



## Determinants of Non-Compliance With Use of Mask Causing A Surge in Covid-19 Cases (Case Study in Ule Village, Asakota District, Bima City-West Nusa Tenggara)

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### ABSTRACT

**Background:** COVID-19 cases in the world have reached 62,162,592 cases. Based on the Worldometers report, Indonesia is still in the top 10 with the highest number of cases in Asia. In West Nusa Tenggara itself, it is ranked 2nd best in the COVID-19 recovery index, but this does not rule out the possibility that there could be a spike in cases.

**Objective:** to analyze the main factors causing the lack of public awareness in using masks during the COVID-19 pandemic in Ule Village, Asakota District, Bima City.

**Method:** This research is a case study research with a cross sectional design. The population in this study is all the people who live there in Ule Village, Asakota District, Bima City.

**Results:** As many as 55.9% were in a state of non-compliance with the use of masks because it was difficult to breathe (stuffy), they did not believe that Covid-19 was real, there was no need to use a mask if they only left the house for a short distance, it could hinder communication with the POR value = 37,424 (p.value < 0.05) so that the risk of transmission of COVID-19 could occur 37 times in people who do not comply with wearing masks when compared to people who comply with wearing masks.

**Conclusion:** The main factor causing the lack of public awareness regarding the use of masks during the COVID-19 pandemic is that there are still people who feel that using a mask can hinder communication and feel that using a mask causes difficulty in breathing.

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## 1. INTRODUCTION

Coronavirus is a large family of viruses that can cause disease ranging from mild to severe (severe) symptoms. There are two types of coronavirus that are known to cause diseases that cause severe symptoms, such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). (1). Coronavirus Disease 2019 (COVID-19) is a new disease that has never been found (identified) in humans (1)

At the beginning of 2020, COVID-19 began to become a global pandemic and became a world health problem. This pandemic continues to develop until reports of deaths and new cases continue to emerge in various countries around the world. Common signs and symptoms of COVID-19 infection include symptoms of acute respiratory system disorders (such as fever, cough and shortness of breath). The average incubation period is 5-6 days with the longest incubation period being 14 days. Severe cases of COVID-19 can cause pneumonia, acute respiratory syndrome, kidney failure, and even death (1).

The increase in the number of COVID-19 cases is happening quite quickly and there has been spread outside the Wuhan area and other countries. Globally, as of February 16 2020, 51,857 confirmed cases had been reported in 25 countries with 1,669 deaths (CFR 3.2%). According to data from the World Health Organization (WHO) on March 25 2020, as many as 168 countries in the world have confirmed infection with coronavirus (COVID-19).(2). Based on the latest data released by the Center for Systems Science and Engineering (CSSE) by John Hopkins University (JHU) in June 2020, the total positive confirmed cases of COVID-19 worldwide reached 7,026,732, and the death toll reached 403,016(2).

COVID-19 first appeared in Indonesia on March 2 2020 with 2 cases, in fact every day until March 31 2020 confirmed case reports increased, namely 1,528 cases and 136 deaths. Currently, on July 22 2020, there are 91,751 confirmed case reports and 4,459 deaths. For West Nusa Tenggara Province, COVID-19 first appeared on March 24 2020 in East Lombok Regency, namely 1 case, in fact every day in West Nusa Tenggara province itself there has been an increase in cases until now on July 22 the number of confirmed cases is 1,822 cases. and 98 cases of death. The distribution of COVID-19 cases in City Districts in West Nusa Tenggara Province as of July 2020 is as follows: Mataram City (882 cases), West Lombok (489 cases), Central Lombok (152 cases), North Lombok (66 cases), East Lombok (186 cases), West Sumbawa (19 cases), Sumbawa (87 cases), Dompu (44 cases), Bima (38 cases), Bima City (49 cases)(3).

In Bima City, COVID-19 began to enter in April 2020, which was caused by the emergence of several clusters, one of which was the Tablighi congregation cluster with 1 case. However, as time went by other clusters emerged so that the number of COVID-19 cases in Bima City reached 1,430 cases. Due to the spike in the number of positive confirmed cases of COVID-19 that occurred in Bima City, the local government implemented health protocols which were carried out to prevent transmission. However, the stricter the rules that have been implemented, some of the people in Bima City are still often found violating these rules, one of which is the use of masks. There are still many people who think that COVID-19 is not real, so the number of positive confirmed cases of COVID-19 is increasing(4)

## 2. RESEARCH METHODS

This research is quantitative research. It is hoped that researchers can explore and understand the factors that cause respondents not to comply with health protocols, one of which is wearing masks. The type of research carried out was a case study with a cross sectional approach.

The research was conducted in Ule Village, Asakota District, Bima City. This research was conducted in May-July 2020. The population of people living in Ule Village. The sample used in this research was 143 respondents with a sampling technique using simple random sampling. The data collection technique is carried out using a questionnaire which will be distributed to respondents. The data analysis used in this research is the data analysis used in this research, namely univariate and bivariate. This was done to see the relationship between risk factors for non-compliance with mask use and the spike in COVID-19 cases in Bima City.

## 3. RESULTS AND DISCUSSION

**Table 1.** Characteristics of Respondents

Research variable	Frequency (n)	Percent (%)
Gender		
Man	68	47.55
Woman	75	52.44
Age		
< 45 years	83	58.04
≥ 45 years old	60	41.95
Education		
elementary school	27	18.88
JUNIOR HIGH SCHOOL	43	30.07
SENIOR HIGH SCHOOL	19	13.28
College	54	37.76
Work		
Formal	75	52.43
Informal	68	47.55
Difficulty breathing/stuffy		
Yes	82	57.34
No	61	42.66
Don't Believe in Covid-19		
Yes	124	86.71
No	19	13.29
Traveling Without a Mask		

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Yes	69	48.25	
No	74	51.75	
Hindering Communication			
Yes	77	53.84	
No	46	32.16	

**Table 2.** Bivariate Analysis of the Risk of Transmission of COVID-19 Due to Non-Compliance

Research variable	Risk of Transmission of COVID-19				P-Value	OR (CI)
	Infected		Not Infected			
	N	%	N	%		
Difficulty breathing/stuffy						
Yes	22	28.95	60	89.55	0,000	0.047 (0.18-0.120)
No	54	71.05	7	10.45		
Don't Believe in Covid-19						
Yes	66	82.50	58	92.06	0.154	0.406 (0.138-1.197)
No	14	17.50	5	7.94		
Traveling Without a Mask						
Yes	16	20.00	53	84.13	0,000	0.042 (0.019-0.112)
No	64	80.00	10	15.87		
Hindering Communication						
Yes	61	76.25	5	7.94	0,000	37,242 (13,049-106.28)
No	19	23.75	58	92.06		

Based on table 1, it shows that the majority of respondents were female, namely 75 respondents (52.44%) with age < 45 years as many as 83 respondents (58.04%) where the majority of respondents' last education was tertiary, namely 54 respondents (37, 76%) and the majority of respondents also work as formal workers, namely 75 respondents (52.43%).

Table 2 explains that 22 respondents (28.69%) felt it was difficult to breathe/stuffy when using a mask with a p.value of 0.000, which means there is a significant relationship between difficulty breathing (stuffy) and the risk of transmitting COVID-19. 19. The majority of people still do not believe in the existence of COVID-19, namely 66 respondents (82.50%) with a p-value of 0.154, which means there is no relationship between not believing in COVID-19 and the risk of transmitting COVID-19. There were 16 respondents who traveled without wearing a mask (20.00%) with a p.value of 0.000, which means there is a significant relationship between traveling without wearing a mask and the risk of transmitting COVID-19. The last variable is hindering communication, where the majority of respondents felt that 61 respondents (76.25%) found it difficult to communicate when using a mask with a p-value of 0.000, which means there is a significant relationship between traveling without wearing a mask and the risk of transmitting COVID-19.

Based on the results of research conducted by researchers, it is stated that factors that can influence the risk of contracting COVID-19 as a result of not complying with wearing a mask are difficulty breathing (stiffness), traveling without a mask and blocking communication. A person needs time to adapt to wearing a mask to breathe more and harder so that the oxygen in the body can be met optimally(5). The effectiveness of masks in preventing the transmission of Covid-19 depends on how they are used, there are those who use masks without covering their nose and mouth completely, and those who use masks incorrectly.(6). N95, surgical, polypropylene and cotton masks have a higher level of effectiveness than other types of masks. The US Centers for Disease Control and Prevention (CDC) recommends using cloth masks for people who are healthy and not infected with Covid-19, because cloth masks are simpler, more economical and can be used repeatedly compared to surgical masks which can only be used once. This can save on spending on economic needs amidst limited resources(7). This research is different from research conducted by Baragi which stated that the social environment is a determining factor in changes in behavior that occur in each individual or group, the family environment and living environment will shape the behavior of each individual. A good social environment will shape a good person, because a person's behavior and personality are a reflection of the social environment he or she lives in(8). The relationship between public knowledge and compliance with using masks as an effort to prevent Covid-19 causes compliance to be quite closely related to behavior. Notoatmodjo said that there was a theory put forward by Lawrence Green about behavior(9). The factors that influence compliance are as follows: 1. Educational factors. In a simple sense, education is often interpreted as a human effort to develop a personality in accordance with the values in society and culture. In its development, the term education or pedagogy means guidance or help provided deliberately by adults. Furthermore, education is defined as an effort carried out by a person or group of other people in order to become mature or reach a higher level of living in a mental sense. According to Melmambessy Moses, education is a systematic process of transferring knowledge from one person to another according to standards set by experts. With the transfer of knowledge, it is hoped that it can change attitudes, behavior,

thinking maturity and personality maturity into education. According to Tomson, education is the influence of the environment on individuals to produce permanent changes in their behavioral habits, thoughts and character. The higher a person's level of education, the more knowledge they have. On the other hand, insufficient education will hinder the development of a person's attitude towards newly permitted values. Education can be done in two ways, namely formal and non-formal education:

Formal education, is an educational path carried out in schools in general and is structured and tiered consisting of basic education, secondary education, and up to higher education and has regulations that are binding on each individual. 2. Non-formal education, is education that is aimed more at to the wider community from all levels, non-formal education is carried out in several ways, one of which is by providing legal education. The most important thing that must be prioritized in both formal and non-formal education is about how to be a good citizen and what the rights and obligations of citizens are. Instilling legal awareness is the same as instilling cultural values, cultural values can be achieved through education. This effort is the right action to increase legal awareness in society. Education can increase compliance, as long as the education is active education. The goal to be achieved in the educational process is physical and spiritual maturity. Maturity in this sense is if a person is physically large enough and capable, is able to carry out his life duties in accordance with the demands or norms that apply in society, and is responsible for his own actions.

Knowledge Factor Knowledge is the theoretical and practical understanding possessed by humans. The knowledge a person has is very important for that person's intelligence. Knowledge can be stored in books, technology, practices, and traditions. The stored knowledge can undergo transformation if used properly.

Knowledge plays an important role in the life and development of individuals, communities or organizations (10). Knowledge or cognitive is a very important dominant for the formation of a person's actions from experience and research which is based on knowledge. Knowledge is the result of knowing and this occurs after people sense a particular object. According to its function, knowledge is a basic impulse to want to know, to seek reasoning, and to organize one's experiences. The higher the level of knowledge, the better the level of compliance. Legal regulations must be widely displayed and valid. So naturally, this regulation will quickly become known and known to the public. People who violate it do not necessarily mean they are breaking the rules. This can happen because of the public's understanding and knowledge of legal awareness and the regulations that apply in the law itself.

Trust Factors Trust is a belief system or something that is believed to exist or is true for a group of people. A behavior displayed by an individual is mostly based on the beliefs held. An attitude of loyalty to one's beliefs will influence one's decision making. An individual will more easily comply with social norms that are indoctrinated by the beliefs they hold. Obedient behavior based on trust is also caused by heavy rewards and punishments. Trust is an individual's behavior, which expects someone to provide positive benefits. There is trust because the individual who is trusted can provide benefits and do what the individual who gives the trust wants. Trust is the assumption that to give trust to another person you must first receive strong information or knowledge about a rule. Rational factors are strategic and calculative, in other words, people can be trusted because they have special skills or have a professional position. Meanwhile, relational factors are also called affective or morality factors. Relational trust is rooted in good ethics and is based on the goodness of a person.

Environmental Factors The values that grow in an environment will also influence the internalization process carried out by the individual. A conducive and communicative environment will be able to make individuals learn the meaning of a rule and then internalize it within themselves and display it through behavior. An environment that tends to be authoritarian will make individuals experience an internalization process with compulsion. Compliance formed in a conducive environment will make individuals experience great benefits and use them for a longer period of time. Instilling values is carried out by effective communication between the authorized party and the party exercising the authority. This process will base its behavior on the new environment, the adaptation process will be easier. The family environment is the first place where life begins and greatly influences a person's success. Family is able to be a driving force or motivation for someone in achieving a common goal. Motivation means stimulation or encouragement to behave. The social environment is a place where daily activities take place. The social environment is a determining factor in behavioral changes that occur in each individual or group. A good social environment will shape a good person, because a person's behavior and personality are a reflection of the social environment he or she lives in. Based on the description of factors that influence compliance above, it can be concluded that compliance that occurs in individuals can be influenced by external and internal factors. External factors are factors that come from outside a person, such as the social environment. Meanwhile, internal factors are factors that come from within a person, such as personality, education, knowledge and beliefs. c. Dimensions of Compliance with Regulations. Compliance with regulations has dimensions that refer to the dimensions of compliance. Blass explains that someone can be said to be obedient to other people, if that person has three dimensions of obedience related to obedient attitudes and behavior. The

following are the dimensions of compliance, namely: 1. Trust. Belief in the purpose of the rules in question, regardless of feelings or values towards the group or holder of power or supervision. 2. Accept. Accept wholeheartedly an order or request submitted by another person. 3. Do (act). Consciously carry out orders or requests from other people(11).

#### 4. CONCLUSION

The main factor causing the lack of public awareness regarding the use of masks is that people feel that using masks can hinder the communication process and can cause difficulty in breathing.

#### 5. SUGGESTIONS

It would be better if the Ule Village Government, Asakota District, Bima City, West Nusa Tenggara should put up a warning "Mandatory to Use Masks". Because remembering that the main factor causing the lack of public awareness regarding the use of masks is that people feel that using masks can hinder the communication process and can cause difficulty in breathing. Mask control activities in Ule Village must be carried out every day so they must be tightened again. The sub-district government must create a Covid-19 response post. The police have further tightened the process of controlling masks in Ule Village, namely that the hours for controlling masks are from morning to evening and officers are distributed in shifts.

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