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Pathway Analysis of Behavioral Determinants in Preventing Genital Infections of Santri Putri Pondok Pesantren : Application of The Integrated Behavior Model

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Abstract

Female students who live in Islamic boarding schools are a population at risk for genital infections. The practice of personal/vaginal hygiene or menstrual hygiene is a form of maintaining reproductive health by preventing genital infections. Some bad behavior related to vaginal hygiene is a trigger factor for female genital infections. This study aimed to examine the factors behind the behavior of preventing genital infection in female students in the Islamic boarding school environment. This study was a quantitative study with a cross-sectional design. The population in this study was all female students. Determination of the sample in this study was carried out randomly with the number of subjects determined based on the rule-of-thumb sample size for path analysis, namely a minimum of 100 subjects, a minimum of 5 subjects per parameter, and a minimum of 10 subjects per variable. So that a sample of 150 female students was determined. The independent variable in this study was the behavior of preventing genital infection, while the dependent variables was: (1) behavioral intentions, (2) correct knowledge about behavior, (3) perception of the meaning of behavior, (4) environmental barriers, (5) experiential attitudes, (6) instrumental attitudes, (7) injunctive norms, (8) descriptive norms, (9) perceived behavioral control, (10) self-efficacy. This study indicated that infection prevention behavior can be determined by the behavior of female students prevention of genital infection is not influenced by the behavior of environmental barriers. Good knowledge and skills did not affect female students in taking measures to prevent genital infections; therefore, it was necessary to develop a more heterogeneous number of respondents and a questionnaire that can be understood by respondents so that an integrated behavioral model can become a reference to change behavior, and use methods that can improve their behavior.

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INTRODUCTION

East Java is the province with the largest number of mukim students in Indonesia. In Blitar Regency in particular, there are 132 Islamic boarding schools with a total of 4,208 mukim students (Ministry of Religion of the Republic of Indonesia, 2019). As a place to live, a place to study and a place to interact for many students who come from various regions and have different behavioral habits, coupled with less than optimal environmental management, Islamic boarding schools become places that are at risk for causing various health problems. One of the health problems that arise among students is genital infection.

Especially in the female santri community, issues regarding female organs and reproductive health are still often neglected. This is related to the negative public perception of the discussion about these matters. There is an assumption that women should not talk about their femininity to other people, often making female students not getting proper treatment when they are exposed to genital infections..

Many female students start living in the pesantren environment before experiencing menarche, so the practice of managing menstruation is only obtained from seniors or their coaches based on environmental habits. Menstruation is a natural process, but if the process is not managed properly, it will create humidity in the genital area which increases the risk of germs entering the reproductive tract and triggering infectioni(Rizky Amelia, Irvani Dewi and Karim, 2013). The practice of personal/ vaginal hygiene or menstrual hygiene is a form of maintaining reproductive health by preventing genital infections. Some bad behaviors are related to vaginal hygiene when defecating or urinating, such as perfect cleaning of the genitals (unclean or wrong), using soap when cleaning the vagina, not washing hands before touching the vagina, wearing tight underwear and made from non-absorbent sweat, rarely changing underwear or pads, is a trigger factor for female genital infections(Pudiastuti, 2010). A study conducted by Sevil, et al in 2013 also revealed the results that the frequency of genital infections was more common in female students who had poor hygiene behavior (Sevil *et al.*, 2013).

A preliminary study at the Al Mawaddah Islamic Islamic Boarding School 2 Jiwut, Nglegok, Blitar produced several findings related to genital infections in female students. (1) Based on a random survey of 30 female students, 75% stated that they had experienced vaginal itching and/or excessive vaginal discharge, but only 10% had complained to their supervisor and tried to deal with complaints appropriately. (2) There was no health clinics or specially trained officers to provide reproductive health services to female students. (3) The habit of female students wearing sarongs or skirts with double trousers, taking turns using towels or panties, wearing inappropriate sanitary napkins, rarely changing underwear or sanitary napkins during menstruation. (4) There are differences in the level of hygiene behavior in female students. On average, older female students (Aliyah level – equivalent to senior high school) had better hygiene behavior than younger female students (Tsanawiyah level – equivalent to junior high school). Based on these findings, the researcher assumes that hygiene behavior as a form of prevention against genital infections is influenced by many factors. Therefore, researchers are interested in conducting research to examine the factors behind the behavior of preventing genital infections in female students in the Islamic boarding school environment. Through this research, researchers will find the dominant factor so that they can choose the right intervention steps to overcome the problem of female students' genital infection.

METHOD

The research to be conducted is a quantitative study with a cross-sectional design. The research will be conducted at the Al Mawaddah Islamic Boarding School 2 Jiwut, Nglegok District, Blitar Regency. The population in this study were all female students with the source population being female students who had lived for at least 6 months, which were 385 people. Determination of the sample in this study was carried out randomly with the number of subjects determined based on the rule-of-thumb sample size for path analysis, namely a minimum of 100 subjects, a minimum of 5 subjects per parameter, and a minimum of 10 subjects per variable. So that a sample of 150 female students was determined.

The variables that will be used in this study consist of two types, namely the independent variable and the dependent variable. All research variables come from the constructs that make up the integrated behavior model. The independent variable in this study is the behavior of preventing geni-

tal infection, while the dependent variables are: (1) behavioral intentions, (2) correct knowledge about behavior, (3) perception of the meaning of behavior, (4) environmental barriers, (5) experiential attitudes, (6) instrumental attitudes, (7) injunctive norms, (8) descriptive norms, (9) perceived behavioral control, (10) self-efficacy. The habit variable is excluded because it has the same meaning with behavior.

Related to the data analysis method that will be used in this study, the research variables are also divided into two types, namely exogenous variables and endogenous variables. Included in the types of exogenous variables are experiential attitudes, instrumental attitudes, injunctive norms, descriptive norms, perceptions of behavioral control, self-efficacy, correct knowledge of behavior, perceptions of the meaning of behavior, and environmental barriers. Included in the type of endogenous variable is the behavior of preventing genital infection.

The data in this study will be collected using a questionnaire developed by the researcher himself. Before the instrument is used to collect data, the researcher will first test the instrument on a population that has the same characteristics as the research subject. It aims to obtain a valid and reliable instrumentThe research data that will be obtained by the researchers will be numerical data with a continuous scale. Furthermore, for the purposes of data analysis, the researcher will use the mean or median value of each variable as a cut of point to convert the data into a categorical measurement scale.

Data analysis will be carried out in three stages (univariate, bivariate, and multivariate) using the STATA 13 program. Univariate analysis uses descriptive statistical tests to determine the frequency distribution of each variable. Meanwhile, to find out the relationship between each independent variable and the dependent variable in the bivariate analysis, the chi-square test with odds ratio and p-value will be used. The last stage of analysis will use the path analysis method to determine the magnitude of the influence of the independent variable on the dependent variable, either directly or indirectly. The size of the relationship used to determine the magnitude of the influence in this analysis is called the path coefficient. It is assumed that the greater the path coefficient, the stronger the relationship between variables or the greater the influence of one variable on other variables.

Ethical Clearance in this study was obtained from the Health Research Ethics Commission of the University of Muhammadiyah Lamongan No. 082/EC/KEPK-S2/06/2001

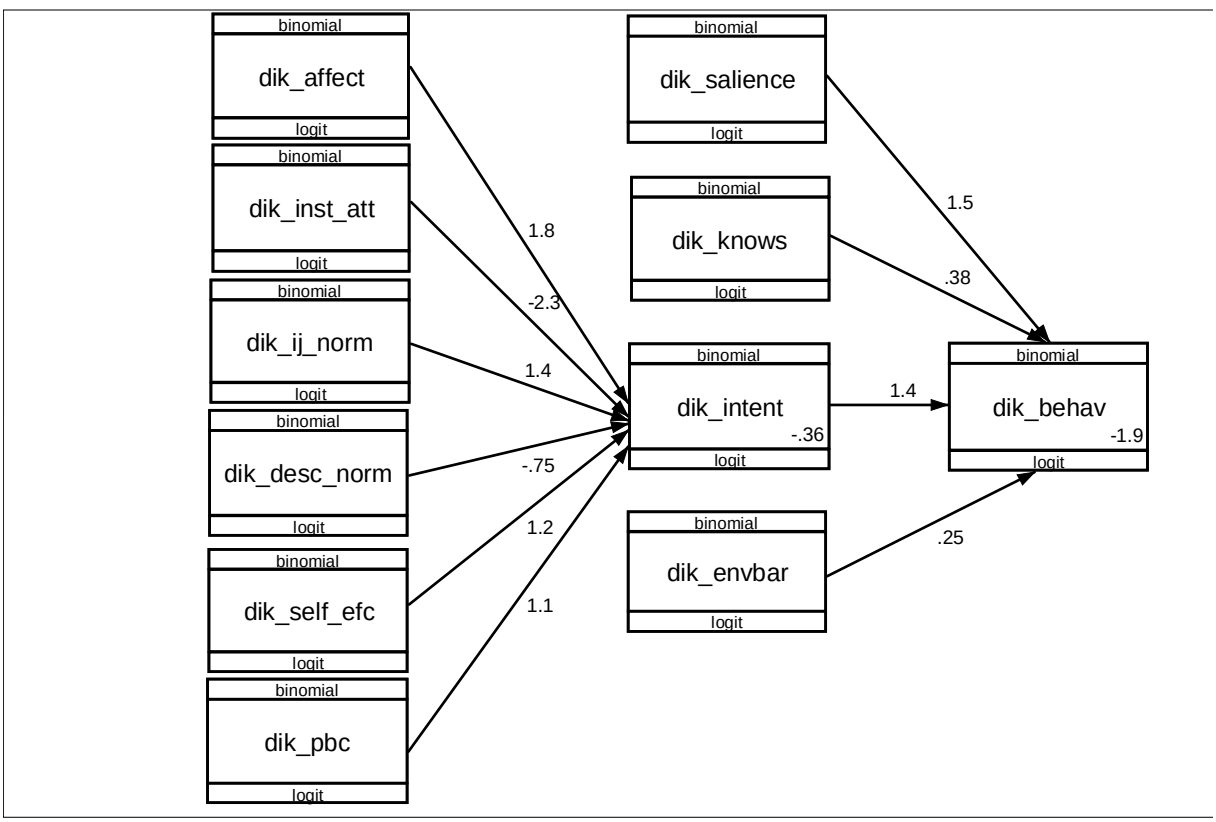
RESULT

Table 1 Variable Frequency Distribution

Variable	Category	Frekuension	%
Genital infection prevention behavior	Bad	75	46.88
	Good	85	53.13
Perception of the meaning of behavior	Bad	76	47.50
	Good	84	52.50
Injunctive norm	Bad	75	46.88
	Good	85	53.13
Descriptive norm	Bad	79	49.38
	Good	81	50.63
Subjective attitude (*affect*)	Negativ	73	45.63
	Positiv	87	54.38
Instrumental attitude	Negativ	69	43.13
	Positiv	91	56.88
Self efficacy	Low	76	47.50
	High	84	52.50
Behavioral control perception	Low	75	46.88
	High	85	53.13
Intention to behave	Low	56	35.00
	High	104	65.00

Knowledge and skills	Low	88	55.00
	High	72	45.00
Environmental barriers	Low	69	43.13
	High	91	56.88

From the Table 1 above, it is explained that the respondents who live in the female Islamic boarding school Al Mawaddah 2, the majority of female students' genital infection prevention behaviors are good as many as 85 respondents (53.13%), the majority of the perception of the meaning of female students' behavior is good as many as 84 respondents (52.50%), the majority of the norms injunctive female students as many as 85 respondents (53.13%), the majority of descriptive norms for female students were good as many as 81 respondents (50.63%), the majority of subjective attitudes (affect) of female students were negative as many as 87 respondents (54.38%), the majority of instrumental attitudes of female students were positive as many as 91 respondents (56.88%), the majority of female students' self-efficacy is high as many as 84 respondents (52.50%), the majority of female students' behavior control perceptions are 85 respondents (53.13%), the majority of female students' behavioral intentions are high as much as 104 (65.00%), the majority of female students' knowledge and skills were low as many as 88 respondents (55.00%), the majority of female students' environmental barriers were high as many as 91 respondents onden (56.88%).



Picture 1 Path Analysis Chart

Table 2 Path Analysis Results

Dependen variable	Independen variable	b	95% CI		p
			Upper limit	Lower limit	
Direct Effect					
Genital infection prevention behavior	← Perception of the meaning of behavior	1.49	0.75	2.24	< 0.001
Genital infection prevention behavior	← Behavioral knowledge and skills	0.37	- 0.58	1.33	0.45
Genital infection prevention behavior	← Intention of behave	1.39	0.60	2.18	0.001
Genital infection prevention behavior	← Environmental barriers	0.25	- 0.69	1.19	0.61
Indirect Effect					
Intention to behave	← Subjective attitude	1.78	0.51	3.05	0.01
Intention to behave	← Instrumental attitude	- 2.32	- 4.05	- 0.60	0.01
Intention to behave	← Injunctive norm	1.39	0.04	2.74	0.04
Intention to behave	← Descriptive norm	- 0.75	- 2.21	0.71	0.32
Intention to behave	← Self efficacy	1.18	- 0.29	2.66	0.12
Intention to behave	← Behavioral control perception	1.08	- 0.14	2.29	0.08
N Observasi = 160					
Log Likelihood = - 169.99					
df = 45					
AIC = 363.98					
BIC = 400.88					

The behavior of preventing genital infection is directly and significantly influenced by the perception of the meaning of the behavior and the intention to behave.

Someone who has a good perception of the meaning of behavior has a log odds of carrying out genital infection prevention behavior of 1.49 units better than someone who has a bad perception of the meaning of behavior (b = 1.49, 95% CI = 0.75 to 2.24, p = <0.001).

Someone with a high behavioral intention had a log odds of doing a genital infection prevention behavior of 1.39 units better than someone with a low behavioral intention (b= 1.39, 95%CI= - 0.60 to 2.18, p= 0.001).

Genital infection prevention behavior is indirectly influenced by subjective attitudes, instrumental attitudes and injunctive norms, through behavioral intentions.

DISCUSSION

The results of this study indicated that behavior in preventing genital infection with adolescents' perceptions of the meaning of behavior was 0.0001. This is in line with research from (Agustina, Murti and Demartoto, 2016), that there is a close relationship between perception and behavior to prevent sexually transmitted infections. Perceived behavioral control refers to a person's perception of the difficulty of carrying out the desired behavior, related to the belief that the resources and opportunities needed to realize certain behaviors will be available by reflecting past experiences and anticipation of obstacles and obstacles (Ajzen, 1991 dalam Mihartinah and Coryanata, 2019).

An individual's past experience of a behavior can be influenced by information that can be obtained from others, Ajzen explained that a person's behavior is not only controlled by himself, but also

requires control. Perceived behavioral control has two aspects, namely how much a person has control over the behavior and how a person feels confident about the ability to perform or not perform the behavior. The genital infection prevention behavior carried out by the young women of the Pondok is in accordance with the Theory of Reasoned action model that the existence of such behavior is based on the perception of past experiences. If the youth of the cottage are menstruating, the sanitary napkins used are cloth that can be washed again. Perception of behavioral control or also called behavioral control is a person's feelings about the ease or difficulty of realizing a certain behavior, (Ajzen, 2005 in Naratama and Nurcaya, 2016)). Ajzen explains the feelings related to control behavior by distinguishing it from the locus of control or control center proposed by Rotter's. Control center relates to a person's belief that is relatively stable in all situations. Perceptions of behavioral control may change depending on the situation and the type of behavior to be performed. The control center is concerned with the individual's belief that his success in doing anything depends on his efforts.

According to Fishbein dan Ajzen (1975) that in order to understand the area of Attitude, it is necessary to distinguish between Attitude, Belief, Behavioral Intention and Behavior. One form of distinction that has been used for a long time is the classic trilogy between emotion or feeling, cognition and conation. Emotions refer to a person's feelings and evaluation of an object, person, problem, or event. Cognition which is knowledge, opinions, beliefs, and experiences about objects. Conation is nothing but the intention of behavior. Knowledge of something is a representation of the cognitive aspect so that adolescent knowledge related to the prevention of genital infections which in theory has an influence on Attitudes Towards Behavior

The results showed that there was no relationship between genital infection prevention behavior with knowledge and behavioral skills. Skiner in Notoatmodjo (2010), a psychologist, formulated that behavior is a person's response or reaction to a stimulus (stimulus from outside). But in reality, the stimulus received by the organism is not always able to produce behavior, there are several other factors that play a role in the emergence of behavior, one of which is the intention to behave in a certain way from an individual. Intention itself will also not appear without an influencing determinant (Mahyarni, 2013). Several studies have shown that the object which is a representation of cognitive factors has been described in TRA as one of the factors that can influence behavioral intentions through attitudes (Hidayat, 2018).

The results of this study indicate that the behavior of preventing genital infection is influenced by the behavioral intentions of female students, explained from the results of data analysis that students with high behavioral intentions have a log odds of carrying out genital infection prevention behavior of 1.39 units better than someone who has low behavioral intentions (b = 1.39, 95%CI= - 0.60 to 2.18, p= 0.001). According to Papahan, M et all (2021) the theory described from Theory of Reasoned Action (TRA) which explains that behavior is the result of intention. The behavior of preventing genital infection is also indirectly influenced by subjective attitudes, instrumental attitudes and injunctive norms, through behavioral intentions. Based on the data obtained, female students with subjective attitudes were mostly positive attitudes as many as 87 respondents (54.38%), students with instrumental attitudes were mostly positive attitudes as many as 91 respondents (56.88%) and students had mostly good injunctive norms as many as 85 respondents. (53.13%). It was found that the subjective attitude was obtained p = 0.01, the instrumental attitude was obtained p = 0.01, and the injunctive norm was obtained p = 0.04.

Respondents have a subjective attitude based on what is experienced during their stay in the Islamic boarding school, female students can adjust the place to avoid genital diseases. The instrumental attitude or basic attitude of the santri has been obtained before living in the cottage so that it becomes a good habit. As for the injunctive norms of students, it can be known from how students prevent the occurrence of genital infections in the Islamic boarding school environment. The behavior of students in preventing infection includes cleaning the genitals, most of them are good, the underwear used is appropriate,

Another factor that influences infection prevention behavior is self-efficacy. Confidence from students in infection prevention behavior was obtained from the results of the questionnaire, the majority of students with high self-efficacy were 84 respondents (52.50%). With high self-efficacy, students believe that what they do can prevent in-

fection in the genitals by washing their hands before and after cleaning the genitals, wearing loose underwear that absorbs sweat, and changing sanitary napkins 3-4 times a day.

Descriptive norm is one of the factors that influence infection prevention, obtained from the results of the questionnaire, most of the students with good descriptive norms were 81 respondents (50.63%). Most of the students did the same thing as some of their friends in preventing infection. Avoid sharing towels with friends when drying the genitals.

In this study the perception of behavioral control is also a factor in preventing infection. most of the students' behavior control perceptions were high as many as 85 respondents (53.13%). Santri who experience genital problems rarely discuss their complaints with other people, they are more confident in expressing what they experience with people they trust, for example parents, trusted cottage companions and health workers who come to the cottage.

The results of the research on the prevention of genital infection behavior were not influenced by environmental barriers, explained from the results of data analysis p 0.61. One of the behaviors is influenced by environmental factors. In general, environmental factors are determinants of human behavior. Environmental factors will affect when the human has started to enter and interact with the environment. So, the environment is the land for the development of behavior (Notoatmodjo, 2010). The environment in Islamic boarding schools that is supportive in matters relating to genital infection prevention behavior includes the availability of clean water or water flowing directly from the faucet, the availability of a poskestren (Islamic boarding school health post) that can facilitate female students if there are complaints or problems related to the genital area. . As well as the availability of adequate health workers, so that female students feel comfortable to check the complaints they are experiencing. So that environmental barriers do not affect the behavior of preventing genital infections in Islamic boarding schools

CONCLUSION

The results of this study indicate that behavior in preventing genital infection with adolescents' perceptions of the meaning of behavior is 0.0001, there is no relationship between genital infection prevention behavior with knowledge and behavioral skills. The results of this study indicate that infection prevention behavior can be determined by the behavior of female students prevention of genital infection is not influenced by the behavior of environmental barriers.

SUGGESTION

Good knowledge and skills do not affect female students in taking measures to prevent genital infections, therefore, it is necessary to develop a more heterogeneous number of respondents and a questionnaire that can be understood by respondents so that an integrated behavioral model can be a reference.

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