DOI: https://doi.org/10.53350/pjmhs22169371

ORIGINAL ARTICLE

Knowledge, Attitude and Practice Among Covid-19 Health Care Workers A Quantitative Study on the Covid 19 Health Care Workers of Sindh Infectious Disease Hospital Karachi Pakistan

RIZWANA SALIK NUKRICH[1], HASEEB U REHMAN[2], SABA AFSHAN[3], MUHAMMAD AZHAR AHMED[4], KHAIR JAN[5]
[1,2,3]Consultant Pulmonologist, Sindh Infectious Disease Hospital and Research Center Karachi Pakistan
[4]Registrar Pulmonology, Ojha Institute of Chest Disease Dow university of Health Sciences Karachi Pakistan
[5]Registrar Pediatric Surgery, National Institute of Child Health NICH Karachi Pakistan
Corresponding author: Rizwana Salik Nukrich, Email: riznukrich@Hotmail.com

ABSTRACT

Background: As per the World Health Organization (WHO), the coronavirus diagnosis 2019 (COVID-19) increase in the prevalence has turned into a pandemic, to date world has witnessed 5 waves of COVID- and it has now infected over 200 countries / regions, resulting in over 7.5 million infections and 4,19,568 fatalities worldwide

Objective: To assess the knowledge, attitudes, and practices among COVID-19 Health care workers of COVID-19.

Methodology: This was cross sectional studyand carried at Sindh Infectious Disease Hospital and Research Centre (SIDH & RC), a specialized COVID-19 hospital. Data will be collected through questionnaires and the respondents will be healthcare workers (doctors/medical practitioners and nurses) dealing with COVID 19 patients. Data was analysed by the SPSS version: 21.

Result: In total, there are 111 participants; 56.8% of them are male COVID-19 health care workers Most of the Healthcare worker age range was 21-30 years. The received responses from 3 persons aged 51 and older, which represented 2.7% of the total population. The knowledge attitude and practices among the COVID-19 health care workers and all of them found that Awareness of COVID-19 among medical professionals is high. As people age, they get a more mature perspective on COVID19 infection, which in turn leads to more responsible behavior.

Conclusion:89% of the healthcare professionals who were evaluated have the necessary understanding of COVID-19. On the basis of the findings of this research, future efforts to increase awareness and educate people can more effectively target specific knowledge and practice gaps.

INTRODUCTION

As per the World Health Organization (WHO), the coronavirus diagnosis 2019 (COVID-19) increase in the prevalence has turned into a pandemic, to date world has witnessed 5 waves of COVID- and it has now infected over 200 countries / regions, resulting in over 7.5 million infections and 4,19,568 fatalities worldwide.[1]COVID-19 has expanded at such a quick rate that it has affected every aspect of human life. [1]A sickness that first developed in the Chinese city of Wuhan spread astonishingly quickly throughout China and the rest of the world [2-3].Healthcare personnel are at the vanguard of the global effort to restrict the COVID-19 outbreak, diagnose affected patients, and manage them. Healthcare workers, however, were both the cause and the mechanism of nosocomial and population spread. Due to a lack of personal protective equipment for healthcare personnel, environmental harm, congestion, and a lack of sufficient quarantine facilities, the illness load in both developed and emerging nations has deteriorated the response and management measures. As a result, in order to reduce the rising number of COVID-19 patients, Health care workers must follow the prescribed preventive actions. Knowledge, attitudes, and practices (KAPs) of frontline employees have a significant impact on these measurements [4].

During the epidemic, WHO established various recommendations and began offering online courses and training sessions to raise awareness and prepare HCWs for COVID-19 prevention and control. Knowledge, attitude, and practice survey is an excellent tool to assess existing programs and develop effective behavior modification methods in society. Currently limited information is available about the level of awareness of HCWs about COVID_19 in Karachi and this study will help us in filling this gap. [5]

The treatment of patients who are suffering from this extremely contagious sickness requires the participation of healthcare workers (HCWs) of all levels and specializations. HCWs have been forced to contend with significant occupational health concerns connected to COVID-19 as a result of their consistent interaction with patients who are infected with the virus.

According to the findings of the study, inadequate infection control methods, diagnostic delays, and the spread of disease are all the result of HCW ignorance and misunderstandings. There are currently thousands of infected HCWs, the majority of whom are located in China [6].

Therefore, it is of the utmost importance to put a stop to the spread of this potentially fatal disease in healthcare facilities. Because of the recent outbreak, the World Health Organization (WHO) has released a number of guidelines and begun offering online training sessions [7] in order to make it easier for health care workers to get familiar with the prevention and management of COVID-19. A survey of people's knowledge, attitudes, and practices can be used to evaluate programs that are already in place and to identify effective ways to influence the behavior of members of society. At this time, there is a significant lack of data on the knowledge levels of health care workers in Pakistan. As a result, the objective of this study was to evaluate the level of knowledge, attitude, and practice about COVID-19 that is now prevalent among HCWs in Pakistan.

METHODS AND MATERIAL

This is a cross-sectional study and was conducted under one month at Sindh infectious disease hospital and research center. The inclusion criteria were to include all healthcare workers including doctors, nurses, IDD workers which are associated and practicing with COVID-19 patients in COVID-19 department of Sindh Infectious Disease Hospital, Karachi. Medical practitioner or other Healthcare workers which was not practicing or associated with COVID-19 patients are excluded. Data was collected through questionnaires and the respondents will (Healthcare workers) dealing with COVID 19 patients. The consent portion of the study questionnaire will state the study's goal, nature of the survey, study objectives, voluntary participation, declaration of confidentiality, and anonymity. The questionnaires comprised of four parts. In part I, demographic which includes age, gender, marital status, occupation an education. Part II and Part II is based on the knowledge and attitudes of healthcare workers towards COVID-19. Part III was focused on the practices of healthcare workers towards COVID-19.

The data will be tested on the newest version of SPSS. The scales will be nominal, ordinal and LIKERT scale. All the confidential information, recordings has been saved to ensure their privacy as it is researcher's ethical responsibility.

Table 1:

Always	Most of the time	Some times	occasionally	Rarely
Not understanding 1	Understanding 2	General 3	Familiar 4	Master 5

Ethics Approval: Dow University of Health Sciences institutional review board had approved this study

RESULTS

Table.1 shows the data from the demographic survey, separated into columns labeled "male" and "female," respectively. In total, there are 111 participants; 48 of them are femalecovid 19 health care workers, while 63 of them are male covid 19 health care workers (43.2% to 56.8%).

Table 1: Demographics

Parameter	N=111	Percent
Age		
21 to 30 years	75	67.6
31 to 40 years	27	24.3
41 to 50 years	6	5.4
51 and above	3	2.7
Gender		
Male	63	56.8
Female	48	43.2
Qualifications		
Bachelors	54	48.6
MBBS	36	32.4
FCPS	6	5.4
Masters	12	10.8
Diploma Certificate	3	2.7
Work Experience		
1-3 years	51	45.9
4-6 years	27	24.3
7-10 years	21	18.9
Above 10 years	12	10.8

Table 2: Reliability Statistics

Variable name	Cronbach's Alpha	No. of items
Knowledge among covid 19 health care workers	0.71	13
practices among covid 19 health care workers	0.80	5
attitudes among covid 19 health care workers	0.70	4

Table 3: One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
knowledge	111	48.6438	2.90983	.27619
attitudes	111	8.1734	1.93702	.18385
practices	111	10.7252	2.29177	.21753

Table.2 is showing and interpreting the reliability analysis after computing variable from. Indicators through Cronbach's alpha.

The table. 3 is showing the mean, standard deviation and St. Error mean

Table 4: One-Sample Test

	Test Value = 0					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
knowledge	176.125	110	.000	48.64380	48.0965	49.1911
attitudes	44.456	110	.000	8.17342	7.8091	8.5378
practices	49.306	110	.000	10.72523	10.2941	11.1563

In the table 4, the significance or p value from the data is evaluated in conjunction with the mean difference and the confidence interval

We can see the overall frequencies, percentages, and frequency distributions of the respondent's age across all of the alternatives in the table that is located directly above this one. The proportion of adults who are between the ages of 21 till3o is anywhere 67.6 % of the overall sample. Participants in the study ranged in age from 31 to 40, with a total of 111 individuals covid 19 health care workers are 27 around 24.3 % of sample. People between the ages of 41till 50 made up 5.4% of the overall sample population. The received responses from 3 persons aged 51 and older, which represented 2.7% of the total population. Table. 1is showing house hold income level of covid 19 health care workers. Where we can see that 21 individuals have the income level of 21000-30000 which is around 18.9 %.Only 3 individuals who are covid 19 health care worker have income level of 5000-10000 .87 covid 19 health care workers out of 111 have other level of income.You may view the frequency with which each possible qualification for the Covid 19 health care professionals occurs in the table that is located directly above this one. The three possibilities are stakeholder qualifying frequencies, total frequencies, and percentages This indicates that there are 54bachelors,which accounts for 48. %Of the total population. There are 36 people in the population who possess a MBBS degree, making up 32.4% of the total. Sixpeople, or 5.4 percent of the total, have received FCPS related to the field in which they work. Around 12 health care workers are Masters, which is about 10.8 % and 3 out of 111 persons are diploma certificate.

The above table displays the frequency distribution of Covid 19 healthcare workers along with percentages, cumulative frequencies, and total frequencies for each interval. This means that one-to-three-year veterans make up 45.9% of the workforce, or 51 persons. 27 persons, have between 4 to6 years of experience in the workforce which is around24.3%, 21 out of 111 of the population is composed of who have 7–10 years of work experience which is around 18.9 %. Only 10.8% of heath care workers have more than 10 years of work experience. There are 12workers with 10+ years of experience.

Table.2 is showing and interpreting the reliability analysis after computing variable from. Indicators through Cronbach's alpha.When the reliability values are between 0.5 and 1, the data's consistency and reliability are seen as being high; on the other hand, they are regarded as being poor when the reliability values are lower than 0.5. Evidence in favor of this claim may be found in the fact that each of these indicators has a reliability at or above this threshold. Additionally, it comes highly recommended by a well-known authority in the industry (Hair, Ringle, &Sarstedt, 2011). After taking the average of the indicators, the data can be trusted because all three variables fall inside the acceptable range. This data collection has a Cronbach's alpha value of 0.71, which indicates a satisfactory level of reliability.

The table. 3 is showing the mean, standard deviation and St. Error mean

In the table 4, the significance or p value from the data is evaluated in conjunction with the mean difference and the confidence interval.The p values for attitudes among the Covid 19 healthcare personnel are (0.000), whereas the p values for practices are (0.000), and the p value for knowledge is (0.000). Because none of these values are more than 0.05, the researcher concludes that the null hypothesis is not supported by the data, and instead, they embrace the alternative hypothesis. The findings are therefore considered to be significant and essential.The E. Mean Difference, also known as the real distance that separates the "sample" mean and the "hypothesis" mean, is displayed in the table that is located directly above this one. If the value is positive,

the mean of the sample will be higher than the mean hypothesis; on the other hand, if the value is negative, the mean hypothesis will be higher than the sample.

The value of the F. Confidence Interval for the Difference can be found in the table that is located above this one. This number is representative of the dispersion that exists between the mean value of the hypothesis and the mean value of the sample. In this scenario, the highest possible value is 48.0965 ,7.8091,10.2941, and the lowest possible value are 49.1911,8.5378,11.1563.

DISCUSSIONS

Recently, a lot of individuals, particularly medical professionals and patients, have been discussing about COVID-19. The current spread of COVID-19 is rising tensions among everyone, including health authorities and health institutions. As a result, the subject of how we handle information to assist frontline health care workers during times of public health crisis is becoming an increasingly crucial one. The purpose of this study was to evaluate the KAP of medical workers working in the field in light of the ongoing epidemic brought on by COVID-19. The findings of this study are comparable to those of a previous study that was carried out in China and found that 89 percent of the healthcare workers who were evaluated have the necessary understanding of COVID-19. As a result of the timing of the study, which took place during the period in which Pakistan was under a state of national lockdown, healthcare workers were already quite familiar with a significant amount of the information related to COVID-19 in preparation for responding to the pandemic that was already underway. Although most members of the healthcare personnel were familiar with COVID-19, their feelings about the condition they faced on the job did not correspond with their level of understanding. This study runs opposed to the conclusions that were drawn from past studies, which revealed that individuals' beliefs and level of self-assurance were proportionate to the amount of knowledge that they possessed. It is crucial to have knowledge in order to advocate for preventative steps and to create positive viewpoints on the effort that is being made to combat disease. Research has shown, however, that the danger of infection can be reduced in emergency rooms and other hospital departments with adequate protections, but that it can be increased in settings where proper measures are not taken.

The knowledge among those who work in healthcare appeared to be stable, despite the fact that there were clear demographic inequalities. On the other hand, a number of studies have shown that the levels of competence that are present in various subfields of the healthcare industry can vary significantly from one another. According to the findings of one study, individuals' age was associated with a more favorable attitude toward healthcare personnel. In other examinations, it was shown that the same kinds of scenarios occurred among healthcare practitioners. When a person gets older, they have more years of experience under their belt, which allows them to hone their sense of self-assurance and optimism in the face of hardship. As a result, becoming more mature might be the source of hope.

It was concluded that the vast majority of healthcare workers were behaving in an appropriate manner, regardless of the educational levels they held or the personal traits they possessed. On the other hand, there was a correlation that might be considered statistically significant between the exercise and their attitude. Therefore, one can link poor behaviors to having a pessimistic outlook on life. This is despite the fact that many people engaged in social isolation, wore masks and gloves when working in hospitals, took other infection-prevention precautions, and attended patients who were suspected of having COVID-19 (68.9%). This is all due to the fact that so few people were trained to work with patients who had COVID-19. This finding is in line with the findings of an analogous study that was carried out in China. That study discovered that 89.7%5 of healthcare personnel followed the prescribed guidelines while dealing with COVID-19. This finding is compatible with those findings.

In addition, because they are the most susceptible population, they stand to benefit the most from following safe working regulations and taking appropriate preventative measures.

After analyzing we can say that knowledge attitude and practices among the covid 19 health care workers are very crucial elements to consider. Howeverzhang5 collected data from a cross-sectional survey of 1357 HCWs working in 10 hospitals in Henan, China. Of those surveyed, more than 85% were worried about catching the virus themselves; of HCWs, 89% had enough knowledge of COVID-19; and of those, 89.7% followed best practices with COVID-19. HCWs' behaviors and perspectives on COVID-19 were affected not just by their level of knowledge but also by risk variables such years of experience in the workforce and occupational classification. Frontline workers, those with less training and experience, those with less education, and those in less secure jobs all pose unique risks to HCWs that must be mitigated. Similar studies were done in India[7],Ethiopia[8], Nepal[9] , Thailand[10] and Indonesia[11] on the knowledge attitude and practices among the covid 19 health care workers and all of them found that Awareness of COVID-19 among medical professionals is high. As people age, they get a more mature perspective on COVID19 infection, which in turn leads to more responsible behavior. Therefore, in the fight against COVID-19 infection, education on safety and preventative measures for having a positive mindset among healthcare personnel is essential.

CONCLUSIONS

On the basis of the findings of this research, future efforts to increase awareness and educate people can more effectively target specific knowledge and practice gaps. Further investigation found that healthcare workers were relying on information sources with a lower level of reliability than they should have been. Due to the damage it causes to knowledge as well as the way it presents itself in practice and attitude, this is a problem that needs to be addressed as soon as humanly possible. According to the findings of the study, health ministries should implement comprehensive training programs for all HCWs in order to communicate all preventive and preventative measures about COVID-19 and to achieve clinical parity in their understanding of COVID-19. This is necessary in order to communicate all preventive and preventative measures about COVID-19.

Abbreviations and Symbols:

MBBS: Bachelor of Medicine, Bachelor of Surgery
FCPS: Fellow of College of Physicians and Surgeons Pakistan
COVID-19: Coronavirus Disease 2019
HCWs: Healthcare Workers
KAP: Knowledge, Attitude, and Practice

REFERENCES

1. Kraemer, Moritz UG, Chia-Hung Yang, Bernardo Gutierrez, Chieh-Hsi Wu, Brennan Klein, et al. "The effect of human mobility and control measures on the COVID-19 epidemic in China." Science 368, no. 6490 (2020): 493-497.
2. Wickramasinghe, N. Chandra, Edward J. Steele, Reginald M. Gorczynski, Robert Temple, Gensuke Tokoro, et al. "Growing evidence against global infection-driven by person-to-person transfer of COVID-19." VirolCurr Res 4, no. 1 (2020).
3. Sintema, Edgar John. "Effect of COVID-19 on the performance of grade 12 students: Implications for STEM education." Eurasia Journal of Mathematics, Science and Technology Education 16, no. 7 (2020): em1851.
4. Ejeh, Francis Enenche, Adamu Saleh Saidu, Samuel Owoicho, Nanven Abraham Maurice, Solomon Jauro, et al. "Knowledge, attitude, and practice among healthcare workers towards COVID-19 outbreak in Nigeria." Heliyon 6, no. 11 (2020): e05557.
5. Zhang, M., M. Zhou, F. Tang, Y. Wang, H. Nie, L. Zhang, and G. You. "Knowledge, attitude, and practice regarding COVID-19 among healthcare workers in Henan, China." Journal of Hospital Infection 105, no. 2 (2020): 183-187.
6. Gan WH, Lim JW, Koh D. Preventing Intra-hospital Infection and Transmission of Coronavirus Disease 2019 in Health-care Workers. Saf Health Work. 2020;11(2):241-243.

doi:10.1016/j.shaw.2020.03.001
7. Bhagavathula, Akshaya Srikanth, Wafa Ali Aldhaleei, Jamal Rahmani, Mohammadjavad Ashrafi Mahabadi, and Deepak Kumar Bandari. "Novel coronavirus (COVID-19) knowledge and perceptions: a survey of healthcare workers." MedRxiv (2020).
8. Jemal, Bedru, Zemedu Aweke, Simeneh Mola, Sileshi Hailu, Sileshi Abiy, et al. "Knowledge, attitude, and practice of healthcare workers toward COVID-19 and its prevention in Ethiopia: A multicenter study." SAGE Open Medicine 9 (2021): 20503121211034389.
9. Limbu, Dil K., Rano M. Piryani, and Avinash K. Sunny. "Healthcare workers' knowledge, attitude and practices during the COVID-19 pandemic response in a tertiary care hospital of Nepal." PloS one 15, no. 11 (2020): e0242126.
10. Maude, Rapeephan R., Monnaphat Jongdeepaisal, Sumawadee Skuntaniyom, Thanomvong Muntajit, Stuart D. Blacksell, et al. "Improving knowledge, attitudes and practice to prevent COVID-19 transmission in healthcare workers and the public in Thailand." BMC Public Health 21, no. 1 (2021): 1-14.
11. Rizki, Saraswati Anindita, Jenifer Kurniawan, Patricia Budimulia, Peter Sylvanus, Avilia Alexandra, et al. "Knowledge, attitude, and practice in indonesian health care workers regarding COVID-19." Asia Pacific Journal of Public Health 33, no. 5 (2021): 662-664.