

COVID-19 VACCINE ACCEPTANCE AMONG PUBLIC HEALTH STUDENTS IN GRESIK CITY

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ABSTRACT

One of the programs that can protect the community from COVID-19 is vaccination. Vaccination is an effective approach to prevent infection and reduce mortality. This study was conducted to determine the perception of acceptance of the Covid-19 vaccine among public health students as potential health workers in the future. This is a mixed-method study with 140 respondents of public health students. The data were analyzed using a non-parametric binomial test. The results of this study Statistics prove that as prospective health workers, the public health student has a good level of acceptance of the COVID-19 vaccine (p-value 0.002). However, several indicators still make students doubt the COVID-19 vaccine, including the effectiveness of the vaccine (p-value 0.006), information circulating (p-value 0,041), and the mandate from the government (p-value 0,041). Conclusion this research is the government must provide information on the effectiveness of the vaccine to the entire community so that the COVID-19 vaccine can be accepted by the public health worker to be and the public community.

Keywords: COVID-19, Public Health Student, Vaccination Acceptance

INTRODUCTION

At the end of December 2019, the first case of Corona virus infection (COVID-19) was reported in Wuhan China and has finally spread throughout the world. This pandemic brings several impacts in terms of health, economy and social (1,2). In terms of health, the Covid-19 Handling Task Force has recorded that as of September 25, this virus has infected 262,022 people with 191,863 recovered cases and 10,105 deaths (covid.go.id). From an economic and social perspective, COVID-19 has caused a decline in people's productivity, a fall in people's consumption

levels, and a loss of consumer confidence (3–5).

Since the COVID-19 outbreak, most countries in the world have faced casualties, with several economic parameters, namely low economic growth, rising unemployment rates, and others (6). The perceived threat from COVID-19 is very real, and people are afraid for a variety of reasons including losing their jobs, becoming seriously ill, transmitting the disease to family or friends, humans being responsible for their death and suffering, and the general financial loss associated with the virus (7).

The first step in protecting the community from COVID-19 is vaccination (8). Vaccination is an effective approach to prevent infection and reduce mortality (9). At the end of October, several COVID-19 vaccine candidates were in phase 3 trials with efficacy assessments in protecting humans from SARS-CoV-2 infection. WHO recommends that potential vaccines should have an efficacy threshold of at least 50% at the population level in reducing the risk of COVID-19 disease (WHO, 2020). Although vaccines provide protection from disease, they do not completely reduce transmission (10,11). Globally, as a public health control measure, it is being implemented as an alternative to solving COVID-19 by using the COVID-19 vaccine (12).

However, some problems arise when people's assumptions about vaccines are not positive. Doubts about using vaccines among the public can be caused by a belief in the content of illegal vaccine ingredients (10,11,13). Previous research has stated that this public doubt will have an impact on not maximizing vaccine coverage (13). Several previous studies have proven that studies on the level of public acceptance of a new vaccine are very important (10,14,15). This study was conducted to determine the perception of the acceptance of new vaccines in public health students as potential health workers in the future.

Public health students are the forefronts of future health workers. They will work in several health services such as hospitals, community health centers, and clinics. As candidates for health workers, their perception and level of acceptance of government programs is an important benchmark (16). They are at the forefront of implementing health programs. The success of a health program is their responsibility. From some of the phenomena above, a study is needed to see the level of acceptance of the covid-19 vaccine from health students as potential health workers in the future.

METHODS OF THE STUDY

This research uses descriptive quantitative research method with cross sectional survey method. The population of this study were public health students. Sampling was taken by random sampling with the number of samples in this study was 140 samples. This research was conducted at the University of Muhammadiyah Gresik. The types of questions asked to respondents are semi-open. Researchers also performed probing techniques. The results of the answers obtained through the questionnaire and from this probing resulted in primary data. Questionnaire items in this study include likely to be exposed, importancy, hesitency, trust, adverse event concerned, information, and personal view of vaccine taken from previous research (16,17).

Process analysis The data is done by describing and explaining the research findings with the help of statistical tools to test the effect of the independent variable on the dependent variable. In addition, the researcher also fully analyzes using theoretical interpretation, where the data obtained from the results of research in the field (quantitative and qualitative) are compared or associated with several existing theories, expert opinions or findings from previous research. Furthermore, the data analysis process is carried out by describing and explaining the research findings that have been presented in the form of statistical output tables.

RESULTS AND DISCUSSION

Most of the respondents were women (124 people). This is related to the proportion of students in the public health study program at the University of Muhammadiyah Gresik, the majority of whom are women. Of all respondents, it turns out that there are 4 students who have been confirmed positive for Covid-19 both with symptoms and without symptoms. This could be due to the status of these students as part-time students where they are health workers or indeed full-time students who are practicing in the field.

Most of the students know of family or neighbors who have been confirmed positive for COVID-19 (72 people) and have died

due to COVID-19 (60 people). This indicates a very rapid transmission of the virus in the community. Data on respondent characteristics can be seen in table 1.

Table 1. Characteristic of Respondents

Item	%
Gender	
Male	11,4
Female	88,6
Self Covid-19 status	
Positive	5,7
Negative	94,3
Family Covid-19 status	
Positive	51,4
Negative	48,6
Mortality Effect of covid-19 status of family	
Positive	42,9
Negative	57,1

Health workers as the front line of health programs are the hope of the community in implementing a health program. The public will believe in the health program if the health workers have proven the effectiveness of the health program. This rationalization is important because the Indonesian people still have minimal health literacy so that the knowledge adoption process relies on trust in other people such as health workers and community leaders. Public health students as prospective health workers must have confidence in the COVID-19 vaccination program. The survey on the level of acceptance of public health students for the covid-19 vaccine can be seen in table 2.

Table 2. Survey Response of vaccine acceptance among public health students

Item	Agree/Strongly Agree (%)	Disagree/Strongly Disagree (%)	p-value
I am likely to be exposed to COVID-19 as a future HCW	82,9	17,1	0,000
COVID-19 vaccination is important for me as an HCW	91,4	8,6	0,000
I will take the COVID-19 vaccine as soon as the Gov-approved vaccine is available	78,1	22,9	0,002
I am concerned that a COVID-19 vaccine may not be effective	74,3	25,7	0,006
I am concerned about serious adverse effects from a COVID-19 vaccine	82,9	17,1	0,000
I need more information about the COVID-19 vaccine	100		0,000
trust the information I am receiving about the COVID-19 vaccine from public health experts	68,5	31,5	0,041
The only reason I will get a COVID-19 vaccine is if it is mandated by health systems/ school	68,5	31,5	0,041

From table 2 it is known that not all students are willing to get the covid19 vaccine (17%). This could be due to a lack of confidence in the efficacy and effectiveness of the COVID-19 vaccine in preventing transmission. This is reinforced by qualitative data from several respondents who stated their doubts about the basic ingredients and country of origin of the vaccine (table 3). Nevertheless, statistically it is stated that public health students are willing to receive the covid-19 vaccine from the government (p-value 0.000). Even though the respondents are health students, data shows that some still do not consider the COVID-19 vaccine important for themselves as prospective health workers

(8.6%). This is due to the fact that the vaccine has a certain level of effectiveness so that it is still possible to contract the Covid-19 virus. The concept of a vaccine is not like a drug that is able to ward off or cure certain disease symptoms. This is what makes some students are still reluctant and think vaccines are not important for them. The age factor can also be an incentive for students not to consider vaccines important for themselves because most of them are at a young age who have relatively good immune systems.

The statement regarding the willingness and trust in the COVID-19 vaccine was supported by a statement after that, namely that students will immediately

administer the vaccine if the government has made it available to the general public. It turns out that there are still students who do not agree with the statement (22.9%). This is inseparable from their perception of the effectiveness of the vaccine and their relatively good immune system, so the possibility of contracting COVID-19 is very small. However, statistics show that students will immediately vaccinate after the

government provides vaccines for the general public.

The statistical results stated that doubts about the effectiveness of the vaccine were not significant (p value 0.006) and the concern about adverse events due to vaccines was significant (0.000). This proves that health students basically believe in the hope brought by the COVID-19 vaccination program in order to minimize the transmission of the Covid-19 virus.

Table 3. Comment Provided by Public Health Students

Theme	Representative Quote
Personal Concern About Vaccine Safety and Efficacy	<p>“I don't know the full safety of the covid-19 vaccine, right now my family doesn't agree with being vaccinated on the grounds that I heard they listen to the news if someone has been vaccinated and continues to contract Corona, they will not be able to recover. and I as a public health student are confused about giving correct information to my family”</p> <p>“The covid19 vaccine in Indonesia is an imported vaccine from China and there are some from other countries too, my opinion about the covid19 vaccine for me is less effective because even that person has received their vaccine can also be infected with the covid19 virus again, that makes me a little doubtful about the effectiveness of the current Covid19 vaccine”</p> <p>"If there is already permission from BPOM stating that the vaccine is safe to be given to humans, it means that its safety has been proven. But it needs to be evaluated further related to minimizing side effects after administering the covid-19 vaccine. "</p>
Rapid Development and Implementation of Vaccine	<p>"The development of the COVID-19 vaccine is quite time-consuming and efficient where many people have been infected and even died. The vaccine has just been developed, I think that is natural because in the manufacturing process it needs a trial stage. However, the results given or the results of the vaccine are not satisfactory for eradicating the current COVID-19 pandemic. Provision of vaccines covid19 in Indonesia was enough to exceed the limits, even the president Jokowi has given DP of 80% for vaccines imported</p>

	<p>from China, it shows to inconsistencies father of the president on health and healing people"</p> <p>"The development of vaccine manufacturing covid 19 in Indonesia today there are several is still in the refinement stage so that there is no "risk" to vaccine recipients."</p>
Politicization	<p>"There are many pros and cons to the vaccine because many people are worried about vaccines that can cause harmful side effects to their bodies and suspect that vaccination is a hidden agenda of one country to take advantage of other countries."</p> <p>"Everything related to the potential for funds and materials there is prone to politicization. During this pandemic, there are also animal-minded humans who have the heart to politicize for the sake of worldly desires: the fact is that there are hoaxes and misappropriation and corruption of covid-19 social funds"</p>
Education for Public	<p>"Info around me enough to make a scourge especially for the elderly. So when I became an elderly cadre in the village, it was very difficult for me to persuade the elderly to want to be vaccinated. I hope that incorrect issues can be quickly removed by showing evidence that this vaccine is safe and necessary"</p> <p>"Very bad because the news is still confusing"</p> <p>"Information circulating in the community does not provide an explanation of how the covid-19 vaccine works, the side effects"</p> <p>"Through newspapers, social media has a lot of information about the covid-19 vaccine. If the public is willing to open it, it can be a source of knowledge"</p>

In the next statement, all respondents felt the need to get additional information regarding the covid-19 vaccination (100%). This indicates that the information currently available in the community is still lacking. Qualitative data also states that the information circulating in the community actually becomes frightening and disturbing to the public, especially for the elderly. Although the government has prepared an official website for the Covid-19

information center, the dissemination of this information is still inferior to the horrendous news and attracts the attention of the public who have a tendency to distrust the Covid-19 vaccine. This makes public trust in the information provided by health workers is still low (68.5%). In addition, the majority of public health students will only take the covid-19 vaccine if it is required by educational institutions or the government (68.5%). This becomes linear with some

perceptions of previous statements about the importance of vaccines for them.

Public health students in general have a good acceptance rate of the COVID-19 vaccine. However, some indicators still show doubts about the vaccine, namely the effectiveness and information currently circulating. They still doubt the effectiveness of the COVID-19 vaccine and are concerned about the adverse event it causes. In addition, the information regarding the Covid-19 vaccine currently circulating cannot be fully accounted for. This is because most of the available information actually makes people afraid to receive the vaccine (16,17). Some media highlight the symptoms caused by the vaccine rather than the effectiveness of the vaccine.

CONCLUSION

Public health students in general have a good acceptance rate of the COVID-19 vaccine, except in effectiveness aspect. This is because mass media bring the impact of vaccine in physical health rather in negative way. This study illustrates that people with health backgrounds still have doubts about the COVID-19 vaccine. This needs to be immediately corrected by policy makers so that the vaccine Covid-19 can be accepted by the wider community.

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