# Awareness regarding COVID-19 among health workers at Kastamonu education and research hospital

Health workers COVID -19 disease awareness

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## Abstract

Aim: The knowledge of health care professionals about COVID- 19 disease increases day by day. No definitive medical treatment or vaccine is available to date. Health professionals all over the world now show a great example of virtue. The purpose of our questionnaire is to evaluate the awareness of the doctor, nurse and technical team working at the Kastamonu Education and Research Hospital about Covid -19 disease.

Material and Method: An online questionnaire was applied to 182 people working in Kastamonu Education and Research Hospital. Our survey was divided into two sections: one-part consisted of 4 questions examining the participant characteristics, and the second part consisted of 11 questions examining COVID -19 disease awareness. While examining awareness of COVID-19 disease, the participants' information sources, ways of transmission of the disease, symptoms, diagnostic methods, isolation time, risks, vaccines, drugs and prevention pathways were used in responses to general information questions.

Results: Doctors, nurses and technical staff responded in a similar way to the awareness survey questions regarding general information about COVID-19 disease. We conclude that the most effective sources of learning about COVID-19 disease for the participants are social media and government guides.

Discussion: COVID-19 is a disease that is still unknown in the world, but health workers are learning about this disease from their own experience and reviews. As a result of our survey, we can say that healthcare professionals are wondering and learning about this disease.

## Keywords

COVID-19; Health workers; Knowledge

## Introduction

Coronavirus disease emerged in Wuhan province of China in December 2019 and has rapidly affected the world. Many people lost their lives due to SARS disease in 2002 and MERS disease in 2012 [1]. In January 2020, the World Health Organization declared a pandemic. The knowledge of healthcare professionals about COVID-19 disease increases day by day. No definitive medical treatment or vaccine is available to date. Health professionals all over the world now show a great example of virtue. The purpose of our study is to evaluate the awareness of the doctor, nurse and technical team working at the Kastamonu Education and Research Hospital about COVID-19 disease.

## Material and Methods

### Study design

An online questionnaire was applied to 182 people working in Kastamonu Education and Research Hospital. The questionnaire applied to the hospital staff was sent randomly via WhatsApp. A brief explanation was made which explains the subject of the research before the questionnaire. Those who volunteered to participate after the explanation filled the forms and sent them to the researchers. Our survey contains general questions about COVID- 19 disease. In fact, some of the questions asked in this questionnaire do not yet have a definitive answer, so the answers given by healthcare professionals based on their experience may be more valuable than general information.

The survey consisted of a total of 15 questions and took approximately 3 to 5 minutes to complete. Our survey was divided into two sections: one-part consisted of 4 questions examining the participant characteristics, and the second part consisted of 11 questions examining COVID -19 disease awareness. While examining awareness of COVID-19 disease, the participants' information sources, ways of transmission of the disease, symptoms, diagnostic methods, isolation time, risks, vaccines, drugs and prevention pathways were used in responses to general information questions.

### Statistical data analysis

Data from participants were encoded and analyzed using SPSS version 22 (IBM). Descriptive analysis was performed to calculate frequency and ratios. The Chi-square test was used to examine the level of relationship between variables. $P < 0.005$ was considered statistically significant.

### Ethical considerations

Ethics committee permission was obtained from Kastamonu University. In this study, the privacy of the participants was respected and no identification was made. On the first page of the electronic survey, brief information about the study was given, and the participants were informed about the purpose of the study. Participants who cannot volunteer at this stage had the freedom not to continue.

## Results

A total of 182 health workers participated in our survey study. Thirty-six of the 182 participants were doctors, 103 were nurses and 46 were technical. Most of the participating doctors were males between the ages of 31 and 45, and their professional experience was between 11and 20 years. Most of the participating nurses were females aged 31-45 years, and their professional experience was 11-20 years. The majority of the technician participants were men and their ages were 18-30 years, and their professional experience was between 0 and10 years. The demographic characteristics of the participants are presented in Table 1.

In part 2 of our survey, it was intended to examine participants' awareness of COVID -19 disease. In this context, it was questioned where the participants obtained their knowledge of COVID -19. The answers given by the participants to section 2 questions are presented in Table 2.

The majority of the participants answered yes to the question of whether COVID-19 is a virus disease (doctors: 34, nurses: 89, technicians: 42), but there were also participants who said no (doctors: 2, nurses: 14, technician: 1).

The participants were asked how long does the isolation last in COVID -19 disease? The majority of the participants answered 2 weeks (doctors: 36, nurses: 101, technicians: 42), and there were also participants who said 3 weeks (doctors: 0, nurses: 2, technicians: 1).

Regarding participants' responses to the question of which method is most effective in diagnosing COVID-19 disease, it was observed that nurses and technicians consider lung CT scans to be a more effective method for diagnosing COVID-19 disease. Although the majority of the participants who are doctors think that the PCR (Polymerase Chain Reaction) technique is effective; we also found that the number of those who prefer tomography of the lungs is not low. Participants' answers to the question of which method of diagnosing COVID -19 disease is the most effective are presented in Figure 1.

The respondents were asked, 'what is the most common finding in COVID-19 disease?' Most of the participants responded that the most common findings were cough, shortness of breath, and sore throat (doctors: 24, nurses: 66, tecnichians: 28).

We asked if antibiotherapy was one of the first treatment options for COVID -19 disease, and we received the responses from most of the participants that antibiotherapy was one of the first options (doctors: 9, nurses: 59, tecnichians:18).

We asked if those with chronic diseases were at high risk of getting COVID- 19 disease and associated mortality rates, and we found that only one nurse answered 'no', while almost all participants answered 'yes'.

Participants were asked questions about the modes of transmission of the COVID-19 disease. In this question, it was stated that more than one answer could be marked, and many of the participants responded that the most common route of transmission was breathing. The answers to this question are presented in Figure 2.

We asked the participants if there was a vaccine for COVID -19 disease and saw that one person in each group believed that the COVID -19 vaccine was available.

While examining the sources of participants' knowledge about COVID -19 disease, a question was asked so that more than one option could be confirmed. The answers to the question about the source of information about the COVID -19 disease were health ministry guides or the website of our hospital. It was observed that the second source of information for all participants was television. The third source of information for

all participants was found to be social media. The answers given by the participants to this question are presented in Figure 3.

We asked the participants if healthcare workers were in the risk group for the COVID -19 disease, and all participants, except for one nurse, stated that healthcare workers were in the risk group.

We asked the participants which method of preventing COVID -19 disease is the most effective, and found that all groups preferred to use masks and protective equipment the most.

**Table 1.** Demographic Characteristics of participans

| Total Participans | | Doctor n:36 | Nurse n:103 | Technician n:43 | Total N:182 |
|---|---|---|---|---|---|
| Gender | Female | 14 | 73 | 21 | 108 |
| | Male | 22 | 28 | 22 | 74 |
| Marital status | Married | 28 | 66 | 28 | 122 |
| | Non- married | 8 | 37 | 15 | 60 |
| Age | 18-30 | 2 | 33 | 18 | 53 |
| | 31-45 | 27 | 60 | 16 | 103 |
| | >46 | 7 | 10 | 9 | 26 |
| Professional Experience | 0-10 | 12 | 35 | 21 | 68 |
| | 11-20 | 17 | 50 | 11 | 78 |
| | >21 | 7 | 18 | 11 | 36 |

## Discussion

As a result of our survey, the responses of doctors, nurses and technicians were grouped one by one. Phylogenetic and virological examinations of COVID-19 show us that the disease is of viral origin. We asked healthcare workers about this common information in our survey, and as expected, many of them stated that COVID- 19 was a viral disease [2].

In their study, Stephen A Lauer and colleagues determined the incubation period of coronavirus to be 5.1-11.5 days for COVID-19 disease. They also stated that this period could be extended up to 14 days. In our study, the majority of the participants approved the option, which is 2 weeks. In this case, the fact that the current and general information is the same indicates that awareness of this issue is good [3].

Until now, there is no exact diagnostic method for diagnosing COVID- 19. The polymerase chain reaction (PCR) technique has a number of limitations. Antibody detection in the blood or lung tomography are among the valuable methods of diagnosis. In our survey results, we saw that although the majority of the doctors approved the PCR technique option, some of them preferred lung tomography, and the majority of the nurses and technicians thought that the tomography was more effective in diagnosing COVID 19 disease [4].

**Table 2.** The responses of the participants to our survey

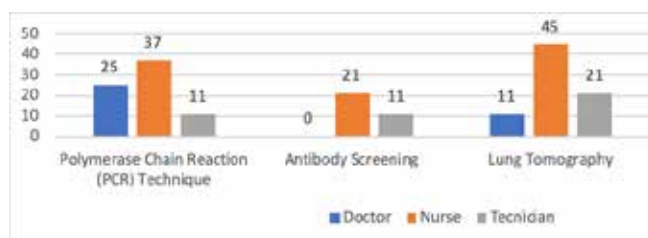| Survey questions | Answer options | Doctor | Nurse | Technician | Total |
|---|---|---|---|---|---|
| Is COVID -19 a virus disease? | Yes | 34 | 89 | 42 | 165 |
| | No | 2 | 14 | 1 | 17 |
| How long is the isolation time in COVID -19 disease? | 1 week | 0 | 0 | 0 | 0 |
| | 2 weeks | 36 | 101 | 42 | 179 |
| | 3 weeks | 0 | 2 | 1 | 3 |
| What is the most effective method in diagnosing COVID-19 disease? | Polymerase chain reaction (pcr) technique | 25 | 37 | 11 | 73 |
| | Antibody screening | 0 | 21 | 11 | 32 |
| | Lung tomography | 11 | 45 | 21 | 77 |
| What is the most common sign of COVID-19 disease? | Fever | 12 | 36 | 15 | 63 |
| | Cough, shortness of breath, sore throat | 24 | 66 | 28 | 118 |
| | Acute respiratory failure, vascular occlusion | 0 | 1 | 0 | 1 |
| Is antibiotherapy among the first options in COVID-19 disease? | Yes | 9 | 59 | 18 | 86 |
| | No | 27 | 44 | 25 | 96 |
| Are those with chronic disease at a higher risk for COVID-19 disease and death from this disease? | Yes | 36 | 102 | 43 | 181 |
| | No | 0 | 1 | 0 | 1 |
| What are the common transmission ways of COVID-19 disease? | Contact | 29 | 79 | 38 | 146 |
| | Resprations | 36 | 99 | 42 | 177 |
| | Blood | 1 | 2 | 8 | 11 |
| | Pets | 1 | 0 | 1 | 2 |
| Is there a vaccine for COVID-19 disease? | Yes | 35 | 102 | 42 | 179 |
| | No | 1 | 1 | 1 | 3 |
| Where did you learn about COVID-19 disease? | Television | 19 | 61 | 26 | 146 |
| | Social media | 17 | 58 | 20 | 95 |
| | Health Ministry Guides or the website of our hospital | 34 | 83 | 39 | 156 |
| | Friends or people around me | 14 | 22 | 14 | 50 |
| | Others (newspapers,books,  magazine, etc..) | 13 | 19 | 10 | 42 |
| Are healthcare workers in the risk group for COVID-19 disease? | Yes | 36 | 102 | 43 | 181 |
| | No | 0 | 1 | 0 | 1 |
| What is the most important way to prevent COVID-19 disease? | Frequent washing / protecting hands | 2 | 15 | 8 | 25 |
| | Mask use / protective equipment | 22 | 60 | 19 | 101 |
| | Use of protective sper / glasses | 0 | 0 | 0 | 0 |
| | Protection of social distance | 12 | 28 | 16 | 56 |

**Figure 1.** Participants' answers to the question of which method of diagnosing COVID -19 is the most effective
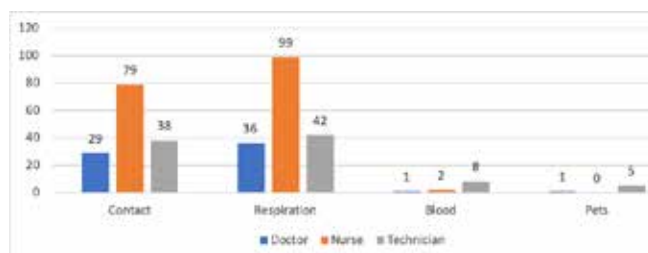


**Figure 2.** Answers to the question about the common ways of transmission of the COVID -19 disease
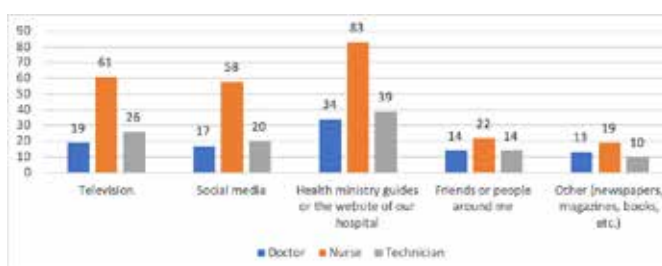


**Figure 3.** The answers of the participants to the question 'Where did you learn about the Covid-19 disease?

There are studies describing the symptoms of COVID 19 disease. These symptoms include fever, cough, shortness of breath, acute respiratory failure and vascular occlusion. Our survey participants were asked about the most common symptoms of COVID- 19 patients, and the answer was cough, shortness of breath, and sore throat. This result was found to be compatible with the general literature information [5].

There is no specific drug for the treatment of COVID-19 disease yet. However, as a result of the experience and observation, treatment protocols have been created. These protocols have undergone changes to find the most ideal treatment in the process. Antibiotics such as azithromycin are present in this protocol, as if the specific treatment option for COVID-19 disease can be perceived as antibiotherapy. In the results of our survey, the majority of doctor participants stated that they did not consider antibiotherapy as one of the first treatment options for COVID-19 disease. However, the majority of the nurse and technician participants chose the option that antibiotherapy was one of the first choices. We think that the nurses and technicians chose antibiotherapy because they saw antibiotherapy being applied to a patient during treatment [6]. The presence of comorbid diseases increases the risk of contracting COVID-19 disease and death due to this disease. Our survey found that all participants had high rates of comorbid disease in the risk group for this disease [7].

There are transmission pathways of COVID-19 disease such as contact, respiratory blood, etc. Our participants could choose more than one option in this question, and we found that the majority of the participant groups preferred the option of contact and reparative transmission [8].

When asked how you knew about the COVID-19 disease, most of the respondents answered that from the Health Ministry guides and the website of our hospital.

There are studies with similar results in this regard [9]. In the answers to this question in our survey, mostly the second choices were from television and social media. We think that social media programs should be more educational.

In our survey, all but one participant stated that all healthcare professionals are in the risk group. Other studies have also indicated that healthcare workers are at risk for COVID-19 disease [10].

We think it is very important to prevent COVID-19 disease. The common slogan "Stay at home" is used all over the world. However, the most preferred option in our survey was the use of masks. Announcements regarding the frequent use of masks have been announced in the hospital where we work. We think that this option is preferred because of these announcements [11].

*Conclusion*

COVID-19 is still an unknown disease in the world, but healthcare workers learn about this disease from their own experience and reviews. If we summarize the data that we have obtained so far, in our hospital, the common opinion about COVID-19 disease is that the most common symptom of the disease is sore throat and the most common way of transmission is resprations, the best method of protection is the use of masks, there is no vaccine yet, and the best source of information is social media and government guides. Who knows how these decisions will change at the end of this pandemic?

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