

ASSESSMENT OF HEALTH WORKERS AWARENESS FOR PREVENTION OF COVID-19 INFECTION IN THIRD WORLD SETTING

Abas Khan*¹, G. H. Yattoo² and Mohd Sarwar Mir³¹Senior Resident, Department of Hospital Administration, Sher-i-Kashmir Institute of Medical Sciences, Srinagar.²Head, Department of Hospital Administration, Sher-i-Kashmir Institute of Medical Sciences, Srinagar.³Resident Medical Officer, Sher-i-Kashmir Institute of Medical Sciences, Srinagar.

*Corresponding Author: Abas Khan

Senior Resident, Department of Hospital Administration, Sher-i-Kashmir Institute of Medical Sciences, Srinagar.

Article Received on 24/01/2021

Article Revised on 14/02/2021

Article Accepted on 06/03/2021

ABSTRACT

Background: Implementing personal hygiene and public health behaviours are necessary to curb the spread of coronavirus, like hand washing and social distancing, which are going to be challenging if not impossible in these settings. **Objective:** Assessment of health workers awareness for prevention of COVID-19 Infection. **Methods:** A cross sectional survey was carried out. **Results and conclusion:** Proper knowledge and attitude correlate with a lower incidence of healthcare-acquired infections. Thus, there is a huge gap between the knowledge and practices of healthcare staff regarding COVID-19. Existing knowledge is adequate. We recommend appropriate measures to interrupt aerosol transmission of coronavirus by ensuring optimal hand hygiene, cough hygiene, frequent environment disinfection, and other beneficial practices among healthcare workers.

KEYWORDS: Health care workers, Pandemic, COVID 19.

INTRODUCTION

COVID-19 also referred to as coronavirus disease 2019 is a rising respiratory disease that is caused by a novel coronavirus which was initially detected in December 2019 in Wuhan, China.^[1] The disease is extremely infectious and therefore the outbreak has been declared a worldwide pandemic by the WHO.^[2] The first case of coronavirus pandemic in India was reported on 30th January 2020.^[3] The unpredictability and uncertainty of the situation regarding the seriousness of the danger and control of the disease are of immense stress. This situation is further aggravated by the spread of COVID19 misinformation including unsupported treatments or promotion of ineffective preventive behaviours.^[4]

KAP surveys, among at-risk populations, is helpful to prepare prevention, control, and mitigation measures during epidemics.^[5] To introduce and install effective control measures, knowing basic hygiene principles and modes of disease transmission, and measures in such an environment are, therefore, of significant importance.^[6] This can be generally influenced by their knowledge, attitude, and practices concerning COVID-19.^[7] Implementing personal hygiene and public health behaviours are necessary to curb the spread of coronavirus, like hand washing and social distancing, which are going to be challenging if not impossible in these settings.^[8]

The main goal of the current study was to measure the level of awareness, and practice concerning COVID-19, and to explore awareness and health behaviours associated with the prevention of coronavirus infection.

Aims and Objectives

Assessment of health workers awareness and use of personal protective equipment for prevention of COVID-19 Infection.

METHODS**Study design**

This study is a cross-sectional survey.

Inclusion criteria

1. Duly signed informed consent form
2. Completely filled up survey questionnaire.

Exclusion criteria

Those not giving consent and not filling the survey form completely

Questionnaire preparation included a survey questionnaire, which was developed using a study and WHO course materials, and a study.^[1,9] The questionnaire consisted of questions on knowledge, assessed attitudes, and related to the practices. The questionnaire was in both English/local languages for

convenience. It was validated by conducting a pilot study.

Statistical Analysis

For statistical analysis SPSS version 20.0 was used. Chi square test/Fisher's exact test was used to compare categorical data. The descriptive analysis applied to calculate the frequencies and proportions.

RESULTS AND DISCUSSION

A total of 200 HCWs were included.

75.5% of the participants believed that COVID-19 will successfully be controlled. Whereas, the previous study, shows a greater positive attitude towards the control of the pandemic with higher knowledge.^[10]

90.8% of the participants believed India can win the battle against coronavirus.

The majority of the participants (54%) have no negative thoughts while working, but other studies have reported fear, fatigue, or disturbed sleep.^[11,12]

72.34% felt safe working in a hospital environment. A previous study, stated that the nursing staff felt unsafe at work while risking their health and fearing transmission to their family members.^[13]

96.6% of the participants believed N 95 mask may reduce the risk of infection transmission, supported by other studies.^[14,15]

The knowledge and attitude of the participants reflect in their practices like avoiding crowded places, wearing masks and follow instructions.

99.3% of the participants in the present study agreed to practice appropriate cough hygiene techniques, thus reducing the chances of droplet transmission and promote safe community hygiene practices which are similar to another study.^[16]

Quarantine and isolation are considered as the pillars of cluster containment.^[17]

95.5% said coming to work during this pandemic is a part of their duty and were determined.

The practice of hand sanitization with 70% alcohol-based hand rub as per WHO guidelines was good with only 87.45% healthcare staff complies with a minimum of 20 seconds. In the present study, 80.43% stated using soap and water for 20 seconds to hand washing. Another study, stated similar results and found the main reason for the transmission of microorganisms was improper hand washing methods, and inappropriate use of personal protective devices.^[18]

Participants had good knowledge of clinical symptoms of the disease (95.6%) which is similar to other studies.^[2]

Participants were aware of the asymptomatic transmission of the virus (68.90%). Studies, support the possible transmission of coronavirus from asymptomatic patients.^[2]

93.2% know early asymptomatic and supportive care is the only management. Studies, have outlined their management plan and stressed on preventive and control measures of transmission risk.^[19,20]

89.8% know respiratory droplets as a mode of infection transmission. It was found interpersonal transmission takes place commonly via respiratory droplets and also via contact transmission.^[21] The knowledge about human to human droplet transmission has shown positive understanding in adopting precautionary measures like 91.5% of participants wear a mask and 98.9% avoid crowded places and public transportations. 93% disagreed that children and young adults do not need any measures but other study stated clinical manifestations of COVID19 cases among children except infants were less severe than those of adult patients.^[22] The knowledge about the spread of coronavirus, the high-risk population is similar to the study.^[21]

84.3% have good knowledge about the quarantine and incubation period of the virus (93.2%). The previous study, suggested the knowledge of the incubation period could be useful for medical observation and quarantine.^[23] 91.2% have significant knowledge about the contents of PPE, which is essential to protect skin and mucosa from droplet transmissions during treatment.^[21,24]

CONCLUSION

Proper knowledge and attitude correlate with a lower incidence of healthcare-acquired infections. Thus, there is a huge gap between the knowledge and practices of healthcare staff regarding COVID-19. Existing knowledge is adequate. We recommend appropriate measures to interrupt aerosol transmission of coronavirus by ensuring optimal hand hygiene, cough hygiene, frequent environment disinfection, and other beneficial practices among healthcare workers.

Funding: No funding sources.

Conflict of interest: None declared.

REFERENCES

1. Mahato C, Suryavanshi S. Knowledge, attitude, and practices towards COVID19 among nurses, ward attendants, and housekeeping staff at a tertiary psychiatric institute in India. *Int J Community Med Public Health*, 2020; 7: 5035-43.
2. Guan WJ, Ni ZY, Hu Y, Liang WH, Ou CQ, He JX et al. Clinical Characteristics of Coronavirus Disease 2019 in China. *N Engl J Med*, 2020; 1-13.

3. USAID. India: Situation Analysis, 2020; 2(February):1-4. <https://www.who.int/india/emergencies/indiasituation-report>. Accessed on August 8, 2020.
4. Ioannidis JPA. Coronavirus disease 2019: The harms of exaggerated information and non-evidence-based measures. *Eur J Clin Invest.*, 2020; 50(4): 1-5.
5. Abuya AT, Austrian K, Isaac A, Kangwana B, Mbushi F. COVID-19-related knowledge, attitudes, and practices in urban slums in Nairobi, Kenya: Study description, 2020; 1-7.
6. Erfani A, Shahriarirad R, Ranjbar K, Mirahmadzadeh A, Moghadami M. Knowledge, Attitude and Practice toward the Novel Coronavirus (COVID-19) Outbreak: A Population-Based Survey in Iran, 2020; 10(2): 1-8.
7. Tachfouti N, Slama K, Berraho M, Nejjari C. The impact of knowledge and attitudes on adherence to tuberculosis treatment: A case-control study in a moroccan region. *Pan Afr Med J.*, 2012; 12(1): 1-8.
8. Favas C, Abdelmagid N, Checchi F, Garry S, Jarrett P, Ratnayake R et al. Guidance for the prevention of COVID-19 infections among high-risk individuals in camps and camp-like settings, 2020; 1-15.
9. World Health Organisation. Emerging respiratory viruses, including COVID-19: methods for detection, prevention, response and control. <https://openwho.org/courses/introduction-to-ncov>.
10. Zhang M, Zhou M, Tang F, Wang Y, Nie H, Zhang L et al. Knowledge, attitude and practice regarding COVID-19 among health care workers in Henan, China. *J Hosp Infect*, 2020; 105(2): 183-7.
11. Chen Q, Liang M, Li Y, Guo J, Fei D, Wang L et al. Mental health care for medical staff in China during the COVID-19 outbreak. *Lancet Psychiatry*, 2020; 7(4): e15-6.
12. Lu W, Wang H, Lin Y, Li L. Psychological status of medical workforce during the COVID-19 pandemic: A cross-sectional study. *Psychiatry Res.*, 2020; 288: 1-5.
13. Maben J, Bridges J. Covid-19: Supporting nurses' psychological and mental health. *J Clin Nurs.*, 2020; 1-9.
14. Gralton J, McLaws ML. Protecting healthcare workers from pandemic influenza: N95 or surgical masks? *Crit Care Med.*, 2010; 38(2): 657-67.
15. Leung NHL, Chu DKW, Shiu EYC, Chan KH, McDevitt JJ, Hau BJP et al. Respiratory virus shedding in exhaled breath and efficacy of face masks. *Nat Med*, 2020; 26(5): 676-80.
16. Singhal T. A Review of Coronavirus Disease-2019 (COVID-19). *Indian J Pediatr*, 2020; 87(4): 281-6.
17. Chetterrje P. Gaps in India's preparedness for COVID-19 control. *Lancet Infect Dis.*, 2020; 3099(20): 30300 Stuart RL, Gillespie EE. Preparing for an influenza pandemic: healthcare workers' opinions on working during a pandemic. *Healthc Infect*, 2008; 13(3): 95-9.
18. Askarian M, Khalooee A, Emroodi NN. Personal hygiene and safety of governmental hospital staff in Shiraz, Islamic Republic of Iran. *East Mediterr Heal J.*, 2006; 12(6): 768-74.
19. De Wit E, van Doremalen N, Falzarano D, Munster VJ. SARS and MERS: recent insights into emerging coronaviruses. *Nat Rev Microbiol*, 2016; 14(8): 523-34.
20. World Health Organization. WHO Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected. *Who*, 2020; 2019(March): 12.
21. Meng L, Hua F, Bian Z. Coronavirus Disease 2019 (COVID-19): Emerging and Future Challenges for Dental and Oral Medicine. *J Dent Res.*, 2020; 2019.
22. Dong Y, Mo X, Hu Y, Qi X, Jiang F, Jiang Z et al. Epidemiology of COVID-19 Among Children in China. *Pediatrics*, 2020; 145(6): e20200702.
23. Backer JA, Klinkenberg D, Wallinga J. Incubation period of 2019 novel coronavirus (2019-nCoV) infections among travellers from Wuhan, China, 20-28 January 2020. *Eurosurveillance*, 2020; 25(5).
24. World Health Organization (WHO). Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19) and considerations during severe shortages, 2020; (April): 1-28.