SINOMICS JOURNAL
International Journal of Social Science, Education, Communication and Economics

The Relationship Between Health Belief Model on Covid-19 Preventive Behavior in The Elderly

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Abstract

Indonesia is one of the countries affected by the COVID-19 pandemic. The elderly are the group most at risk for morbidity and mortality due to COVID-19. West Aceh Regency is one of the areas with confirmed cases of COVID-19. This study aims to analyze the behavior of preventing COVID-19 in the elderly group. This type of research is descriptive analytic, with a quantitative approach. The sampling technique used was total sampling. Data collection techniques using a questionnaire instrument. Data analysis in this study used three analyzes, namely univariate, bivariate, and multivariate. The results showed that 69.8% of the elderly with less Perceived Susceptibility but had good COVID-19 prevention. 64.7% of the elderly with good Perceived Severity but have less prevention. 63.6% of respondents have good Perceived Benefits as well as COVID-19 prevention. 69.1% of respondents have less Perceived Barriers but have good COVID-19 prevention and 69.1% have good Cues to action plus good COVID-19 Prevention. The most dominant factors that can be used in COVID-19 prevention are Perceived Severity with an OR value of 2.77 and Perceived Barriers with an OR value of 2.76. The Health Belief Model has a relationship and can cause behavioral changes in preventing the potential for COVID-19 in the elderly.

Keywords: Preventive Behavior, COVID-19, Health Belief Model

INTRODUCTION

The World Health Organization (WHO) designated the Corona virus as a pandemic on March 11, 2020. The status of a global pandemic or epidemic indicates that the spread of COVID-19 is taking place so quickly that almost no country in the world can ensure that they can avoid the corona virus. hue. This has led to various health policies and protocols being established by all countries to deal with the widespread spread of this virus.[1]

The first case of COVID-19 in Indonesia was announced on March 2, 2020, and after that the transmission of this virus became more widespread in various regions. The condition of COVID-19 in Indonesia as of August 29, 2020 was 169,195 people and 122,802 people recovered, and 7,261 people died. The increase in cases on this date is the highest increase in cases in a day with a total of 3,308 cases from August 28, 2020, which is 165,887 cases.[2]

The increase in the number of COVID-19 cases occurred in a short time and required immediate treatment. This virus can easily spread and infect anyone regardless of age. Several groups of people have a higher risk level for exposure to COVID-19 that can lead to death.[3] Research conducted by Siagian in analyzing groups at high risk of being infected with COVID-19 showed that the elderly with co-morbidities were one of the most affected groups[4]. risk of contracting COVID-19. In this pandemic era, the elderly group is the group most at risk of experiencing severity/morbidity and mortality due to COVID-19 disease, this is because the work function of the immune system has decreased and is accompanied by various high comorbidities, such as cardiovascular disease, diabetes mellitus. , chronic respiratory disease and hypertension.[5] Besides that, the negative behavior of the elderly

towards healthy living is quite worrying where a quarter of the elderly belong to the group of active smokers, and this situation will worsen their health condition.[6]

West Aceh Regency is an area that has been confirmed positive for COVID-19, where the total cases as of August 29, 2020 amounted to 15 cases, spread over two subdistricts, namely Johan Pahlawan sub-district and Meurebo sub-district with 4 deaths, with an average group of positive infected with age range > 50 years.[2] This condition should be able to be handled properly because of various programs that have been set by the government, but the effectiveness of the program must also be in line with the awareness of the community's own behavior towards preventing the transmission of COVID-19. Human behavior is the biggest determinant factor affecting the degree of human health, so that the supporting factors for positive behavior towards the program are very important indicators and must be owned by the community.[7]

Preliminary studies of several elderly people in the West Aceh Regency area showed negative behavior towards preventing the transmission of COVID-19, where the elderly still spent time in the coffee shop together, smoked and were also exposed to secondhand smoke from other shop visitors. masks as stipulated in the health protocol for the elderly during this pandemic. The above phenomenon indicates an individual gap in preventing the transmission of COVID-19, so it is very important to scientifically study the behavior of the elderly through the Health Belief Model application in West Aceh Regency. This study aims to analyze the preventive behavior of COVID-19 in the elderly group which includes an assessment of vulnerability to COVID-19, an assessment of the seriousness of COVID-19, an assessment or belief in the perceived advantages and disadvantages of taking preventive measures against COVID-19, assessing the on self-confidence in the ability to take action and the beliefs they have or encourage COVID-19 prevention measures, so that the factors behind the preventive behavior will be obtained. COVID-19 in the elderly.

METHOD

This research was conducted using a descriptive analytic approach with a cross-sectional design. The sampling method used is total sampling. This research was conducted in two sub-districts in West Aceh: Johan Pahlawan District and in Meureubo. The location was chosen because it has a high percentage of elderly people suffering from COVID-19. In data collection, there are two types of instruments used, namely questionnaires and interviews by applying health protocols. The data collection process was carried out by the researcher by giving prior approval to the sample. They were asked to sign informed consent and were expected to meet the inclusion and exclusion criteria. The inclusion criteria were: they were elderly; they must agree to implement health protocols; and they live in the sub-district of Johan Pahlawan or in the sub-district of Meureubo.

Data analysis in this study used 3 analyzes, namely univariate, bivariate, and multivariate. Univariate analysis is presented in tabular form so that the distribution of frequencies or different proportions of each studied variable can be seen and then analyzed. Bivariate analysis is presented in the form of cross tabulation using chi-square statistical test, while for multivariate analysis using multiple logistic regression statistical test which aims

to see how much influence the Health Belief Model has on the prevention of COVID-19 in the elderly.

RESULTS

Johan Pahlawan sub-districts and Meureubo sub-districts are 2 sub-districts located in the center of Meulaboh city. Johan Pahlawan sub-district has one village and Meurebo sub-district has 26 villages. From the two sub-districts, there are 4 villages with high COVID-19 cases, namely Lapang, Ujong Baroh, Rundeng and Gunoeng Villages. Kleng. Most respondents came from Guneong Kleng Village with a total of 50 respondents.

Table 1 shows the results of a bivariate analysis of the relationship between the Health Belief Model and COVID-19 preventive efforts. The calculation results show that p value <0.05 on Perceived Susceptibility, Perceived Severity, Perceived Benefits, Perceived Barriers and Cues to Action with Preventive COVID-19. Variables that have p value < 0.025 which can be continued to multivariate analysis are Perceived Susceptibility, Perceived Severity, Perceived Barriers and Cues to action.

Table 2 shows R2 is 35.4%. This means that 35.4% of the Health Belief Model factors consisting of Perceived Susceptibility, Perceived Severity, Perceived Barriers and Cues to Action contribute to the prevention of COVID-19. The results of the F test show that the p value is 0.001 at 5% alpha. It is hereby stated that this model is suitable for preventing COVID-19. The logistic regression test is jointly related between Perceived Susceptibility, Perceived Severity, Perceived Barriers and Cues to action with COVID-19 prevention, so that the regression model Y = -1.628 + 1.046 (Perceived Susceptibility) + 0.993 (Perceived Severity) + (-0.981) Perceived Severity + 2,198 (Cues to action).

Table 1. Relationship of Health Belief Model with Preventive COVID-19

	Preventif COVID-19					
Variabel	**Kurang**		**Baik**		***p value***	**OR**
	f	**%**	**f**	**%**		
Perceived Susceptibility						
Not good	32	30,2	75	69,8	0,001	2,7
Good	58	53,9	49	46,1		
Perceived Severity						
Not	43	39,8	64	60,2	0,01	2,77
Good	69	64,7	38	35,5		
Perceived Benefits						
Not Good	18	37,4	29	62,6	0,026	1,77
Good	22	47,4	30	63,6		
Perceived Barriers						
Not Good	33	30,9	74	69,1	0,001	2,76
Good	59	55,3	48	44,7		
Cues to action						

Not Good	50	47,2	56	52,8	0,017	0,5
Good	33	30,9	74	69,1		

Table 2. Multivariate Analysis

Health Belief Model	***B Coeficient***	***p value***	**Exp (B)**	**R^2**
Perceived Susceptibility	1,046	0,001	2,846	0,3
Perceived Severity	0,993	0,001	2,700	
Perceived Barriers	-0,981	0,003	0,375	
Cues to action	2,198	0,001	9,005	
Constant	-1,628			

DISCUSSION

Awareness is needed to suppress the spread of COVID-19 in every individual. The Health Belief Model approach can be used to predict preventive health behaviors as well as responses, including COVID-19 prevention. The health belief model is a set of one's perceptions about the threat of a disease so that it causes behavioral changes to be healthy.[8] The construct has several elements contained in the self-efficacy group (self-confidence).[13] To measure the level of confidence in changing healthy behavior in order to avoid contracting a disease can use several questions which include: (1) Perceived susceptibility (a person's belief about his or her susceptibility to a disease, in this study COVID-19), (2) Perceived severity (a person's belief about the severity of his or her condition when it is already diagnosed). exposed to a disease, in this study COVID-19), (3) Perceived benefits (one's perception of the benefits obtained from sports activities to ward off chronic diseases, in this study COVID-19), and (4) Perceived barriers (one's perception of obstacles obtained when doing sports).[14]

Old age is a phase of declining intellectual and physical abilities, which begins with some changes in life. The immune system of the elderly decreases due to the aging process. As they age, their defenses against foreign organisms weaken, making them more susceptible to various diseases such as cancer and other infectious diseases. This postulate emphasizes that the elderly have a decreased ability to protect themselves from foreign cells or intruders, so that the body cannot distinguish between normal cells and normal cells abnormal. This causes an antibody attack that leads to degenerative diseases.[16]

Perceived susceptibility refers to a person's subjective perception of the risks of his health condition. In the case of medical illness, these dimensions include acceptance of the results of the diagnosis, personal estimates of the presence of resusceptibility (sensitivity), and susceptibility to disease in general.[17] The results of previous studies stated that Perceived susceptibility relates to closely related to behavioral changes in certain groups. This study

obtained that the Perceived susceptibility of the elderly can change the behavior of the elderly in preventing COVID-19. This is because the Perceived susceptibility carried out provides diagnostic results and provides the opportunity for the elderly to be able to feel the risk if COVID-19 disease occurs. The susceptibility of the COVID-19 disease is an urgent need to be immediately addressed by the government so that it is cut off chain of transmission.[18]

Perceived severity is a feeling about the seriousness of a disease, including evaluation of clinical and medical consequences (for example, death, disability, and illness) and possible social consequences (such as effects on work, family life, and social relationships)[19]. Many experts combine the two components above as a perceived threat.[20] Other studies have found perceived severity in COVID-19 patients so that evaluation activities for clinical and medical consequences will lead to perceived seriousness and need to be prevented.[21] This study provides There are several evaluation activities that can be carried out by the elderly in preventing COVID-19. Other studies also provide some education related to Perceived severity which can prevent the occurrence of certain diseases.[22]

Perceived benefits is the stage where you can feel the benefits of the behavior performed. This can encourage to produce a force that supports behavior change.[23] This depends on one's belief in the effectiveness of the various available efforts in reducing the threat of disease, or the perceived benefit in taking these health efforts.[24] When a person demonstrates a belief in susceptibility and seriousness, it is often not expected to accept any recommended health measures unless they are deemed effective and appropriate.[25] If they can feel the benefits they receive, the elderly are serious about preventing COVID-19 and supporting government programs to break the chain of transmission of COVID-19.

Perceived barriers or perceived barriers to change are barriers faced and found in taking Action.[26] Potentially negative aspects of a health effort (such as uncertainty, side effects), or perceived barriers (such as worrying about suitable, displeased, nervous), which may serve as an impediment to recommending a behavior.[27] This study found that barriers experienced by the elderly affect the prevention of COVID-19. The elderly belief that COVID-19 is very dangerous for humans has led to actions in health efforts and implementing health protocols.

Cues to action is a cue for someone to take an action or behavior. Signs in the form of external and internal factors, for example messages in the mass media, advice or suggestions from friends or other family members, sociodemographic aspects such as education level, living environment, parental care and supervision, association with friends, religion, ethnicity, economic, social, and cultural conditions.[28] This study proves that good cues to action can increase preventive behavior against the spread of COVID-19.

CONCLUSION

This study concludes that the Health Belief Model can lead to behavioral changes in preventing the potential for COVID-19 among the elderly. The most dominant factor that can be used in preventing COVID-19 in the elderly is the Perceived Severity factor with an OR value of 2.77 and Perceived Barriers with an OR value of 2.76.

SUGGESTION

It is recommended that the prevention of COVID-19 in the elderly can be done with the Health Belief Model (HBM). Also, the attention of various related parties is highly expected.

ACKNOWLEDGEMENT

The author would like to thank the Chancellor of Universites Teuku Umar who has provided funding for this research, the West Aceh District Health Office, the Johan Pahlawan and Meureubo Work Area Health Centers and Lansi who are willing to be respondents in this study.

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