



DETERMINANTS IMPLEMENTATION OF HEALTH PROTOCOL IN TALANG UBI DISTRICT, PALI REGENCY AFTER THE SECOND DOSE OF COVID-19 VACCINATION

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ABSTRACT

The government has intensively carried out a vaccination program to reduce the risk of transmission of Covid-19. Even though currently most people have received the vaccine, adherence to implementing health protocols should still be carried out as a form of preventing the spread of Covid-19. Behavior in implementing health protocols is caused by various factors. Therefore, it is necessary to do research on the factors that influence this behavior. This study uses a cross-sectional design with primary data obtained through interviews. The research sample was 134 people who were taken using a purposive sampling technique. The analysis was carried out using the Spearman Correlation Test and the Mann Whitney Test, as well as the Multiple Linear Regression Test. The results show that there is a relationship between family income ($p=0.005$), attitude ($p=0.00$), availability of masks ($p=0.027$), availability of hand washing facilities ($p=0.002$), family support ($p=0.000$) and health worker support ($p=0.034$) with the *implementation* of health protocols. Meanwhile, education ($p=0.125$), age ($p=0.163$), and knowledge ($p=0.856$) were not related to implementing health protocols. It is known that the most dominant factor is the availability of handwashing facilities in public facilities ($\beta=0.344$). The public is encouraged to continue to comply with health protocols even though they have been vaccinated to reduce the risk of a spike in cases, and it is hoped that the relevant agencies can monitor the availability of infrastructure so that efforts to prevent the spread of Covid-19 19 can be carried out optimally.

Keywords: Covid-19, Vaccination, Health Protocol, Facilities and infrastructure

Introduction

Covid-19 is a disease caused by SARS-CoV-2. This virus is transmitted from human to human through droplets, aerosols, and fomites from people who have been exposed to Covid-19 (1). In the months since it was discovered in late 2019, this virus has rapidly spread around the world. This prompted WHO (World Health Organization) to declare Covid-19 a Public Health Emergency of International Concern on January 30, 2020, and officially designate this phenomenon as a global pandemic on March 11, 2020.

Based on WHO data, it was found that in 2022, the number of cases of Covid-19 has increased and decreased every month. As of October 21, 2022, there were 623,893,894 confirmed cases of Covid-19 with 6,553,936 deaths and 294,250 new cases within 24 hours (2). Meanwhile, in Indonesia, as of October 22, 2022, there were 6,469,276 confirmed cases, with a total of 158,146 deaths due to Covid-19 (3). Nationally, South Sumatra Province is in 15th position with the highest number of cases, namely 82,503 confirmed cases as of October 4, 2022. Of the 17 districts and

cities, Penukal Abab Lematang Ilir Regency (PALI) is in 8th position with the number of confirmed cases, namely there were 1,173 cases with 88 deaths as of January 2, 2023. Talang Ubi is the capital city and one of the sub-districts that contributed to the Covid-19 case in PALI Regency. Based on data obtained from the PALI District Health Office, Talang Ubi District is the area with the highest number of cases, with 810 confirmed cases and 57 deaths.

As an effort to control the spread of the virus, the Covid-19 Task Force has campaigned for the application of health protocols to the public. However, over time there have been several policy changes, so that on December 30, 2022, the government revoked the PPKM policy and issued Instruction of the Minister of Home Affairs Number 53 of 2022 concerning the prevention and control of Covid-19 during the transition to endemic. Public compliance is very important in overcoming the Covid-19 outbreak. However, you can still find people who do not implement health protocols due to low public understanding of the dangers of the virus and the current situation, which is still in transition towards endemic, thus underestimating recommendations from the government (6). Based on this condition, researchers wanted to know the determinants of implementing health protocols in the community in Talang Ubi District after the second dose of Covid-19 vaccination.

Methods

This research is a quantitative research with a cross-sectional design. The population is all Talang Ubi District Communities who have been vaccinated against Covid-19. While the sample in this study was the people of Talang Ubi District who had been vaccinated with the second dose of COVID-19, there were as many as 134 people who were selected using a purposive sampling technique. The research was conducted in 3 sub-districts with the highest cases in Talang Ubi District, namely Talang Ubi Utara, Talang Ubi Timur, and Bhayangkara Market.

This study uses primary data obtained through interviews using a questionnaire. The data obtained was analyzed using univariate analysis to find out the description of the characteristics of the respondents and research variables, bivariate analysis using the Spearman Correlation test and Mann Whitney test, as well as multivariate analysis using the Multiple Linear Regression test to find out the most influential variables in implementing health protocols in the people of Talang Ubi District after the second dose of Covid-19 vaccination.

Results

Table 1. Characteristics Respondents

| Variable | Total Respondents | |
|------------------------------------|-------------------|------|
| | n | % |
| Gender | | |
| Male | 56 | 41.8 |
| Female | 78 | 58.2 |
| Education | | |
| Not completed in elementary school | 4 | 3 |
| Elementary School | 19 | 14.2 |
| Junior High School | 17 | 12.7 |
| Senior High School | 72 | 53.7 |
| College | 22 | 16.4 |
| Work | | |
| Student | 28 | 20.9 |
| Housewife | 28 | 20.9 |
| Civil Servant | 2 | 1.5 |
| Employee Private | 9 | 6.7 |
| Teacher/Lecturer | 4 | 3.0 |
| Self-employed | 31 | 23.1 |
| Health workers | 1 | 0.7 |
| Farmer | 19 | 14.2 |
| Other | 7 | 5.2 |
| Not Working | 5 | 3.7 |
| Income Family | | |
| <UMR (<Rp. 3.404.177) | 74 | 55.2 |
| ≥UMR (≥Rp. 3.404.177) | 60 | 44.8 |
| Mask Availability | | |
| There isn't | 10 | 7.5 |
| There is | 124 | 92.5 |

The majority of respondents in this study were female, namely 78%. Nearly half, namely 53.7%, have a high school level of education. Based on the work of the respondents, 23.1% worked as entrepreneurs, 20.9% were housewives, and 20.9% were students. More than half of the respondents, namely 55.2%, have a family income <UMR. Where 92.5% of respondents have the availability of masks.

Table 2. Analysis Bivariate Mann Whitney Test

| Variable | n | Median (Min-Max) | Means | p-values |
|--------------------------|-----|------------------|-------|----------|
| Education | | | | |
| Low Education | 40 | 30 (19-37) | 28.85 | 0.125 |
| Higher Education | 94 | 31 (21-39) | 30,22 | |
| Income Family | | | | |
| <UMR (<Rp. 3.404.177) | 74 | 30 (19-37) | 28,77 | 0.005 |
| ≥UMR (≥Rp. 3.404.177) | 60 | 31 (21-39) | 31,10 | |
| Mask Availability | | | | |
| There isn't | 10 | 27.50 (19-34) | 26,40 | 0.027 |
| There is | 124 | 30.50 (21-39) | 30.09 | |

The bivariate results showed a significant relationship between family income ($p=0.005$), the availability of masks ($p=0.027$), and the implementation of the health protocol in the people of Talang Ubi District after the second dose of Covid-19 vaccination. In addition, it was found that education level was not significantly related to implementation of health protocols ($p=0.125$).

Table 3. Analysis Bivariate Correlation Spearman Test

| Variable | Application Health Protocol | |
|--|-----------------------------|-------------------------|
| | <i>p-values</i> | Coefficient Correlation |
| Age | 0.163 | -0.121 |
| Knowledge | 0.856 | 0.016 |
| Attitude | 0.000 | 0.327 |
| Availability of Hand Washing Facilities in Public Facilities | 0.002 | 0.268 |
| Family Support | 0.000 | 0.319 |
| Health Workers Support | 0.034 | 0.183 |

Table 3 shows that there is a relationship between attitude ($p=0.000$), availability of handwashing facilities at public facilities ($p=0.002$), family support ($p=0.000$), and support from health workers ($p=0.034$) and the implementation of health protocols in the community of Talang Ubi District after the second dose of Covid-19 vaccination. Meanwhile, age ($p=0.163$) and knowledge ($p=0.856$) were not significantly related to the implementation of the health protocol in the people of Talang Ubi District after the second dose of Covid-19 vaccination.

Table 4. Analysis Multivariate Multiple Linear Regression Test

| Variable | <i>p-values</i> | Coefficient Correlation | β | R-Square |
|---|-----------------|-------------------------|---------|----------|
| Education | 0.436 | 0.627 | 0.066 | 0.299 |
| Age | 0.577 | -0.016 | -0.050 | |
| Income Family | 0.018 | 1,809 | 0.206 | |
| Attitude | 0.001 | 0.483 | 0.296 | |
| Mask Availability | 0.030 | 2,903 | 0.175 | |
| Availability of Hand Washing Facilities | 0.000 | 1,187 | 0.344 | |
| Support Family | 0.239 | 0.080 | 0.121 | |
| Health Workers Support | 0.018 | -0.303 | -0.244 | |

Factors that are statistically related to the implementation of the health protocol in the people of Talang Ubi Subdistrict after the second dose of Covid-19 vaccination, namely income, attitude, availability of masks, availability of hand washing facilities in public facilities, and family support. From the results of the multivariate analysis, it is known that the most dominant variable is related to the implementation of health protocols in the people of Talang Ubi District after the second dose of Covid-19 vaccination is the availability of hand washing facilities in public facilities ($\beta=0.344$) after being controlled by the variables age, education, and family support.

Discussion

Relationship between Education and Implementation of Health Protocol

Education affects the mindset of an individual, and a person's mindset influences his behavior. Someone with a high level of education will find it easier to understand and receive information, be better able to understand health needs, communicate effectively, and be able to follow instructions so that it influences understanding in behavior (7). However, based on the results of the study, it was found that the level of education was not related to the implementation

of the health protocol in the people of Talang Ubi District after the second dose of Covid-19 vaccination. In this study, people tend to have a high level of education, but people with low education who are aware of the importance of preventing Covid-19 after receiving the vaccine will also affect their behavior in implementing health protocols.

This is in line with research conducted by Mayasari, Ikalius, and Aurora (2021), which states that there is no influence between education and Covid-19 prevention behavior because education is not only obtained from school but can also be obtained from the community, family environment, or media. Basically, education is a factor that influences one's knowledge and actions because knowledge directly influences behavior caused by education.

The absence of a relationship between education and the implementation of health protocols after the Covid-19 vaccination can be influenced by differences in several things, such as differences in perceptions regarding disease risk factors as well as perceptions in carrying out disease prevention. In this case, the people being studied actually have the will and awareness to receive vaccines as a form of prevention against Covid-19, meaning that they have behaved well compared to those around them. People who are aware of their health will understand the dangers of Covid-19, as well as the benefits of implementing health protocols, which will affect their behavior when implementing good health protocols.

Relationship between Age with Implementation of Health Protocol

Changes in behavior through the maturation process occur instinctively or adaptively (9). Increasing age toward adulthood causes individuals in general to make behavioral adjustments to take better actions. Age can affect mindsets and comprehension when learning something, so it is easier to accept changes in behavior, especially in health activities (10).

Based on the results of the study, it was found that age was not significantly related to the implementation of the health protocol in the people of Talang Ubi District after the second dose of Covid-19 vaccination. This is in line with Sari and Budiono's research (2021), which states that there is no relationship between age and Covid-19 prevention behavior. Research by Pratiwi et al., 2020, states the same thing that there is no significant relationship between age and behavior related to the Covid-19 pandemic.

The results of research and findings from several articles show that there is no difference between people with older and younger ages in implementing health protocols. The higher the age does not guarantee the better the behavior, but the emergence of behavior in implementing health protocols after vaccination is also supported by other factors. It is easier for young people to follow government instructions in efforts to prevent Covid-19 and are better able to find and identify information related to Covid-19 because in life they go hand in hand with technological developments when compared to adults or the elderly. People with old age need consistency and

family support in providing education and attention to implementing health protocols in everyday life.

Relationship between Income with Implementation of Health Protocol

Based on the results of research in the income field, it has a significant relationship with the implementation of the health protocol in the people of Talang Ubi District after the second dose of Covid-19 vaccination. The results of this study are in line with research conducted by Dani et al. (2021), which shows that there is a relationship between economic conditions and efforts to prevent Covid-19. Similar research was conducted by Aulia, Amelia, and Hamzah (2022), who stated that there was a relationship between income and behavior towards the Covid-19 health protocol.

Family income is income received by the family or household concerned, either from the head of the family or from family members. Income can determine a person's ability to buy an item. If the income is high, then they are more able to obtain better goods to meet the socio-economic needs of the family (15). Income can also affect behavior and perspective when making a decision to meet their needs. If a person's income is high, he will be better able to facilitate the need to improve his health (16).

The relationship produced in this study means that the higher the family income, the better the implementation of the health protocol. Because it is more possible to be sufficient and meet family needs to implement health protocols. So that this can support and improve the implementation of health protocols

for every family member.

Relationship between Knowledge with Implementation of Health Protocol

From the research results, it was found that there was no relationship between knowledge and the implementation of health protocols in the people of Talang Ubi District after the second dose of Covid-19 vaccination. This study is similar to that of Patimah et al. (2021), who stated that there was no relationship between knowledge of Covid-19 prevention and behavior to prevent the spread of Covid-19. According to Notoatmodjo (2012), many factors can affect knowledge, such as education, age, occupation, and various other factors. It is known that the majority of respondents have a higher education level with their last education being SMA. It is also known that the average public's knowledge regarding health protocols can be said to be good. This is in line with the theory, which states that someone with a higher education level will find it easier to receive information so that they can increase their knowledge (18).

However, even though most people have a high level of education, it does not mean that people with low education also have low knowledge. Education does not always affect knowledge because good knowledge can also be obtained from information through the mass media,

experience, or from other people. Health education experts are of the opinion that someone who has high knowledge but whose practice is still relatively low means that an increase in public knowledge related to health is not matched by an increase in behavior. So that with health education the community is not yet able (able) to behave healthily, but they are only willing (willingness) to behave healthily (19). There is no relationship between knowledge and the implementation of health protocols in the people of Talang Ubi Sub-District after the second dose of Covid-19 vaccination. This shows a positive indication of efforts to prevent Covid-19.

Relationship between Attitude with Implementation of Health Protocol

Attitude can be interpreted as a behavior that is still closed to an object. Attitude is not yet an action but is a willingness or readiness to act (20). In preventing a disease, a good attitude will shape good behavior, and vice versa. This is due to the tendency of individuals to make preparations before carrying out an action (7). Attitude is an important thing that influences action, even though it is not shown in the form of action or behavior (21).

Based on the research conducted, it was found that attitude has a significant relationship with the implementation of health protocols in the people of Talang Ubi District after the second dose of Covid-19 vaccination. These results are in line with research conducted by Reuben et al. (2021) in Nigerian society which shows that there is a relationship between a positive attitude and adherence to behavior in reducing the spread of Covid-19. Someone with a bad attitude will be more at risk for bad behavior than respondents with a good attitude (23). It is known that most people already have a positive attitude. This explains that the community has awareness of implementing health protocols after receiving vaccines such as using masks and washing hands to reduce the spread of Covid-19 and support government policies for preventing Covid-19. This awareness arises because of the stimulation received both from the learning process, communication, and information about Covid-19 and its prevention.

Relationship between the availability of masks with Implementation of Health Protocol

Relationship between the availability of masks and the implementation of health protocols Means are everything that is used as a tool to achieve goals and objectives, tools, media, etc. In an effort to prevent Covid-19, facilities are needed to support behavior, one of which is the availability of masks. From the research results, most people already have masks availability (stock). The availability of supporting facilities, especially those related to health, is urgently needed so that practices or actions can be carried out optimally.

Based on the results of the study, it is known that the variable availability of masks has a significant relationship with the implementation of health protocols in the people of Talang Ubi District after the second dose of Covid-19 vaccination. The results of this study are in line with

research conducted by Irfan et al. (2021), which states that the unavailability of masks has a negative impact on the use of masks in society. Where the increasingly unavailability of masks affects the decrease in the application of health protocols to the compliance community in using masks.

WHO recommends that the use of masks be part of a comprehensive series of efforts to prevent and control the spread of Covid-19. The use of masks has been proven effective in reducing the spread of Covid-19. The availability of masks is also related to the support of influential families in providing and maintaining the availability of masks to support the implementation of the health protocol for family members. The family has an important function and role in maintaining the health of family members, both in terms of financial balance, providing a support system, and controlling health, which influences efforts to prevent Covid-19. So that families are expected to be more sensitive in facilitating so that they can support the implementation of good health protocols in the family environment.

Relationship between Availability of Hand Washing Facilities in Public Facilities with Implementation of Health Protocol

Preventing Covid-19 is of course closely related to the means used to support behavior in preventing Covid-19, one of which is the availability of hand washing facilities. Facilities for carrying out efforts to prevent Covid-19 are important and must be fulfilled in order to carry out health protocols properly. Availability of hand washing facilities in public facilities is one of the basic requirements for implementing Covid-19 preventive behavior in the form of maintaining hand hygiene in public spaces.

Based on the results of the analysis, it is known that the availability of handwashing facilities in public facilities has a relationship and is the most dominant variable influencing the implementation of the health protocol in the people of Talang Ubi District after the second dose of Covid-19 vaccination. The results of this study are supported by the results of Utari's research (2022), which found that the availability of infrastructure influences a person's behavior in implementing health protocols. The research states that the implementation of the health protocol will be carried out well if supporting infrastructure is available, such as the provision of hand sanitizers, places to wash hands, running water, and masks.

Life in society is certainly related to the use of public facilities. Where these places have the potential to become intermediaries for the transmission of Covid-19. In a public space, people have the opportunity to catch and transmit disease to other people through the objects they hold. Therefore, public awareness to wash hands is very important in preventing the spread of Covid-19 (26). In practice, community compliance with carrying out health protocols in public facilities varies. Most people comply with health protocols because they see the people around them comply

with health protocols. The existence of policies and regulations in public facilities related to the prevention of Covid-19 forces people to be disciplined and comply with these regulations because they are afraid of getting sanctions or punishments.

According to Wahyuni (2020), the availability of hand washing facilities in public facilities can increase public knowledge and awareness to wash hands. Public awareness in implementing health protocols will increase if it is followed by an increase in the availability of infrastructure related to health protocols in public facilities. So that the government should increase access to hand washing facilities in every public facility and ensure that these facilities meet the requirements and can function properly.

Relationship between Family Support and Implementation of Health Protocols

Based on the research results, it is known that there is a relationship between family support and the implementation of health protocols in the people of Talang Ubi District after the second dose of Covid-19 vaccination. Similar research conducted by Kundari et al. (2020) stated the same thing that family support has a dominant influence on prevention behavior in the community.

Family support plays a role in prevention efforts because most activities are carried out at home. As it is known that Indonesia is known as a community that works together, provides mutual motivation, and assistance both between communities and families. This is a form that is often carried out by Indonesians, one of which is the prevention of Covid-19. In the field of family health, it is the basic unit for improving, influencing, preventing, and improving the quality of individual health by promoting and preventing disease (28). The family is influential in forming a strong culture and character, especially from health behavior, if the family carries out its health functions and roles optimally so that the spread of disease can be prevented (29).

During the Covid-19 pandemic, families could meet various needs to maintain the health of their family members, either by providing masks, hand washing soap, hand sanitizers, or food ingredients to increase immunity and prevent Covid-19. Apart from being related to the provision of infrastructure related to health protocols. The family also plays a role in reminding other family members to always apply Covid-19 prevention behaviors. Where the better the family support received, the better the implementation of the health protocol. Vice versa, the less family support, the lower the implementation of health protocols. The family becomes a reinforcement and influences decisions in behavior, so that the family has influence in improving and maintaining Covid-19 preventive behavior.

Relationship between Health Workers Support with Implementation of Health Protocol

During the Covid-19 pandemic there were still many ordinary people who did not understand everything related to Covid-19. So support from health workers is needed because they understand

more about Covid-19 compared to the general public. Based on the research results, it was found that the majority of respondents received support from health workers, such as reminding them of the importance of implementing health protocols, providing information, and providing facilities such as masks and hand washing soap or hand sanitizer. However, there are still people who receive the support of health workers but do not implement health protocols as recommended by health workers. There are still people who are ignorant of the information provided because they don't believe it or don't need it, so they ignore it. This research is in line with research (Rizky, 2022), which states that the support of health workers is not significant for Covid-19 prevention behavior.

The flow of information in the midst of the Covid-19 pandemic has made people more vulnerable to receiving invalid information. Most of this exchange of information occurs through social media. Disinformation about the pandemic spreads virally, most often through the WhatsApp application. This is confirmed by the results of a Wendratama survey (2020), which showed that the majority of respondents used the WhatsApp application to disseminate information and they were exposed to Covid-19 hoaxes from the same platform. Information dissemination is often found in WhatsApp groups, the information found can be in the form of forwarded messages. Where in the interaction older people become persons who more often disseminate information in an association group, such as the WhatsApp group (30).

Older people are a group that does not understand the current use of technology, in general, parents use social media to interact, make calls, and send messages to each other. This is what makes it easy to be provoked by the existence of the information that is spread. If the public cannot identify and are less critical in responding to information related to Covid-19, as a result the information will be consumptive and can be misleading.

Community disobedience in implementing health protocols can also be influenced by the way health workers educate people who are still using old methods that are considered boring. So that people refuse to understand the information conveyed by health workers. Information is said to be boring if the essence of the message conveyed is uninteresting, confusing, or can lead to ambiguity so that one's reception will be different from the purpose to be conveyed (31). This has an impact on the opposite behavior, one of which is the implementation of health protocols.

Conclusion

The results showed that the risk factors associated with the implementation of the health protocol in the people of Talang Ubi Subdistrict after the second dose of Covid-19 vaccination were family income, attitude, availability of masks, availability of hand washing facilities, family support, and support from health workers. The most dominant variable related to the implementation of the health protocol in the Talang Ubi Subdistrict Community after the Covid-19

vaccination is the availability of hand washing facilities in public facilities. The suggestions in an effort to improve people's behavior in implementing health protocols are:

1. It is hoped that the Health Office can work together with the government in disseminating information regarding health protocols, increasing access to handwashing facilities in public facilities, and ensuring these facilities meet the requirements and function properly.
2. It is hoped that the Talang Ubi Health Center can provide training to Puskesmas cadres in developing interesting educational media and can empower the community to use social media to disseminate information related to Covid-19.
3. Future researchers are expected to be able to carry out further research by developing methods and adding samples and variables to the research so that a more specific picture can be obtained regarding the implementation of health protocols in the community. Future researchers can expand research subjects that are not limited to people who have been vaccinated with the second dose.

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Conflict of Interest

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