CORRELATION OF KNOWLEDGE OF COMORBID FACTORS AS A RISK FACTOR OF COVID-19 SEVERITY WITH BEHAVIOR RELATED TO COVID-19 PREVENTION IN MEMBERS OF CHRONIC DISEASE MANAGEMENT PROGRAM IN BANGKALAN

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ABSTRACT

Introduction: Knowledge about COVID-19 is very important for everyone during this pandemic. This is related to efforts to break the chain of the spread of the COVID-19 virus. Moreover, many deaths caused by this virus are experienced by many people with comorbidities.

Purpose: This research study was conducted to know the relationship between knowledge of comorbid factors as the main risk factor for the severity of COVID-19 and behavior related to COVID-19 prevention among members of the Chronic Disease Management Program (PROLANIS) in Bangkalan Regency.

Method: This study uses quantitative methods. This type of research is observational with a cross-sectional. This sampling used a simple random sampling technique and the data analysis used in this research is the Spearman correlation test.

Result: From the results of the analysis, it is known that there is a relationship between knowledge about comorbid factors as the main risk factor for the severity of COVID-19 with behavior related to preventing COVID-19 among members of the Chronic Disease Management (PROLANIS) program in Bangkalan Regency, as evidenced by a p-value of $0.000 < 0.05$. The correlation coefficient value of 0.619 is included in the strong category.

Conclusion: There is a strong relationship between knowledge about comorbid factors as the main risk factor for the severity of COVID-19 and behaviors related to preventing COVID-19 among members of the Chronic Disease Management (PROLANIS) program in Bangkalan Regency.

Keyword: Knowledge, Comorbidity, Severity of COVID-19, COVID-19 Prevention, Behavior, PROLANIS

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INTRODUCTION

Knowledge is the result of knowing. Knowledge occurs after someone makes sense of one particular object. With this knowledge, a person has a basis for making decisions and determining an action against the problems. Knowledge is divided into factual knowledge, conception, procedural knowledge, and metacognitive knowledge. This knowledge belongs to the domain of behavior.[1]

An individual will adopt a behavior if he first knows the meaning and benefits of the behavior. The indicators used to determine knowledge or health awareness are about illness and disease, maintaining health and a healthy way of life, and knowledge about environmental health.[2] Knowledge about illness and disease is everything related to the disease, one of which is a risk factor for the occurrence of the disease. Risk factors for disease occurrence can consist of the characteristics of the individual, namely age and gender, and can also be due to comorbid factors in the individual.[3]

Comorbid factors or comorbidities mean comorbidities, describing the condition that other diseases are experienced apart from the main disease. Comorbidities harm health status as well as physical and cognitive function. And also, with aging, comorbidities increase markedly because the frequency of chronic disease in individuals increases with age.[4]

In the current COVID-19 pandemic, individuals with comorbid factors such as diabetes, hypertension, and other congenital diseases are more highlighted and paid attention to. The increase in the number of COVID-19 cases took place quite quickly, spreading to various countries fairly quickly. Indonesia reported its first case on March 2, 2020. Cases are increasing and spreading rapidly throughout Indonesia. As of March 6, 2021, the Ministry of Health reported 1,368,069 confirmed cases of COVID-19, with 37,026 deaths.[5]

in these individuals. The sample used is a member of the Chronic Disease

Some people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without special treatment. Meanwhile, the elderly and those with medical problems such as cardiovascular disease, diabetes, and chronic respiratory disease are at risk for severe COVID-19 disease.[6] In a study in a hospital of the total number of deaths in people suffering from COVID-19, it was found that 83.3% of COVID-19 patients had comorbid factors, including diabetes and hypertension.[7] Therefore, there is a need for education about behavior related to preventing COVID-19 in patients who have comorbid factors.[8]

The knowledge and education that can be provided are that COVID-19 can be transmitted from human to human through close contact and droplets. People who are at risk of contracting this disease are people who are in close contact with COVID-19 patients, including those who care for COVID-19 patients.[9]

Standard recommendations to prevent the spread of infection are regular hand washing, practicing cough and sneezing etiquette, and avoiding direct contact with anyone showing symptoms of respiratory diseases, such as coughing and sneezing.[10]

In maintaining one's health, in this case, prevention related to COVID-19, two factors play an important role in influencing health: behavioral and non-behavioral factors.[1] In maintaining one's health, in this case, prevention related to COVID-19, two factors play an important role in influencing health: behavioral and non-behavioral factors.[2] This knowledge also involves knowledge about oneself, which can be done by understanding the illness and disease. Therefore, this study took samples of people with comorbid factors to measure their level of knowledge about themselves, namely in the form of knowledge that patients with comorbid factors have a risk of COVID-19 severity, which will later be associated with behavior related to COVID-19 prevention
Management Program (PROLANIS), where this program is under the auspices of

the BPJS Kesehatan Branch Office for Primary Service Management. This PROLANIS targets all BPJS Kesehatan participants with chronic diseases (Type 2 Diabetes Mellitus and hypertension).[11] The sample of PROLANIS members taken were PROLANIS members in Bangkalan Regency because knowledge about COVID-19 was still lacking, which increased the number of COVID-19 incidents in Bangkalan Regency.[12]

Research on knowledge related to efforts to prevent Coronavirus Disease (COVID-19) has been carried out previously. There is a significant relationship between knowledge and behavior related to efforts to prevent COVID-19.[13] However, research to find out about the knowledge that comorbid factors are the main risk factors for the severity of COVID-19 related to COVID-19 prevention efforts has never been done before in this particular case the sample used is people with high-risk factors, namely members of PROLANIS (Chronic Disease Service Program). The magnitude of the response from the public to the COVID-19 case is the basis for this study to identify the knowledge of people with comorbid factors that they are at high risk for the severity of COVID-19 and its relation to behavior related to efforts to prevent transmission of COVID-19.

This study aims to determine the relationship between knowledge that comorbid factors are the main risk factors for the severity of COVID-19 and behavior related to COVID-19 prevention among members of the Chronic Disease Management Program (PROLANIS) in Bangkalan Regency.

METHOD

This study uses quantitative methods. This type of research is observational with a cross-sectional approach. The population in this study were all members registered in the chronic disease management program (PROLANIS) at the first-level health who were knowledgeable in a good category, namely as many as 19 people

facility in Bangkalan Regency, totaling 54 people. The sample size was determined by the Slovin formula so that a sample of 41 people was found. The sample in this study were members of the PROLANIS program. Where PROLANIS members are patients who suffer from chronic diseases (such as diabetes and hypertension) with the inclusion criteria: 1) All members of the PROLANIS program at first-level health facilities in Bangkalan Regency. 2) Patients with chronic diseases (such as diabetes and hypertension) who are registered as members of the PROLANIS program. 3) Willing to be respondents in this research. This research was conducted in Bangkalan Regency, Madura, in August – November 2021. The data analysis used in this study used Spearmen correlation test analysis. This test was used to see whether there was a relationship between the knowledge that comorbid factors were the main risk factor for the severity of COVID-19 and the behavior related to preventing COVID-19 among members of the Chronic Disease Management Program (PROLANIS) in Bangkalan Regency.

RESULTS
Table 1 Knowledge Table of Members of the Chronic Disease Management Program (PROLANIS) in Bangkalan Regency

Knowledge	Frequency	%
Insufficient	0	0
Sufficient	22	53,7
Good	19	46,3
Total	41	100.0

Source: Research Results in 2021

Table 1 shows that most of the members of the Chronic Disease Management Program (PROLANIS) in Bangkalan Regency in this study were knowledgeable about comorbid factors as the main risk factor for the severity of COVID-19 with a sufficient category of 22 people (53.7%) and those

(46.3%). The following are responses from members of the Chronic Disease

Management Program (PROLANIS) in Bangkalan Regency for each statement on knowledge:

Table 2 Behavior of Members of the Chronic Disease Management Program (PROLANIS) in Bangkalan District

Behavior	Frequency	%
Insufficient	4	9,8
Sufficient	16	39,0
Good	21	51,2
Total	41	100.0

Source: Research Results in 2021

Table 2 shows that most of the members of the Chronic Disease Management Program (PROLANIS) in Bangkalan Regency in the study had relatively good behavior in preventing COVID-19 disease, namely 21 people (51.2%) and 16 people (39%) with moderate behavior while 4 other people (9.8%) behave classified as less. Following are the responses of PROLANIS Program members in Bangkalan Regency for each statement on behavior:

Table 3 Relationship Between Knowledge of Comorbid Factors as a Major Risk Factor for Severity of COVID-19 and Behaviors Related to COVID-19 Prevention among members of the Chronic Disease Management (PROLANIS) program in Bangkalan Regency

Knowledge	Behavior			Spearman rho
	Insufficient	Sufficient	Good	
Insufficient	-	-	-	
Sufficient	4 (18,2%)	13 (59,1%)	5 (22,7%)	p-value= 0,000
Good	0 (0%)	3 (15,8%)	16 (84,2%)	r = 0,619
Total	4 (9,8%)	16 (39%)	21 (51,2%)	

Source : Processed Questionnaire Result

Table 3 shows that of 100% of respondents with sufficient knowledge with insufficient behavior, 18.2%, respondents with sufficient knowledge with sufficient

discussion includes research results with theoretical concepts from previous research.

behavior, 59.1%, and respondents with sufficient knowledge with good behavior, 22.7 %. Respondents with good knowledge and sufficient behavior there are 39%, and respondents with good knowledge and good behavior, are 51.2%.

The results of the Spearman rank test obtained a p-value of 0.000 (<0.05), so it can be interpreted that there is a relationship between knowledge of comorbid factors as the main risk factor for COVID-19 severity and behavior related to COVID-19 prevention in members of the Chronic Disease Management program (PROLANIS) in Bangkalan Regency. The correlation coefficient value of 0.619 is included in the strong category, meaning that there is a strong relationship between knowledge of comorbid factors as the main risk factor for COVID-19 severity and behavior related to COVID-19 prevention among members of the Chronic Disease Management (PROLANIS) program in Bangkalan Regency.

DISCUSSION

The Coronavirus (SARS-CoV-2) transmission in the human body causes pneumonia and flu-like symptoms. These include cough, fever, fatigue, shortness of breath, and no appetite.[5] However, unlike influenza, the coronavirus can develop rapidly, resulting in more severe infections, organ failure, and death.[13] This emergency condition especially occurs in patients with previous health problems.[14] This is what makes COVID-19 so dangerous and can cause death.[15]

This discussion will describe the meaning of the research results conducted on the relationship between the level of knowledge and the behavior of COVID-19 patients regarding the COVID-19 disease, carried out on members of the Chronic Disease Management (PROLANIS) program in Bangkalan Regency. This

1.   Knowledge of Respondents

Based on the results of the study showed that most of the members of the Chronic Disease Management Program

(PROLANIS) in Bangkalan Regency in this study were knowledgeable about comorbid factors as the main risk factor for the severity of COVID-19 with a sufficient category of 53.7% and those who were knowledgeable in a good category were as many as 53.7%. 46.3%. These results are almost the same as those of Yanti et al., where in the study, individuals with good knowledge dominated the most, namely as much as 70%.[16]

Coronavirus can easily spread and infect anyone regardless of age. Efforts to break the chain of the spread of COVID-19 require good understanding and knowledge from all elements, including the community. Knowledge about COVID-19 disease is very important so as not to cause an increase in the number of cases of COVID-19. Knowledge of COVID-19 patients can be interpreted as the result of knowing from the patient about his illness, understanding his illness, ways of prevention, treatment, and complications.[14]

2.   Behavior of Respondent

Based on the results of the study showed that most of the members of the Chronic Disease Management Program (PROLANIS) in Bangkalan Regency in the study had relatively good behavior in preventing COVID-19 disease, namely 21 people (51.2%) and 16 people (39 people with moderate behavior) while the other 4 (9.8%) behaved poorly. This result is in line with research conducted in Wonosobo Regency, in which this study most of the individuals studied behaved in a good category, namely 95.8%.[10]

Good behavior can be an effort to prevent the spread of COVID-19.[17] Health behavior is influenced by many factors, including knowledge, perception, emotion, motivation, and environment.[18] Exploration of public health behavior can be seen from level for being exposed to the coronavirus Virus, which can lead to death. Although the data shows certain groups, such as the young group, have a better immune system than the elderly and people with chronic

various components, including perceptions of disease susceptibility, perceptions of obstacles in prevention efforts, perceptions of benefits, encouragement, and individual perceptions of their abilities to carry out prevention efforts.[19]

3.   The Relationship Between Knowledge of Comorbid Factors as a Major Risk Factor for the Severity of COVID-19 and Behaviors Related to COVID-19 Prevention

Disease prevention measures are an important component of health care. Preventive action involves health promotion activities, including special health education programs designed to help clients reduce the risk of illness, maintain maximum function, and promote good health-related habits.[20]

Based on the results of the study, it is known that of 100% of respondents who have sufficient knowledge with insufficient behavior, there are 18.2%, respondents with sufficient knowledge with sufficient behavior, 59.1%, while respondents who have sufficient knowledge with good behavior as much as 22.7%. Respondents with good knowledge and sufficient behavior there are 39%, and respondents with good knowledge and good behavior, are 51.2%.

The results of this study are the same as those of Purnamasari and Raharyani, where out of 100% of highly knowledgeable individuals, 96.9% have good behavior in preventing COVID-19.[21] Efforts to break the chain of the spread of COVID-19 do require a good understanding and knowledge from all elements of society. People who have good knowledge also have good attitudes and behavior.[22] Everyone has the potential to be infected with the coronavirus, but certain groups of people have a higher risk

diseases, but that does not mean the younger group is unlikely to be affected. Coronavirus can attack anyone from infants, children, and adults to the elderly. This means that everyone must be aware of

this COVID-19 disease so that the spread of the virus can be suppressed and stopped.[6] The results of the Spearman rank test obtained a p-value of 0.000 (<0.05), so it can be interpreted that there is a relationship between knowledge of comorbid factors as the main risk factor for COVID-19 severity and behavior related to COVID-19 prevention in members of the Chronic Disease Management program (PROLANIS) in Bangkalan Regency. This study's results align with research conducted in Potorono Banguntapan Hamlet, Bantul DI Yogyakarta, where the study found a significant relationship between knowledge and COVID-19 prevention behavior.[15]

COVID-19 can be transmitted from human to human through droplets and transmitted through the air or airborne.[23] People most at risk of contracting this disease are people in close contact with COVID-19 patients, including those who care for COVID-19 patients. Standard recommendations to prevent the spread of infection are regular hand washing with soap and clean water, practicing cough and sneezing etiquette, avoiding direct contact with livestock and wild animals, and avoiding close contact with anyone showing symptoms of respiratory illness such as coughing and sneezing. In addition, implementing Infection Prevention and Control (PPI) in health facilities, especially emergency units.[5]

The limitation of this research is that many factors influence the variables studied by the researcher. For example, the knowledge variable is influenced by the education level of each respondent, the culture of each respondent, and the experience of each respondent itself, for the behavioral variable is influenced by several factors such as the environment and the attitudes and behavior of health workers who are a group. Reference from the behavior of each respondent itself.

CONCLUSIONS

Based on the analysis and discussion in the previous chapter, it can be concluded as follows:
1. Most members of the Chronic Disease Management Program (PROLANIS) in Bangkalan Regency in this study were knowledgeable about comorbid factors as the main risk factor for the severity of COVID-19, with a sufficient category of 53.7%.
2. In the study, most of the members of the Chronic Disease Management Program (PROLANIS) in Bangkalan Regency had relatively good behavior in preventing COVID-19, which was 51.2%.

There is a relationship between knowledge about comorbid factors as the main risk factor for COVID-19 severity and behavior related to COVID-19 prevention among members of the Chronic Disease Management (PROLANIS) program in Bangkalan Regency, as evidenced by a p-value of 0.000 <0.05. The correlation coefficient value of 0.619 is included in the strong category, meaning that there is a strong relationship between knowledge of comorbid factors as the main risk factor for COVID-19 severity and behavior related to COVID-19 prevention among members of the Chronic Disease Management (PROLANIS) program in Bangkalan Regency.

SUGGESTIONS

Based on the conclusions above, some suggestions can be made as follows:
1. For the wider community, it is hoped that they will continue to comply with the health protocols that the Government has implemented and make more efforts to increase body .resistance by maintaining diet, activity patterns, and worship patterns according to their respective beliefs.
2. Related agencies are expected to be energized and energized by giving

warnings and counseling to the public about COVID-19 and how to take preventive measures to prevent and break the chain of transmission.

Further researchers, it is hoped that they can conduct further research on other factors related to COVID-19 prevention behavior, such as economical, social, and environmental factors.

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