

# MEDICAL STUDENT PERCEPTION ABOUT COVID-19 AND HEALTH PROTOCOL IN TASIKMALAYA, WEST JAVA: A MIXED-METHOD

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## ABSTRACT

**Background:** Higher education in health institution has an important role in the prevention and health care activities during the COVID-19 pandemic. In order to play this role, there is a need for medical and health students had positive perception, attitude, and behavior. However, there is a lack of information on the medical student perception about COVID-19 pandemic and health protocols. This study aimed to provide an overview of medical student perceptions about COVID-19 and health protocol in Tasikmalaya, West Java.

**Subjects and Method:** A mix-method study was conducted in Tasikmalaya, West Java, from October to December 2020. A total of 320 medical student was selected by purposive sampling. The key informants were six medical students. The study variable was medical students perception of COVID-19 and health protocols. The triangulation of data was taken from COVID-19 task force and regional disaster management agency. The quantitative data were analyzed descriptively (frequency and percent). The qualitative data were analyzed by content analysis.

**Results:** Half of the medical students had a good perception of COVID-19 and health protocols (56.9%). They looked for information on COVID-19 and health protocols from trusted sources, such as the World Health Organization and Ministry of Health Indonesia website.

**Conclusion:** Half of the medical students have a good perception of COVID-19 and health protocols and they seek trusted sources of information.

**Keywords:** health protocols, perceptions, COVID-19, medical students

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## BACKGROUND

The Coronavirus Disease (COVID-19) pandemic is sweeping across the nation, and all governments are being forced to work hard to deal with it. Currently, the number of COVID-19 cases is starting to decline, but the situation is not stable and there is a risk of increasing the number of cases or the threat of a third wave, so you must remain vigilant. The

total number of cases in Indonesia infected with the corona virus has now reached 4,240,479 (Positive), 4,240,479 (Recovered) and 143,235 (Died) as of October 25, 2021. The Tasikmalaya City Health Office reports as of October 25, 2021 the number of confirmed COVID-19 namely 14,706 people. 7937 symptomatic, asymptomatic 6769 people, a total of 544 deaths. The city of Tasikmalaya is

in a strategic position in the southeastern part of West Java Province, namely as a liaison and also the center of the East Priangan region. The distance of Tasikmalaya City from the capital of West Java Province, Bandung, is 105 km and from the state capital, Jakarta, 255 km (BPS Kota Tasikmalaya, 2019). This makes the mobility of the people of Tasikmalaya City quite high, so they are at risk of being infected. In 2018, the population of Tasikmalaya City reached 662,723 people, an increase of 0.20% from the previous year. The productive age population reached 67.43% (BPS Kota Tasikmalaya, 2019). The high number of young people shows the huge potential for human resources (HR) to be involved in prevention and health care, especially during the COVID-19 pandemic. A healthy young generation has a good immune system as the main capital to face COVID-19.

The younger generation, especially health students, can play a role in preventing and handling COVID-19, because it has many advantages including, more time, an understanding of health issues, and excellent physical condition at a young age. Students can be involved directly as volunteers, or indirectly through prevention activities, for example through social media conducting COVID-19 prevention campaigns, inviting other millennial young people not to hang out, gather in groups, etc. Socialization must continue to be improved, especially in the current situation, when people are starting to ignore and assume the situation is starting to return to normal, and are starting to

abandon health protocols. The survey results show that 95.2% of the public are aware of the implementation of health protocols during the Adaptation of New Habits (IMR). However, only 64% of the community knows the procedures for implementing health protocols (Muchtaridi et al., 2021). It is hoped that the approach by young people will also be more effective for their group, because they understand more about effective approaches and media models. COVID-19 has had short- and long-term psychosocial and mental health implications for children and adolescents (Singh et al., 2020). Therefore, a more humane approach is needed and in accordance with the conditions. The role of peers who understand health problems is expected to be more effective.

The government, especially the local health office and puskesmas, has limited resources in the management of health services. The COVID-19 pandemic situation also requires special attention and significant resources. Therefore it is important to involve community participation, especially in prevention and early detection. Locally at the regional level can also involve health students in collaboration with local Health Colleges. In Tasikmalaya City, there are several Health Universities including the Health Polytechnic of the Ministry of Health Tasikmalaya, Bhakti Tunas Husada Health College, Tasikmalaya Muhammadiyah University, Mitra Kencana Health College, and the Faculty of Health Sciences at Siliwangi University. Students and lecturers can be empowered as part of community service. Health Poly-

technics Kemenkes Tasikmalaya is currently appointed as one of the vaccination centers in West Java, routinely holding vaccination activities, involving lecturers and students.

The activities of lecturers and students are in the form of the Tri Dharma of Higher Education, namely Community Service. The active participation of students in this activity during the COVID-19 pandemic at Jenderal Sudirman University (UNSOED) through Real Work Lectures by using an android application for COVID-19 independent detection. The results obtained are that residents can self-diagnose COVID-19, information related to COVID-19 and its relation can be known to the public, concern for residents has increased, and the response of residents is satisfied with the results of the detection of the application (Judge, 2019).

The government through the Ministry of Health has issued guidelines for the prevention and control of COVID-19. The government has also issued several health protocols related to COVID-19. It is important to know these health guidelines and protocols in order to better understand and be able to implement the prevention and handling of COVID-19 (Ministry of Health, Technical Instructions for the Use of Personal Protective Equipment (PPE) in Facing the COVID-19 Outbreak, Jakarta; 2020). This health protocol is very important to spread to help prevent the spread of COVID-19. Students with a background in health knowledge are expected to be the right agents for prevention by spreading the COVID-19 prevention pro-

ocol. However, the COVID-19 problem has only occurred at the end of 2019 until now, so the COVID-19 material is really a new thing, although of course, basic knowledge about the virus and its spread should be known by health students.

A study shows that there is a large number of students willing to volunteer during a pandemic. However, they may not be ready for this role because knowledge is generally poor, and this may be due to the lack of teaching about disasters in medical schools. During the current COVID-19 pandemic and future disasters, medical students may be asked to volunteer as support staff. There is a need to develop infrastructure to facilitate this process as well as provide education and training to ensure students are adequately prepared to perform these roles safely (Byrne et al., 2020).

Perception is an opinion, judgment, and belief that arises in a person about a particular object. Perception is giving meaning to sensory stimuli (sensory stimuli) (Rachmat, 2011). The choice to become a volunteer depends on the student's perception of COVID-19 and the perception of health protocols. Of course, it is not an easy choice to make the choice to become a volunteer, because there is a high chance of getting infected. Even official health workers can experience mental stress, especially volunteers who work voluntarily. The COVID-19 pandemic is likely to place healthcare professionals around the world in an unprecedented situation, having to make impossible decisions and work under extreme pressure. Decisions may include how to allocate fewer

resources to patients in need, how to balance their own physical and mental health care needs with those of patients, how to align their wishes and obligations to patients with those of their family and friends, and how to provide care for all severely unwell patients with limited or inadequate resources. This can lead to some experiencing moral injury or mental health problems (Greenberg et al., 2020). The purpose of this study was to provide an overview of the perceptions of health students about COVID-19 and the COVID-19 health protocol in the City of Tasikmalaya, West Java.

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## **SUBJECTS AND METHOD**

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### **1. Study Design**

This was a qualitative quantitative mix method. A descriptive survey research method followed by a qualitative approach using in-depth interviews. This study describes the picture of health student perceptions of COVID-19 and the COVID-19 Health protocol.

### **2. Population and Sample**

The population in this study were health students in Tasikmalaya, West Java from October – December 2020. The total sample was 320 health students selected by purposive sampling.

### **3. Study Variables**

The study variables were the health students' perceptions of COVID-19 and the COVID-19 protocol.

### **4. Operational Definition of Variables**

The perception of health students about COVID-19 is the perception of health students about COVID-19.

Perceptions of health students about health protocols are feelings of agreement or disagreement based on oneself or the participation of others towards COVID-19 and the COVID-19 protocol.

### **5. Instruments**

The data collection technique in this study was to distribute questionnaire sheets online via google form to obtain information from respondents. Questionnaire sheet containing closed questions/statements about student perceptions of the COVID-19 protocol. Furthermore, in the second stage, interviews were conducted with 5 students who had been selected. Interviews were also conducted with the COVID-19 Task Force and BPBD elements.

The instrument was made by referring to the Health Protocol set by the Ministry of Health in the form of a google form. The questionnaire used has been tested for validity and reliability, so that the questions or statements on the questionnaire are valid and reliable. Another research instrument used is the interview guide, to collect qualitative data.

### **6. Data Analysis**

Data from quantitative research were analyzed univariately to produce descriptive data on the frequency distribution and qualitative data was analyzed by content analysis, starting with a data transcript, namely transferring the interview recordings into writing or narrative, then reading and rereading and marking and noting important things in the transcript. Then determine and map the interrelationships of the interview results described in narrative form. Sum-

marized, reduced, interpreted and or given meaning presented in the form of narrative (content analysis).

## 7. Research Ethics

Description of Ethical Eligibility No. e-KEPK/-POLKESYO/0690/XII/2020 from KEPK Health Polytechnic, Ministry of Health Yogyakarta.

## RESULTS

### 1. Sociodemographic characteristics of informants

**Table 1. Characteristics of the sample by gender**

Gender	Total	Percentage (%)
Male	32	10
Female	288	90
Total	320	100%

**Table 2. Characteristics of the sample by major**

Jurusan	Jumlah	Presentase (%)
Nursing	29	9.1
Midwifery	37	11.6
Medical record health information	93	29.1
Nutrition	58	18.1
Pharmacy	49	15.3
Dental nurse	54	16.9

**Table 3. Distribution of respondents' perceptions of COVID-19 and health protocols in the Tasikmalaya Region, West Java**

Category of perception	Total	Percentage (%)
Lacking	138	43.1
Good	182	56.9

Table 3 shows the distribution of respondents who have a bad perception about COVID-19 and the COVID-19 Health Protocol. In the City of Tasikmalaya, 138 people (43.1%) and 182 people (56.9%) have a good perception. The results of interviews conducted on the COVID-19 task force are as follows:

Table 1 shows the sex distribution of the most respondents, namely for female sex as many as 288 people (90%) and male as many as 32 people (10%).

Table 2 shows that the distribution of major respondents came from health information medical records as many as 93 people (29.1%), while for Nursing, Midwifery, Nutrition, Pharmacy, and Dental Nursing, respectively, 3.1%, 11.6%, 18.1%, 15.3%, and 16.9%.

The statement that if you have followed the health protocol, there will be no transmission of covid-19, answered agreeably by respondents, 1, 2 and 5, and respondents disagreed with 3 and 4. Respondents 1, 2 and 5 felt that they really implemented the protocol. healthy eating the lower the risk of transmission.

Meanwhile, respondent 3 conveyed his perception;

*“Well, that's okay. So, we can be infected with COVID by people who are at home even though we have maintained health protocols. But if for example people at home or people closest to us are ignored, they continue to be exposed, and we don't necessarily wear masks at home.”*

Respondent 4 stated;

*“Yes, ma'am, I've read on twitter that there are people who still adhere to health protocols, such as using hand sanitizer, wearing masks, but still contracting COVID”*

Respondents did not agree with the statement that every case of COVID-19 can cause death, because many cases of COVID-19 can be cured.

Respondents believe that the procedures for preventing the transmission of Covid-19 in public facilities have been carried out in several places, but there could be transmission if someone is infected. The following is the statement of respondent 3;

*“Yes, ma'am, because we have implemented health protocols well, but in public facilities there are many people who may be ignorant of it, and they could be transmitting the virus to us.”*

Respondent 4 stated;

*“I often see that public facilities have been provided but are not used by the surrounding community. There are also those who have no place to wash their hands, and there are still many crowds.”*

Respondents do not agree if COVID-19 sufferers are considered to give negative stigma to society and the environment.

Respondent 3 answered doubtfully, and explained the reasons as follows;

*“Yes, ma'am, because there are covid ones, if there are those in society that cause negative stigma, some don't. I tend not to, it's normal. Thank God, there are some people in my community who don't have a bad stigma.”*

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## DISCUSSION

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Almost all students agree on the importance of health protocols for the prevention of COVID-19, but it does not guarantee that they will avoid Covid-19. Students also think that it is important to continue to socialize protocols and enforce rules so that people obey health protocols. Students argue that there is a need for more massive socialization through social media and with a more attractive appearance. The implementation of health protocols is also expected to be accompanied by strict supervision. Dissemination of information through social media is an effective and efficient thing to be implemented in the community, especially in conditions of the COVID-19 pandemic because there is no need to meet in person (Shodikin and Kristen, 2021).

Perception is a process that occurs in humans where the stimuli received by the senses through the learning process or experience are organized and interpreted first before the stimulus can be understood and responded to. In other

words, perception is the opinion, judgment, and belief that arises in a person about a particular object. The statement made describes the opinion, assessment, and interpretation of the respondent about an object. The distribution of respondents who have a bad perception of the COVID-19 Health Protocol in the City of Tasikmalaya Region, as many as 138 people (43.1%) and as many as 182 people (56.9%) have a good perception. This illustrates that the majority of respondents as health students have a good perception of 56.9%. There are still unfavorable perceptions because among them there are different interpretations of the statement items.

Students are an idealistic community because they have not been overwhelmed by organizational interests, etc. The role of students is very much needed, students contribute to dealing with covid-19 by partnering with covid-19 volunteers, they automatically offer to volunteer to help the community (Khusairi, 2020). The formation of a volunteer team will strengthen the COVID-19 Task Force in enforcing health protocols through education, outreach and mitigation (Hasibuan, Simanjuntak and Sinaga, 2021).

There were 14 students who had volunteered showing positive perceptions. Medika and Rochmawati's (2011) shows that being a health volunteer provides benefits and positive experiences. The results showed that in general, being a health volunteer provided several benefits and all undergraduate nursing students expressed a positive experience as a health volunteer.

Additional research could further evaluate the effectiveness of health volunteering and its application in different situations. In addition, undergraduate nursing students believe that personal attributes, including honesty, empathy, and kindness, are important teamwork skills to become good health volunteers during disasters (Medika and Rochmawati, 2011).

Health students can play a role in prevention efforts through official activities coordinated by the government, so that they have the same and systematic movement. Respondent 6 said:

*“Yes, it is very possible, even some good sentences from the PMK minister, stating that student participation can be an educator for the community, it can be disseminated to all levels of society, because there is no single treatment for Covid. Various kinds of efforts in dealing with COVID-19, for health students how should they be able to socialize, and educate the public at least from the RW to the RT, in the scope where he is like that, even the minister of education, yes, some of his KKN are also directed also to the alleviation of COVID, a resilient village against COVID. So it is clear and can be an important factor for this health protocol to continue to be socialized to the public. Apart from that, actually community discipline, judging from the defense from the pandemic is the responsibility of the individual individually, then there is a shared responsibility, so if there is a shared responsibility, such as regulations for*

*adaptation, there are already regulations, right, joint regulations already exist.”*

Ideas and innovations born from students' minds are very helpful in dealing with COVID-19. Especially in the education and economic sectors which are very worrying, ideas distributed by students are very much needed and help the government in overcoming the spread of COVID-19. The ideas that can be given by students include: first, conveying aspirations to the authorities so that if they can provide free quotas and reduce tuition fees for students. Second, providing free internet or WiFi services voluntarily to students. Third, helping merchants to promote their merchandise and services through social media. Finally, providing a shuttle service for goods purchased by buyers from traders (Abdillah, Hafidzi and Sulistyoko, 2020). The description of the perceptions of health students about the COVID-19 Health Protocol in the Tasikmalaya City Region is as follows; The distribution of respondents who have a bad perception of the Covid-19 Health Protocol in the City of Tasikmalaya Region, as many as 138 people (43.1%) and as many as 182 people (56.9%) have a good perception. The results of the interviews showed that students had good perceptions and were diligent in reading information related to covid-19 and health protocols, this was evident from several statements made. Students know that health protocols can help prevent COVID-19 but do not guarantee that the implementation of protocols can prevent COVID-19. Therefore, it is necessary to be vigilant and

continue to be careful and remain obedient to Health protocols and the importance of continuous socialization.

Students with good perceptions about COVID-19 and the COVID-19 health protocol, are expected to be willing to become health volunteers. This is in line with research; Systematic review of medical student willingness to volunteer and preparedness for pandemics and disasters. The average weighted willingness to volunteer during a disaster was 68.4%, and there was a significant difference between those who planned to volunteer and those who actually volunteered ( $p < 0.001$ ) (Byrne et al., 2020).

This research shows that there is a large number of students willing to volunteer during the pandemic. However, they may not be ready for this role due to poor overall knowledge, and this may be due to a lack of teaching about disasters (Byrne et al., 2020).

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#### **AUTHOR CONTRIBUTION**

Ida Sugiarti prepares proposals and prepares research instruments and conducts research. Dedi Setiadi takes care of research permits, helps retrieve research data and process data.

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#### **CONFLICT OF INTEREST**

There may be a conflict of interest because the respondent is a student and the researcher is a lecturer at the same institution. Handling problems with an explanation at the beginning that this research is not binding and is not required to participate, respondents are allowed not to fill it out.

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