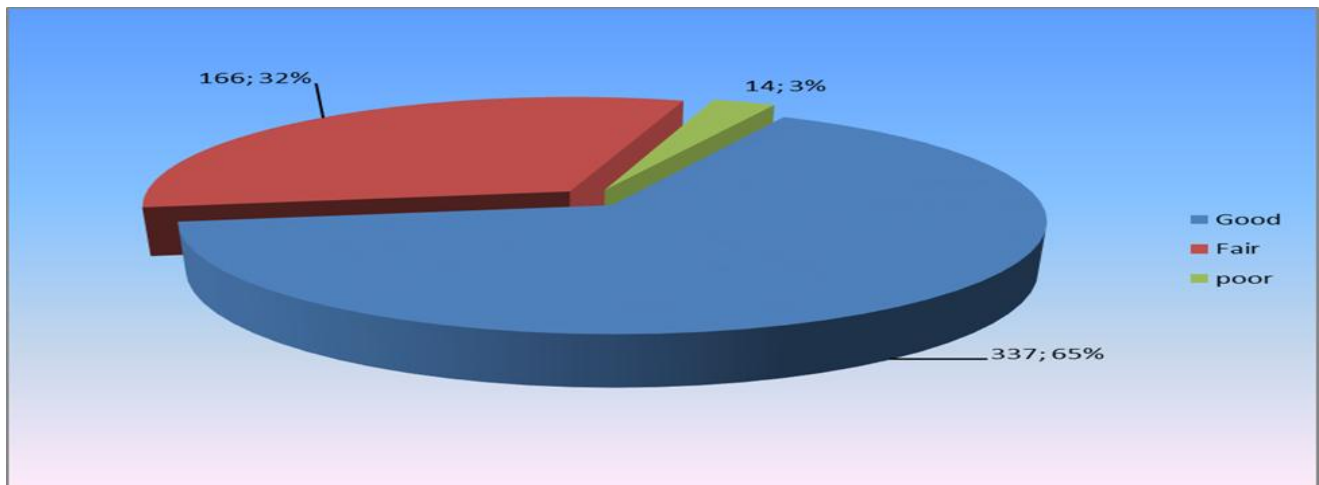**Figure 1:** The attitude score regarding covid-19 among a sample of health care workers

Attitude score regarding covid-19 showed that highest percentage of them (84%) have good attitude, and (16%) have fair attitude.

Table 2: Distribution of sample according to their practice regarding COVID-19

Practice	Negative		Positive	
	No	%	No	%
Wearing facemask continuously	226	43.7	291	56.3
Using gloves continuously	296	57.3	221	42.7
Using soap to wash your hands after touching objects	34	6.6	483	93.4
Refraining from shaking hands	128	24.8	389	75.2
Refraining from touching his/her face	165	31.9	352	68.1
Attended training on wearing and removing facemask (or N95 mask) and gloves safely during COVID-19 pandemic	314	60.7	203	39.3
Attended training on performing nasopharyngeal swab safely	367	71.0	150	29.0
Practicing social distancing and avoiding going out unnecessarily	81	15.7	436	84.3

In current study (56.3%) of sample wearing facemask continuously, while (57.3%) not using gloves continuously, highest percentage of studied sample (93.4%) using soap to wash hands after touching objects, (75.2%) refraining from shaking hands with others, also highest percentage of sample (68.1%) refraining from touching face, only (39.3%) Attended training on wearing and

removing facemask (or N95 mask) and gloves safely during COVID-19 pandemic, also only (29.0%) Attended training on nasopharyngeal swab , regarding practicing social distancing highest percentage of them (84.3%) practiced social distancing.

Figure 2: The practice score regarding covid-19 among a sample of health care workers

Practice score regarding covid-19showed that highest percentage of sample (65%) have good practice, (32%) have fair practice, and only (3%) of them with poor practice.

Table 3: The distribution of sample according to attitude score about covid-19 by the demographic characteristics**.**

demographic characteristics		Attitude score				P value
		Poor-Fair		Good		
		No	**%**	**No**	%	
Age groups	20---29	18	21.7	66	15.2	0.443
	30---39	31	37.3	170	39.2	
	40---49	18	21.7	104	24.0	
	50 & more	16	19.3	94	21.7	
Gender	Male	32	38.6	241	55.5	0.005*
	Female	51	61.4	193	44.5	
Qualification	Secondary school	13	15.7	84	19.4	0.450
	Diploma	44	53	198	45.6	
	College & higher	26	31.3	152	35	
Occupation (profession)	Medical staff	16	19.3	113	26.0	0.348
	Paramedical staff	42	50.6	188	43.3	
	Nursing staff	25	30.1	133	30.6	
Years of experience	<5years	9	10.8	55	12.7	0.225
	5---9	28	33.7	107	24.7	
	=>11year	46	55.4	272	62.7	
Marital status	Single	17	20.5	43	9.9	0.003*
	Married	58	69.9	370	85.3	
	Others	8	9.6	21	4.8	

Regarding the attitudes score and demographic variables significant association was found between attitude score and gender, marital status.

Table 4: The distribution of sample according to practice score about covid-19 by the demographic characteristics.

demographic characteristics		Practice score				P value
		Poor-Fair		Good		
		No	**%**	**No**	%	
Age groups	20---29	32	17.8	52	15.4	0.464
	30---39	73	40.6	128	38.0	
	40---49	37	20.6	85	25.2	
	50 & more	38	21.1	72	21.4	
Gender	Male	97	53.9	176	52.2	0.718
	Female	83	46.1	161	47.8	
Qualification	Secondary school	27	15.0	70	20.8	0.233
	Diploma	91	50.6	151	44.8	
	College & higher	62	34.4	116	34.4	
Occupation (profession)	Medical staff	46	25.6	83	24.6	0.969
	Paramedical staff	79	43.9	151	44.8	
	Nursing staff	55	30.6	103	30.6	
Years of experience	<5years	25	13.9	39	11.6	0.534
	5---9	50	27.8	85	25.2	
	=>11year	105	58.3	213	63.2	
Marital status	Single	24	13.3	36	10.7	0.669
	Married	146	81.1	282	83.7	
	Others	10	5.6	19	5.6	

Regarding the practices score and demographic variables no significant association was found**.**

Discussion

In current study (92.5%) of the participants considered that having the disease does not represent a stigma, and (91.1%) will seek help in case of infection, this is similar to what had been reportedby Alzoubiet.al.2020 in Jordan who found that (94.6%) do not consider there a stigma when get the disease and (93.6%) will go to hospital in case of infection. In this study (68.1%) of the participants worried that he or one of their family become infected, and regarding taking the vaccine (60.7%) of them will get the vaccine if it is available, and these results differ from what had been reported in Baghdad by Khalil, who found that(46.4%) of studied sample have anxiety from infection and the percentage of those who want to get the vaccine is (81%), and this difference may be due to the difference in the study sample.

Overall Attitude score regarding covid-19 showed that highest percentage of studied sample (84%) have good attitude and (16%) have fair attitude. This is similar with what had been reported in

Vietnam by Huynh et.al.,2020, who found thathighest percentage of participants had positive attitudes towards Covid-19, and they were the majority of the study sample. This differ from what had been found in Ugandan by Olum et.al.,2020who found that majority of HCWs had negative attitudes towards the Covid-19, this difference may be due to the difference in societies or due to the time of the study, as the study in Uganda was at the beginning of the epidemic.

Significant association was found between gender and attitudes scores, this is similar to what was concluded from a study conducted by Temsah et.al.,2020 in Saudi Arabia where the association was statistically significant as well

In current study more than half of the respondents (56.3%) wear a face mask continuously, while only (42.7%) of them constantly wear gloves. These results are less than what had been conducted in Nepal by Limbu et.al.,2020, and this difference may be due to a difference in societies or because of the difference in the size of the sample (in Nepal, the sample was consisted from 103 participants, while in the current study it consisted of 517 participants). In this study (93.4%) of the respondents use soap to wash their hands in the event of touching things, (68.1%) of them avoid the habit of touching the face, and (84.3%) of them practice social distancing instructions, this is in agreement with what had been reported by Saqlain et.al.,2020 in Pakistan.

Overall practice score regarding covid-19 showed that highest percentage of sample (65%) had good practice score, and (32%) have fair practice score, while only (3%) with poor practice score. In comparison with other studies this is in agreement with what had been reported by olum et.al.,2020 in Uganda, who found the highest percentage had good practices.

Conclusion: The highest proportion of the study sample had good scores of attitudes and practices, regarding COVID-19.

Recommendation: Establish training programs for HCWs about correct practices in prevention of pandemic COVID-19, such as how to wear and remove personal protective equipment, aboutcorrect methods of sterilization and how to protect themselves and others while dealing with a person infected with COVID -19.

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