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RESEARCH ARTICLE

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The Impact of the Health Belief Model Booklet Intervention on Behavior about Preventing High Risk of Pregnancy

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ABSTRACT

Every pregnant woman has the risk of experiencing childbirth complications with various impacts including death, morbidity, disability. The objective of this study is to determine the impact of the health belief model booklet-based intervention on the prevention of high-risk pregnancy behavior in Merak Urak District, Tuban Regency. This type of research was a quasi experimental study using a post test with control group design, to determine the effect of an intervention using the Health Belief Model based booklet on prevention of high risk pregnancy behavior. The subjects in this study were all 60 pregnant women in the District of Merak Urak, Tuban Regency, selected by cluster sampling. Data were collected using an instrument in the form of a questionnaire, then analyzed by Manova test.

Keywords: health belief model; booklet; health education; high-risk pregnancy

INTRODUCTION

Background

The degree of public health in a country is determined by several indicators, one of which is the maternal mortality rate (MMR). According to a survey conducted by WHO (World Health Organization)⁽¹⁾ in 2011, maternal mortality in developing countries is still relatively high. The MMR ratio in developing countries reaches 450 mothers per 100,000 live births. Compared to other countries in ASEAN, the maternal mortality rate in Indonesia is still relatively high. One of the targets in the MDGs is to reduce maternal mortality from 1990 to 2015 by 75%, and globally, a reduction of 45% was achieved, from 380 / 100,000 live births to 210 / 100,000 live births. The maternal mortality rate in East Java has tended to decline in the last three years. Based on the 2016 SUPAS (Intercensal Population Survey)⁽²⁾, the target for MMR is 305 per 100,000 live births. In 2016, MMR in East Java reached 91.00 per 100,000 live births. This figure is higher than the 2015 MMR which reached 89.6 per 100,000 live births.

Other data from the National Health Indicator Survey (SIRKESNAS)⁽³⁾ in 2016, showed that the coverage of pregnant women who examined for pregnancy and childbirth in health facilities, only reached around 74.7%. That is, there are still 25% of mothers with fetal growth and development that are not monitored by health workers (Media Indonesia 2018). Data from the performance of the Ministry of Health of the Republic of Indonesia, shows that the maternal mortality rate decreased from 4,999 in 2015 to 4,912 in 2016 and in 2017 (trimester I) there were 1,712 cases⁽⁴⁾. Data from the results of community service activities in October 2015 by lecturers of Poltekkes Kemenkes Surabaya in the area of the Palang Health Center, showed that of 160 pregnant women, 58 of them had anemia. Data from the Merak Urak Community Health Center shows that in 2018 there were 167 pregnant women, and 40 of them were pregnant with high risk. This number represents the highest number of high-risk pregnant women in Tuban District.

Every pregnant woman has the risk of experiencing childbirth complications with various impacts including death, morbidity, disability. One form of efforts that can be done to overcome the problem of ignorance of pregnant women about high-risk pregnancies is by providing early health promotion, about the

high risk of pregnancy. This is very necessary in order to increase the understanding, attitudes and positive behavior of pregnant women in facing their pregnancy. Information delivery activities that have been carried out are related to health care programs for pregnant women, in general using the classical lecture method.

This allows the weak effectiveness of the delivery of information about the high risk of pregnancy, as evidenced by the results of Teresia et al. (2016), that out of 100 pregnant women who take the class of pregnant women, the proportion of pregnant women who have a good level of knowledge in the good category is only 10.5%; while among mothers who did not attend the class of pregnant women, the proportion of mothers with a good level of knowledge was 9.5%.

In community service activities in 2018 regarding early detection of pregnancy, out of 140 pregnant women, 41.4% of them have knowledge and are skilled in detecting in sufficient categories, so that in health education activities, other methods are needed using media that is in accordance with the character pregnant mother.

Preliminary study results show that pregnant women need media information about high risks in pregnancy in the form of booklets. This media was chosen because the booklet contained a lot of information that was presented and was equipped with pictures that made understanding easier. In addition, booklet layouts can be designed with a variety of colors, typography and photos that support, so it becomes interesting to read.⁽⁵⁾

The Health Belief Model was chosen as the basic theory used to explain broadly the causes of failure of pregnant women to detect high risks in pregnancy, and as a basis for changes in health behavior in individuals.

Problem Statement

Based on the description above, the formulation of the problem in this study is: "What is the impact of the health belief model booklet-based intervention on the prevention of high-risk pregnancy behavior in Merak Urak Sub-District, Tuban Regency?"

Objective

The general objective of this study is to determine the impact of the health belief model booklet-based intervention on the prevention of high-risk pregnancy behavior in Merak Urak District, Tuban Regency.

Meanwhile, the specific objectives of this study are: 1) analyzing booklet interventions on vulnerability perception; 2) analyze booklet interventions on perception of severity; 3) analyze booklet interventions on threat perception; 4) analyze booklet interventions on the perception of benefits; 5) analyze booklet interventions on barrier perceptions; 6) analyze booklet interventions on cues to action.

METHODS

This type of research was a quasi experimental study using a post test with control group design, to determine the effect of an intervention using the Health Belief Model based booklet on prevention of high risk pregnancy behavior. The population in this study were all pregnant women in the District of Merak Urak, Tuban Regency, with a population size of 65 people. The sample size was 60 people, selected by cluster sampling techniques.

The independent variable in this study was the intervention booklet based on the Health Belief Model; while the dependent variable was prevention of high risk pregnancy. Data was collected using an instrument in the form of a questionnaire about the object of knowledge to be measured. This questionnaire used the answer options with a Likert Scale. The collected data was then analyzed using the Manova test.

RESULTS

Box's test results show that the variance and covariance for each variable were the same (p-value = 0.251), so that the Manova test could be continued. The Manova test shows numbers that showed insignificance for the treatment and control groups, which were shown through the Pillai Trace, Wilk's Lamda, Hotteling's T and Roy's Largest Root tests, > 0.05. This shows that simultaneously, there was no influence of health belief model booklet intervention on the perception of prevention of high risk of pregnancy.

Table 1. Manova test results

Variables	Box's test				p-value	
	Box M	F	df1	df2	Lavene	Manova
Perceived vulnerability	0.251	1.187	21	5.121	0.961	0.502
Perceived severity					0.679	
Perceived threat					0.337	
Perceived benefits					0.116	
Perceived severity barrier					0.217	
Cues to action					0.082	

DISCUSSION

The Impact of Booklet Interventions on Perceived Vulnerability

In the treatment group there were differences in the average perceived vulnerability before and after education, with a p-value of 0.017, while in the control group there were no differences, with a p-value of 0.402. Perceived vulnerability is personal, referring to the subjective perception of a person regarding the risk of his health condition. In the case of medical ailments, these dimensions include acceptance of the results of diagnosis, personal estimates of recurrence, and sensitivity to disease in general.⁽⁶⁾ Giving an intervention using a booklet to pregnant women will provide an interest in reading, so that mothers who feel vulnerable will be affected by health problems, will be more likely to behave positively in health, namely reducing the high risk of pregnancy and taking precautions.

Impact of Booklet Intervention on Perceived Severity

In the treatment group there were no differences in the mean perceived severity, with a p-value of 0.138; while in the control group there are differences, with a p-value of 0.013. Feelings about the seriousness of an illness include evaluating clinical and medical consequences (for example: death, disability and illness) and social consequences that may occur (such as effects on work, family life, and social relationships). Many experts combine the two components above as perceived threat.⁽⁶⁾ Changes in perceived severity cannot be changed by simply giving a booklet intervention, but it is also necessary to consider giving multimedia with assistance methods for pregnant women.

Impact of Booklet Intervention on Perceived Threats

Both the treatment group and the control group had a mean difference, with a p-value of 0.017 in the treatment group, and 0.025 in the control group. Perceived threats encourage individuals to take action to prevent or cure disease. Perceived threats, namely an individual's assessment of threats that will occur as a result of health problems that may be at risk for his disease⁽⁷⁾, refers to the extent to which a person thinks that illness or illness is really a threat to himself. Seeing the magnitude of the perceived threat, then someone is encouraged to take healthy steps in order to reduce the risk of illness.

Booklet intervention does not always affect perceived threats to pregnant women, because in reality the control group (the group that was not given the booklet intervention) also experienced differences. This is because pregnant women also get motivation and support from the family. In addition, the treatment group and the control group both attended the pregnant mother class.

Impact of Booklet Intervention on Perceived Benefits

In the treatment group there were mean differences with a p-value of 0.001, whereas in the control group there was no difference of a p-value of 0.785. When a person shows a belief in sensitivity and seriousness, it is often not expected to accept any recommended health measures unless they are considered effective and appropriate⁽⁶⁾. Pregnant women who were given educational treatment with the booklet media felt the benefits of preventing high-risk pregnancies. Perceived benefits are a preventive measure which, if done, can reduce the severity or reduce the occurrence of high risk pregnancies.

Impact of Booklet Interventions on Perceived Barriers

In the treatment group there were mean differences with a p-value of 0.011, while the control group had no difference, with a p-value of 0.108. Potential negative aspects of a health effort (such as: uncertainty, side

effects), or perceived obstacles (such as: mismatch, displeasure, nervousness) may act as a barrier to recommending a behavior⁽⁶⁾. Barrier perception is one of the most significant perceptions in determining behavior change⁽⁸⁾. According to Sutrisni's research⁽⁹⁾, the influence of perceived perceptions of barriers to preventive behavior can cause other behaviors to be neglected⁽¹⁰⁾. Pregnant women in Merak Urak Subdistrict have a high curiosity, so the material contained in the booklet is applicable and can be practiced well. In addition, information about prevention of high risk of pregnancy is provided, supported by interesting writing and images to avoid the saturation of pregnant women in reading. This shows that education through the media booklet is quite effective in influencing barrier perceptions in pregnant women.

Impact of Booklet Interventions on Cues to Action

Both in the treatment group and the control group there were no differences, with a p-value of 0.213 in the treatment group, and 0.195 in the control group. Referring Becker et al. cit. Conner & Norman⁽¹¹⁾, cues to action a behavior is influenced by something that becomes a signal for someone to do an action or behavior. In Ningrum's research it was stated that in taking action there were motivating factors for deciding to accept or decide on the action. Encouragement is internal and external.⁽¹²⁾

Increased knowledge in pregnant women does not always result in changes in behavior, but knowledge really needs to be given before the individual takes an action. Actions will be in accordance with knowledge if the individual receives a signal strong enough to motivate him to act in accordance with his knowledge.

CONCLUSION

Based on the results of the study it can be seen that there are differences in scores between the treatment group and the control group, but categorically there are no differences, so it can be concluded that in general the health belief-based booklet intervention model does not affect the prevention of high risk pregnancy behavior. Someone's behavior to take preventative actions can be influenced by how confident the individual's ability to perform healthy behavior, so that the behavior will produce the desired behavior change.

Changes in behavior in pregnant women are not only done by giving booklet interventions, but it is also necessary to consider providing multimedia with the method of assistance to pregnant women, so that the knowledge of pregnant women will increase which will stimulate the receipt of signals that are strong enough to motivate to act in accordance with their knowledge.

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