



**ORIGINAL RESEARCH PAPER**

**Health Science**

**KNOWLEDGE OF COVID 19 AMONG HEALTH PROFESSIONALS  
A DESCRIPTIVE STUDY ON AN EMPIRICAL SURVEY**

**KEY WORDS:** Covid-19, knowledge, health workers

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**ABSTRACT**

The rapid spread of the COVID-19 pandemic has become a major cause of concern for the healthcare profession. The pandemic is still on the rise across the world and countries are taking drastic measures to reduce the spread of the disease by initiating social distancing, closing of schools and nonessential businesses and the such. The present study is a descriptive assessment of the knowledge of health care workers about COVID-19. This assessment was based on a survey of 50 health care workers in a selected hospital in Ernakulum district, in Kerala. The sample was collected by purposive sampling technique. The knowledge was assessed by using a self-reported questionnaire developed by the investigators consisting of 16 multiple choice questions on novel Corona virus. Descriptive analysis was applied to calculate the frequencies and the means. The chi-square test was used to investigate the level of association among the various demographic variables. Study results showed considerable number of participants (76%) demonstrating average knowledge, while 20% have poor knowledge and 4% have good knowledge regarding COVID-19. The mean score of the knowledge level of COVID-19 is 9.12 and standard deviation score is 1.86. In addition, there was no significant correlation found between the levels of knowledge with their socio demographic variables.

**INTRODUCTION**

Corona viruses are a family of viruses that can cause illnesses varying from the common cold to acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS). Corona is a common virus that can infect the humans as well as the animals. Human corona viruses (hCoV) usually cause mild to moderate upper respiratory tract illnesses. The MERS-CoV belongs to the genus of "Betacoronavirus." It appears to replicate efficiently in human respiratory tissues targeting alveolar epithelial cells and the endothelium of blood vessels in the lungs, indicating a potential for spreading beyond the respiratory tract<sup>1</sup>. In September 2012, MERS-CoV was first isolated in two Saudi patients who were suffering from severe pneumonia<sup>2</sup>. In 2019, a new corona virus was identified as the cause of a disease outbreak that originated in China. Corona virus disease 2019, abbreviated as COVID-19 is an extremely expanding pandemic caused by a novel human corona virus; severe acute respiratory syndrome-corona virus (SARS-COV-2), an enveloped single-stranded RNA virus, previously known as 2019-nCov. Healthcare workers are at the frontline of defense against this deadly pandemic. Thus, their inadequate knowledge and incorrect attitude can adversely influence practices that lead to delayed diagnosis, poor infection control, and spread of disease<sup>3</sup>. COVID-19 affects different people in different ways. Most infected people develop mild to moderate symptoms and recover without hospitalization. CoV is zoonotic pathogens that can be transmitted via animal-to-human and human-to-human interaction. On 30 January 2020, the World Health Organization declared COVID-19 as a public health emergency of international concern<sup>4</sup>. As of July 2020, the virus has affected many healthcare workers claiming a good number of their lives as well. The fact that HCWs are the people at high risk of infection in the pandemic chain is a serious issue as their role in controlling the outbreak is concerned. It is presupposed that the high transmission rate of the disease among HCWs is associated with their 24x7 exposition to overcrowding, lack of isolation room facilities, and an infected atmosphere of work. However, these are compounded by the fact that some HCWs have inadequate awareness of infection and better prevention practices. Knowledge about the disease at hand influence HCWs' attitudes and practices, which help to reduce the risk of getting infected<sup>5</sup>. Precautions to chances of infection and the necessary preventive measures are critical to curb the possible spread of Middle East Respiratory Syndrome-corona virus (MERS-CoV) in healthcare facilities. Therefore,

healthcare workers should be aware of all procedures concerning prevention of and protection from MERS-CoV<sup>6</sup>. An online cross sectional, descriptive study was undertaken through WhatsApp Messenger among HCWs in UGANDA to determine the knowledge, attitude and practices of 136 health care workers toward COVID-19. A vast majority of the participants were male (n = 87, n = 64%), with an average age of 32 (range: 20–66) years. Eighty-four (62%) of them were medical doctors and 125 (92%) hold at least a bachelor's degree. The study revealed that overall 69% (n = 94) had sufficient knowledge, 21% (n = 29) had positive attitude, and 74% (n = 101) had good practices toward COVID-19<sup>7</sup>.

Healthcare workers are in the cavalry of COVID-19 pandemic response and are exposed to dangers like pathogen exposure, long working hours, psychological distress, fatigue, occupational burnout and stigma, and physical violence<sup>8</sup>. The rapid and extensive spread of the COVID-19 pandemic has become a major cause of concern for the healthcare profession. The aim of this study is to assess the knowledge regarding COVID-19 disease and related infection control practices among healthcare professionals.

**MATERIALS AND METHODS**

This was a non experimental descriptive study carried out in selected Hospital, of Ernakulum District in Kerala. The investigators had developed a structured questionnaire related to the knowledge of COVID-19, the first part of which consisted of the socio-demographic variables like age, educational status, working department, and place of residence and the second part, a self-reported questionnaire developed by the investigators contained 16 multiple choice questions on novel corona virus, signs and symptoms, transmission, and treatment. Descriptive and Inferential statistics were used in this study to analyse the findings. The study protocol was approved by the Institution ethical committee.

**RESULTS**

Of a total of 50 participants responded all the participants were health care professionals. The participants were of the following age groups: below 25 years 54%, 25- 30 years 18%, 31-35 years 16%, and above 35 years 12%. All were females of whom more than 30% were nurses, 28% lab technicians 26% pharmacists and 16% working in radiology department. Among them 54% were diploma holders, 40%

undergraduates, and 6% postgraduates. 28% of the participants were hostlers. While a considerable number of participants (76%) showed having an adequate knowledge, 20% had poor knowledge and only a 4% had good knowledge about COVID-19. The mean score of the knowledge level of COVID-19 is 9.12 and standard deviation score is 1.86. In addition, there was no significant relationship found between the levels of knowledge and their socio demographic variables.

**DISCUSSION**

Corona viruses are human and animal pathogens. Towards the end of 2019 Novel corona virus was identified as the leading cause of pneumonia cases in Wuhan city of China which resulted in an epidemic in China. Since its initial outbreak, the COVID-19 disease has a cascading effect worldwide and developed into a global pandemic<sup>9</sup>.

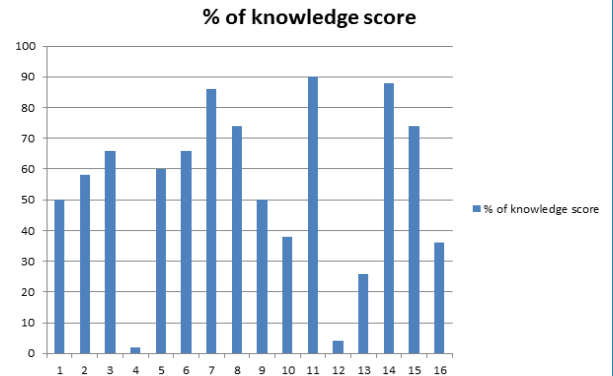
Glenmark Pharmaceuticals said it has launched antiviral drug Favipiravir, under the brand name FabiFlu, for the treatment of patients with mild to moderate COVID-19 at a price of about Rs.103 per tablet.<sup>10</sup> 50% of the survey participants know that the drug Favipiravir is the first antiviral COVID – 19 drug. As per the World Health Organization (WHO), COVID-19 has so far affected 216 countries or territories and has infected over 9 million people globally<sup>11</sup> ( July 10,2020). 58% of the surveyee knew the number of countries affected by COVID-19. T cells are the most powerful weapons in the immune system, but their importance in the battle against SARS-CoV-2, the virus that causes COVID-19, has been so far unclear. But, now, the studies show that the infected people harbor T cells that target the virus—and may help them recover<sup>12</sup>. Among the study participants only 20% answered correctly that T cells found in COVID-19 patients bode well for a long term immunity.

The Drug Controller General of India (DCGI) has approved the clinical trial proposal for convalescent plasma therapy submitted by the Indian Council of Medical Research (ICMR) on April 17, 2020. The DCGI has given the favourable nod for the clinical trial using plasma from recovered Covid-19 individuals to be transfused into sick patients to understand whether this can be a potential treatment for the pandemic. The recovered individuals generate antibodies which are currently being hypothesised to be useful protection against the virus for sick persons who receive the antibody-laden plasma<sup>13</sup>. 66% of the participants knew about the plasma therapy for the treatment of COVID -19 and 86% of them had knowledge about how the corona virus transmits. This indicates that the participants will take curative measures to prevent COVID-19 infection as they have adequate knowledge about the transmission of the virus. From the perspective of scientific prevention control, health care professionals should place a high priority on wearing Personal Protective Equipment (PPE) as a divine shield that prevent further contamination and infection<sup>14</sup>.

The pandemic is still evolving globally and remains a Public Health Emergency of International Concern (PHEIC). As cases of COVID-19 continue to climb up, public concern regarding the severity of the disease and population vulnerability is also growing. But most people (about 80%) recover from the disease without any special treatment, and for the majority – especially for children and young adults – illness due to COVID-19 is generally minor. However, for some people it can cause serious illness. Around 1 in every 5 people who are infected with COVID-19 develops difficulty in breathing and requires hospital care. About 48% of the surveyee could correctly identify the outcome of the COVID -19 infections and 74% of them correctly answered that COVID -19 occurs in all age groups.

90% of the participants knew the name 'COVID-19' which was

the official name announced by WHO on 11 February 2020. Almost all the surveyee were able to identify Wuhan city of Hubei province in China as the origin of the disease. Corona virus may cause different illness like the common cold to more serious disease like middle east respiratory syndrome (MERS-CoV). 74% of the participants were able to establish that corona viruses got its name because of the crown like spikes they are insulated with.. According to WHO, a person can take precautions by covering the nose and mouth while sneezing or coughing, by using a tissue or by coughing and sneezing into one's elbow. The used tissue must be disposed off into a closed dustbin immediately<sup>8</sup>. This precautionary measure was known only to 36% of the study participants.



**Figure 1: percentage of the knowledge score of each question.**

**CONCLUSION**

As the global threat of COVID-19 is still hovering over us , it is an imperative for the health care Professionals to be adequately informed about the threat both scientifically as well as practically. Though there is average knowledge of COVID 19 among health care professionals our study recommends further educational interventions to enhance their knowledge and competence in the battle against the pandemic.

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