

Knowledge, Attitude and Practice Among Healthcare Professionals Regarding COVID-19: A Cross-Sectional Survey from Department of Obstetrics & Gynaecology, Services Hospital Lahore

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Abstract

Background: Pakistan is among 180+ countries dealing with Corona virus pandemic. Pakistan faces sudden hike in number of positive cases including number of healthcare professionals (HCPs) also acquired infection. Therefore, the aim of study is to assess knowledge, attitude and practices among HCPs regarding COVID-19 and identifying gaps which will help in formulating future recommendations.

Objectives: To determine knowledge, attitude and practice among health care professionals regarding COVID 19 in department of obstetrics and gynaecology, Services hospital.

Methods: A cross-sectional survey carried out in department of obstetrics and gynaecology, Services hospital, Lahore from 15th June to 15th July. A structured questionnaire was distributed to 260 healthcare workers after informed consent.

Results: Two hundred sixty participants in total were included in the study. 51% were junior doctors 10% were consultants, 17.3% were paramedics and 20.38% were nurses. Nurses and junior doctors showed moderate knowledge, 62% and 65 percent respectively, practice and attitude 67% and 71% respectively while good knowledge and attitude among senior doctors 77.7% and 85%. Need to focus on paramedics who exhibit below average knowledge, practice and attitude 51 and 55.5%.

Conclusion: The HCWs in showed a moderate level of knowledge and positive attitude toward Coronavirus disease. There was a clear difference in knowledge level between different levels of HCWs. Serial educational interventions inform of workshops and seminars and professional campaigns are strongly recommended.

Keywords: Coronavirus disease 2019, Knowledge, Attitude, Practice Healthcare workers

Introduction

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. It is a respiratory virus which is transmitted chiefly through droplets generated when an infected person coughs or sneezes, or through droplets of saliva or discharge from the nose.¹

On 31st December 2019, China alerted the WHO regarding several cases of pneumonia of unknown cause in Wuhan, capital city of Province Hubei.² The pathogen identified was named as novel coronavirus

(2019-nCoV), currently called as severe acute respiratory syndrome corona virus-2 (SARS-CoV-2), an enveloped and single stranded RNA virus which has phylogenetic resemblance to SARS-COV-1.³

The COVID-19 pandemic is the world biggest public health challenge. The World Health Organization (WHO) on March 11 declared COVID-19 a pandemic,⁴ which at time of writing has affected more than eighteen million people and caused more than seven hundred thousand deaths.⁵ WHO director general stated that “this is not just a public health crisis, it is a crisis that will touch every sector. So every sector and every individual must be involved in the fights”.⁴

Till now virus has affected two hundred and fifty thousand people in Pakistan with more than five thousand deaths.⁶ According to health ministry “among healthcare workers doctors are the most affected peoples as 61 per cent or 3,275 of them have

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so far suffered from COVID 19 infection, followed by 1,453 paramedics, making 27 per cent of the total healthcare providers infected with the deadly virus. About 639 nurses are also among them, which is 12 per cent of the total cases.⁷

58 healthcare workers have so far lost their lives due to COVID 19 infection and still count is increasing. Among these are 42 doctors, 13 paramedics and other support staff, two nurses and one medical student. At present, 240 healthcare providers are hospitalized, of whom 231 are in a stable condition, while nine are on life support," an official of the National Health Services, Regulations and Coordination (NHSR&C) told.⁷

The fact that health care workers are at risk for Corona infection is a serious issue because HCWs help control the outbreak of disease and provide treatment and care to the patients. Therefore, all possible steps should be taken to control the spread of the virus in healthcare workers, first by identifying the risks of infection and then taking the appropriate steps to reduce these risks. It is well established that the transmission of the disease among HCWs is associated with overcrowding, the absence of single living rooms, and environmental contamination.⁸ However, this may be linked to the fact that some HCWs have insufficient understanding of infection prevention strategies. Knowledge of the disease can influence the status and actions of HCWs, and inaccurate and inappropriate behaviors directly increase the risk of infection.⁹

Amid the current pandemic, the WHO has issued a number of guidelines and also launched many online courses and training sessions to raise awareness for prevention and control of COVID-19 in HCPs.¹⁰ National Institutes of Health (NIH), Islamabad, Pakistan has also published several recommendations for HCPs with the aim of reducing occupational spread.¹¹ Although educational campaigns have increased their awareness, it is unclear to what extent this knowledge of COVID-19 is yet to be put into practice and how much this practice actually reduces the spread of COVID-19 infection. Knowledge, attitude, and practice survey provides an appropriate format to assess existing programs and to identify effective strategies for behavior change in society.¹²

Understanding HCWs' knowledge, behaviors, and practices helps in preventing spread among them. Therefore, this study aims to determine knowledge, attitude and practice among health care professionals regarding COVID 19 in the department of Obstetrics and Gynaecology of Services hospital.

If the knowledge regarding the disease and the factors that influence their attitudes and behavior can be determined promptly in the early stages of the outbreak, this information can inform relevant training and procedures during the epidemic and guide HCWs in prioritizing protection and avoiding professional exposure.¹³

Methods

This study was conducted in Services hospital, Lahore. Lahore is critically affected by COVID-19. Services hospital is one of main center receiving Corona patients. This cross-sectional survey was conducted at the obstetrics and gynecology department of Services Hospital Lahore over a span of 1 month from 15th June to 15th July 2020. The study participants were healthcare workers, that is, consultant, medical officer, postgraduate trainee, house officer, and paramedical staff. A convenient sampling method was used. The study was conducted using a semi-structured questionnaire. The questionnaire was developed with the help of previous literature and research papers on KAPs of HCWs. It consisted of two parts: (1) basic demographic characteristics (age, gender, occupation), and (2) knowledge, attitude, and practices regarding COVID 19. At the beginning of the study, the nature and purpose of the study were explained to each participant, and informed consent was obtained. After confirmation for participation, they were directed to complete the questionnaire.

The questionnaire consisted of questions regarding demographics, sources of information, 20 questions consisted of knowledge and 12 questions of attitude and practice towards COVID 19.

The knowledge section has 20 items and each question was answered yes or no. Correct answer scored 1 and incorrect answer score 0. The attitude and practice section consists of 12 items and responses were recorded on a five-point Likert scale (1, rarely; 2, sometimes; 3, occasionally; 4, most of time; 5, almost). Responses are presented as percent-

tages and frequencies. Responses divided in three group as good >80%, moderate 60-80%, and poor <60%.

Ethical approval has been taken from IRB of services hospital/SIMS.

Results

This study was conducted during peak of the Corona outbreak in a critically affected area Lahore, where according to govt. official most of positives cases of Punjab are present. In Punjab approximately eighty five thousand people are affected by COVID19 and majority of these are from Lahore at the time of survey. Daily 4 to 5 hundred cases are being reported from Punjab.⁶ Health care workers are frontline warriors and across Pakistan estimated 32% health care workers have acquired the infection based on antibody testing and country has lost many valuable

<i>Demographics</i>		
Demographic Characteristics	N=260	%
Gender		
Male	27	10.3%
Female	233	89.6%
Age		
21-30	141	54.3%
31-40	65	25%
41-50	37	14.2%
51-60	17	6.5%
Occupation		
Nurses	53	20.38%
Paramedic	45	17.3%
Resident doctor	135	51.9%
Consultant	27	10.3%

<i>Sources of Knowledge n=260</i>		
Sources	N=260	%
Social media	170	65.38%
Television/radio	126	48.46%
Friend & family	57	17.3%
Workshop & seminar	20	9.6%
Newspaper	25	1.7%

<i>Knowledge Regarding Corona Virus n=260</i>			
Response	Good (>80%)	Moderate (60-80%)	Poor (<60%)
Paramedics n=45	13(28.8%)	23 (51.1%)	9 (20%)
Nurses n=53	12(22.6%)	33 (62.2%)	8(15.09%)
Junior doctors n=135	34 (25.18%)	89 (65.9%)	12 (8.8%)
Senior Doctors n=27	21 (77.7%)	6 (22.2%)	-----

<i>Practice & Attitude regarding corona Virus n=260</i>			
Response	Good (>80%)	Moderate (60-80%)	Poor (<60%)
Paramedics n=45	8 (17.7%)	25 (55.5%)	12 (26.6%)
Nurses n=53	8 (15.09)	36 (67.9)	9 (16.9%)
Junior doctors n=135	24(17.7%)	96(71.1%)	15 (11.1%)
Senior Doctors n=27	23 (85.1%)	4 (14.8%)	-----

lives of health care workers. The analysis of health-care workers knowledge, their attitudes and practices regarding COVID 19 transmission, infection prevention knowledge and practices, education of others and counseling could provide a reference for preventing further spread of the epidemic among health care workers and developing recommendations in our context.

260 participants in total were included in the study. 51% were junior doctors 10% were consultants, 17.3 % were paramedics and 20.38% were nurses (table 1). To treat COVID patients with lowest possible risk, for all HCWs, it is essential to have good knowledge, a positive attitude and good practice regarding precautionary measures such as donning and doffing of personal protective equipment's and infection prevention protocols adherence. The continuing pandemic made it necessary for HCWs all over the world, to adopt increased precautions and make every measure to follow appropriate hygienic conditions and WHO recommendations regarding prevention of disease spread.¹⁴

The results of our study revealed that HCWs had a moderate level of knowledge and satisfactory attitude and practices towards the COVID-19 outbreak especially among higher hierarchy.

In survey most of participants were aware of fact that COVID19 is a global concern. Main source of information was social media followed by television and radio. Only 9 percent of participants took information from workshops and seminars and 1.7% read newspaper to remain updated. The findings are similar to other researches, in which social media is major source of information on COVID-19.¹⁴ It is necessary for health care workers to consult reliable sources to seek information on COVID 19 like guidelines and material of WHO and CDC. There is a possibility that a lot of misinformation and myths regarding corona virus will be spreading through social media. Knowledge and practice of doctors can

be affected by the sole use of this media.

Among survey partakers senior doctor's exhibit good knowledge scores while junior doctors and paramedics have moderate knowledge. Sufficient knowledge and understanding is required in dealing with disease confidently. As knowledge directly affects attitude it is a basic requirement for forming prevention beliefs, promoting positive attitudes and practices. The effectiveness of one's coping mechanism and behaviour to some extent depends upon individual perception and approach towards disease.¹⁵

The results of study are comparable with survey conducted by Mohd. Saqlain et al which shows that majority of HCWs have good knowledge (93.2%), a positive attitude and practice (88.7%) towards COVID-19.¹⁵ Giao et al. also reported that 88.4% participants, had sufficient knowledge regarding COVID-19.¹⁶ Another study conducted by Nemati et al in Iran showed that only 56.5% of respondents had sufficient knowledge regarding transmission, symptoms and treatment of COVID-19.¹⁷

Good knowledge of health care workers is essential in this era of global pandemic no vaccine exists with ongoing research, so they must be aware of all the latest guidelines and take precautions in preventing the disease spread.

It is important fact that insufficient knowledge is not sole risk factor for spread of disease but attitude and practice are equally important. In our study Health care workers exhibit positive attitude and practices towards pandemic, but most of them are afraid of getting the virus and passing it to their family members. Most of them followed proper hand washing techniques, donning and doffing of PPE and use of face mask. They were ready to maintain quarantine with family to prevent spread.

Most of participants had positive attitude towards active participation in infection control programs but many of them have not received training about infection prevention and control. Also there is lack of workshops, seminars and refresher courses to keep HCWs updated on guidelines of infection control and use of PPE. As seen in results of the survey that knowledge and positive practices are towards lower side among paramedics, hence this group needs special attention and policy makers must target these

health care worker group. Probably they are not involved and given access to ongoing webinars, online CMEs and training sessions which reflects in poor knowledge and practices among them towards Covid 19. They also have more contact with other administrative staff and non-clinical staff as compared to doctors and senior consultants and this further emphasizes the need of arranging workshops and online sessions for them. There is an urgent need for regular educational interventions and trainings on infection control protocols. It is the need of the hour to start educational programs to address and target those persons who exhibit insufficient knowledge level and practices.

Conclusion

The burden of long working hours, psychological and physical stress, burnout, loss of family members, fear of disease, deaths of colleagues are additional huge hazards along with highly contagious nature of disease and all these factors can lead to immense damage to healthcare system of our country. In addition to this stressful era awareness, attitudes and practices are not up to mark which can lead to a disaster in health care facilities and adversely affect patient care.

Healthcare workers are on frontline and are essentially vulnerable to COVID 19 infections. Though Pakistan is a middle income country with low resources and high burden of disease at the time of writing the article even then by enhancing the knowledge and awareness among health care workers and addressing their practices and attitudes at every level of their service can be of great help in keeping the spread of the disease low and protecting the HCW themselves. Occupational health has always been a neglected or less attended area in Pakistan whereas it is most important field to decrease the risk of transmission to HCWs and continuation of optimal care and services to our patients.

Disclaimer: This article was last update on 26 July 2020 and as COVID 19 pandemic is rapidly evolving situation so it is recommended to review latest information from local and international health organizations.

Authors Contribution

MR: Concept data collection, analysis write up and

approve.

KKM: Analysis write up and approve.

RS: Whole Project Supervise

QS: Data collection

FS: Data analysis and data collection.

Conflict of Interest: None

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