



**The risk sexual behavior of adolescents reviewed based on  
Health belief model**

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**ABSTRAK**

**Latar Belakang:** Perilaku seksual adalah suatu bentuk perilaku yang dilakukan untuk menarik perhatian dengan lawan jenis serta melibatkan suatu sentuhan pada anggota badan yang dilakukan antara pria atau wanita sehingga mencapai tahap hubungan intim. Perilaku seksual berisiko remaja adalah salah satu masalah di Indonesia. Saat ini Remaja Indonesia termasuk negara dengan AKI no 2 tertinggi di ASEAN setelah Laos. Remaja salah satu kelompok dengan usia produktif sehingga menjadi perhatian agar remaja bisa menjaga diri mereka sendiri dengan mampu menerapkan Health Belief Model. Health belief model (HBM) merupakan salah satu pola dalam menentukan hubungan antar keyakinan kesehatan dan perilaku. Perilaku remaja yang melakukan hubungan seksual ditinjau menggunakan teori Health Belief Model karena dapat memprediksi dan mempengaruhi kemungkinan remaja dapat mencegah atau tidak terhadap keyakinan individu itu sendiri.

**Tujuan:** Menganalisis bagaimana hubungan perceived susceptibility, perceived seriousness, perceived benefits, perceived barriers, self-efficacy dan cues to action dengan perilaku seksual remaja berdasarkan Health Belief Model.

**Metode:** Penelitian ini merupakan penelitian non-experimental dengan menggunakan Pendekatan cross-sectional. Sampel dalam penelitian ini sebanyak 300 responden yang dilakukan di SMA X Kotamobagu dengan pengambilan Teknik purposive sampling. Instrument yang digunakan adalah kuesioner. Uji statistic menggunakan Pearson Product Moment dengan  $\alpha < 0.05$ .

**Hasil:** Mayoritas responden menunjukkan perilaku kurang sebanyak 148 (49,3%), mayoritas responden berusia 17 tahun (30,0%), mayoritas responden wanita 204 (68,0%). Hasil analisis menunjukkan bahwa ada hubungan antara perceived susceptibility, perceived barriers, self-efficacy, cues to action  $p < 0,05$  dengan perilaku seksual berisiko, tidak ada hubungan antara perceived seriousness dan perceived benefits dengan perilaku seksual berisiko.

**Kesimpulan:** Berdasarkan hasil analisis ada hubungan antara perceived susceptibility, perceived barriers, self-efficacy, cues to action dengan perilaku seksual berisiko  $p < 0.05$ , tidak ada hubungan antara perceived seriousness dan perceived benefits dengan perilaku seksual berisiko remaja, variabel yang paling berhubungan adalah isyarat untuk bertindak/ cues to action di SMA X Kotamobagu

**KATA KUNCI:** perilaku; seksual; remaja; health belief model

**ABSTRACT**

**Background:** Sexual behavior is a form of behavior that is carried out to attract attention with the opposite sex and involves a touch on the limbs carried out between men or women so that they reach the stage of intimate relationships. Adolescent risky sexual behavior is one of the problems in Indonesia. Currently, Indonesian youth are among the countries with the 2nd highest MMR in ASEAN after Laos. Adolescents are one of the productive age groups, so it is a concern that teenagers can take care of themselves by being able to apply

*the Health Belief Model. Health belief model (HBM) is one of the patterns in determining the relationship between health beliefs and behavior. The behavior of adolescents who have sexual relations is reviewed using the Health Belief Model theory because it can predict and influence the possibility that adolescents can prevent or not believe in the individual's own beliefs.*

**Objectives:** *To analyze how the relationship between perceived susceptibility, perceived seriousness, perceived benefits, perceived barriers, self-efficacy and cues to action with adolescent sexual behavior based on the Health Belief Model*

**Methods:** *This study is a non-experimental study using a cross-sectional approach. The sample in this study were 300 respondents who were conducted at SMA X Kotamobagu by taking purposive sampling technique. The instrument used is a questionnaire. Statistical test using Pearson Product Moment with  $\alpha < 0.05$*

**Results:** *The majority of respondents showed less behavior as much as 148 (49.3%), the majority of respondents were 17 years old (30.0%), the majority of female respondents were 204 (68.0%). The results of the analysis showed that there was a relationship between perceived susceptibility, perceived barriers, self-efficacy, cues to action  $p < 0.05$  with risky sexual behavior, there was no relationship between perceived seriousness and perceived benefits adolescent with risky sexual behavior.*

**Conclusions:** *Based on the results of the analysis there is a relationship between perceived susceptibility, perceived barriers, self-efficacy, cues to action with risky sexual behavior  $p < 0.05$ , there is no relationship between perceived seriousness and perceived benefits with adolescent risky sexual behavior, the most related variable is cues to action at SMA X Kotamobagu*

**KEYWORD:** *behavior; sexual; adolescent; health belief model*

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## **INTRODUCTION**

Adolescent perception period is the age of 10-19 years which is considered a transition period from childhood to adolescence and is an introduction to a unique process that leads to continuous physical changes until the child becomes a more independent adult that is acceptable in society in terms of intellectual, professional and sexual level (1). Adolescents experience puberty which is marked by starting to recognize sexual development and sexual behavior (2).

Sexual behavior is a form of behavior that is carried out to attract attention with the opposite sex and involves a touch of the limbs carried out between men or women so that they reach the stage of intimate relationships (3).

Forms of adolescent sexual behavior that leads to negative and risky directions such as touching sensitive areas, petting, intercourse, oral sex and what is worse when teenagers use drugs and have intimate relationships with partners.(4). The number of teenagers who start dating and start trying to follow trends and try to have a relationship like husband and wife which results in pregnancy due to lack of control of adolescent sexual behavior(5).

As a result of the risk posed when adolescents begin to recognize sexuality and dare to do so, adolescents will have free sex and are also at risk until the consequences will arise, namely adolescents are susceptible to several diseases such as Sexually Transmitted Infections (STIs) and even HIV AIDS and unwanted

pregnancy and lead to abortion, exclusion from society and others (6).

The government itself has implemented the Youth Care Health Service (PKPR) which is supported by the District/City Health Service to serve adolescent health, including sexual behavior(7). However, until the end of 2014 there were 81.69 districts/cities that had at least 4 PKPR Health Centers and 2,999 out of 9,731 puskesmas only 31% were able to implement PKPR. In addition, youth reproductive health service activities organized by the Population and Family Planning Agency (BKKBN) under the name Generation Planning (GenRe) have been implemented in several cities/districts(8). Health centers in districts/cities have implemented a lot, but in the implementation of PKPR there are factors that affect the inclusion of youth and are less active and in terms of evaluation and recording of reports, besides that, cooperation with parties that support the PKPR program has not been maximized.R (9).

Teenagers' risky sexual behavior is strongly influenced by internal and external factors, internal comes from within the teenager itself and external is the physical and non-physical environment. Factors that influence adolescent sexual behavior focus on the family environment, peers, and self-efficacy which are very important as well as information received by adolescents. The factors that are usually applied in the HBM are individuals changing behavior to avoid a disease or minimize health risks, there is an impulse in the individual's environment that makes them change the behavior and behavior of adolescents themselves(10).

These three factors are influenced by several internal factors such as threat assessments (perceived vulnerabilities and seriousness) and expectations (perceived benefits and barriers), self-efficacy and external factors (cues to action), namely information received by adolescents from the media and counseling, friends. peers

and the role of parents. For example, the media is one way of accessing information related to sexuality(11).

Factors that greatly influence adolescents' risky sexual behavior are self-efficacy, a strong belief of adolescents in carrying out a behavior will increase the possibility of realizing good behavior or self-efforts to determine what is good for themselves, Self-efficacy is important for adolescents as an effort to improve behavior healthy (12).

Health belief model (HBM) is one of the patterns and is accurate and very important to be used in determining the relationship between health beliefs and behavior. The behavior of adolescents who have sexual relations is reviewed using the Health Belief Model theory because this theory can predict and influence the possibility of adolescents being able to prevent or not against the individual's own beliefs(1).

The beliefs and attitudes that individuals have are closely related to the thinking process to determine and make decisions by embedding the Health belief model, it is expected that individuals will be able to prevent the dangers of health(13).The purpose of this study is to analyze the relationship between perceived susceptibility, perceived seriousness, perceived benefits, perceived barriers, self-efficacy, cues to action, and risky sexual behavior of adolescents at SMA X Kotamobagu.

## **MATERIALS AND METHODS**

This research is a non-experimental research using a cross-sectional approach that aims to connect between variables so that researchers can explain a relationship based on theory. The technique of taking samples using purposive sampling. Inclusion criteria are 15-18 years old, Students of SMA X, Students who are currently dating or who have already dated, Voluntary and cooperative. While the exclusion criteria are Students who are sick and Students

who don't have smartphones. The total sample used in this study was 300 respondents. The study was conducted at SMA X Kotamobagu in April-May 2021. The instrument used in this study was a questionnaire distributed online via google form. The bivariate analysis of the data in this study used the Pearson Product Moment statistical test, while the multivariate analysis used the Multiple Linear Regression test. The ethical test was carried out at the Research Ethics Committee of FKIK UNISA and the researcher passed the Ethics Test with Number No. 1774/KEP-UNISA/IV/2021.

## RESULTS AND DISCUSSION

Respondents used in this study were all students of SMA X Kotamobagu starting from class X-XII, amounting to 300 respondents. As for what was obtained as follows:

**Table 1. Frequency distribution of adolescent risky sexual behavior characteristics (n=300)**

Teenage sexual behavior	f	%
Good	154	51.3
Enough	109	36.3
Less	37	12.3

Source: Primary Data 2021

Based on **Table 1** risky sexual behavior of adolescents showed good behavior as many as 154 (51.3%) respondents.

Based on **Table 2** shows that the characteristics of research subjects based on age are 17 years old, which is 90 people (30.0%), the most gender is female, which is 204 people (68.0%), the most majors are Science as many as 181 people (39.3%), class the most respondents were class XI, namely 120 people (40.0%).

Based on **Table 3**, the mean value for the variable perception of vulnerability is 20.96, perceived seriousness is 29.63, perceived benefit is 21.54, perceived barrier is 14.35, self-efficacy is 28.96, cues to act 26.09.

**Table 2. Distribution of characteristic frequencies by age, gender, class and major (n=300)**

Characteristics of Respondents	f	%
Age		
15 years old	84	28.0
16 years old	83	27.7
17 years old	90	30.0
18 years old	41	13.7
19 years old	2	7
Gender		
Male	96	32.0
Female	204	68.0
Major		
Natural Science	181	39.3
Social Science	118	60.3
Bahasa	1	3
Class		
- X	86	28.7
- XI	120	40.0
- XII	94	31.3
Total	300	

Source: Primary Data 2021

**Table 3. Description of research variables (n=300)**

Variable	Min-Max	Mean±SD
Perceived Susceptibility	10-30	20.96±3.765
Perceived Seriousness	20-35	29.63±3.283
Perceived Benefit	10-25	21.54±2.973
Perceived Barrier	9-31	14.35±5.179
Self-Effication	17-35	28.96±4.877
Cues to action	14-30	26.09±3.671

**Table 4. Bivariate correlation of the relationship between the independent variable and the dependent variable (n=300)**

Variable	Bivariate Correlation (r)	p
Perceived Susceptibility	0.126	0.030
Perceived Seriousness	0.050	0.386
Perceived Benefit	0.056	0.429
Perceived Barrier	0.123	0.034
Self-Efficacy	0.182	0.002
Cues to action	0.239	0.000

Source: Primary Data 2021

Based on **Table 4**, it shows that the related variables are the perception of vulnerability, the perception of obstacles, the perception of self-efficacy and cues to act while the unrelated variables are the perception of seriousness and the perception of benefits.



**Table 5. Multivariate Analysis of Adolescent Risky Sexual Behaviors reviewed based on the Health Belief Model (n=300)**

Variabel	Koefisien	p
Perceived Susceptibility	-0.088	0.126
Perceived Seriousness	0.036	0.548
Perceived Benefit	0.033	0.584
Perceived Barrier	0.080	0.173
Self-Effication	-0.107	0.082
Cues to action	-0.193	0.002

Source: Primary Data 2021

Based on **table 5**, it shows that the most dominant variable that influences is the cues to action where the p value = 0.002.

## DISCUSSION

### Respondent Characteristics

#### Age

Based on data consisting of 300 respondents, the majority aged 17 years (30.3%). Adolescents with the age of 17 years as a transition of development and children to a more mature period, at this time teenagers tend to find their identity and try new things(14). Age is closely related to sexual behavior in adolescents, sexually active adolescents have an average age of 14 years for girls and 13 years for boys (6).

#### Gender

Based on the data above, there were 60 male respondents with less sexual behavior where male adolescents had more sexual contact than female adolescents. More sexual behavior is carried out by men than women because more parents supervise their daughters than men, so that teenage boys are more likely to engage in sexual behavior. Boys have lower confidence in their ability to resist sex than girls [15].

#### Major

majority of respondents in this study were majoring in Natural Sciences (IPA) as many as 181 (39.3%) respondents. Adolescents who come from the science department have

strong knowledge and perceptions about risky sexual behavior by showing the answers to the questionnaire given (16).

#### Class

The majority of respondents are class XI, namely 120 respondents (40.0%). Risky sexual behavior at this age, adolescents are able to distinguish between good and bad things and have a strong perception indicated by understanding some of the questions in the questionnaire. However, there are still some who have poor perceptions, this is influenced by one of the factors of knowledge (17).

### The relationship between Perceived Susceptibility and adolescent risky sexual behavior

The results showed that there was a relationship between the perception of vulnerability and adolescent sexual behavior in SMA X Kotamobagu where  $p=0.030 (<0.05)$ . The results obtained from the students of SMA X Kotamobagu were 149 (49.7%). The majority of respondents chose the answer Strongly agree, agree and neutral on the questionnaire given. (Perception of Susceptibility) refers to the individual's perceived susceptibility or personal risk to health threats (10).

The model described by Rosenstock about the concept of the Health Belief Model on perceived susceptibility will have a good or positive value so that it will show behavior to prevent risks that will occur (18). In line with research conducted in Ghana, adolescents who consider themselves vulnerable to risky sexual behavior believe that there will be consequences, so that adolescents are more confident in their ability to not have sex/delay pregnancy or abstain from sex (19).

Respondents in this study stated that dating to having sexual relations not with a legal husband/wife resulted in an impact on themselves

so that many answered strongly agree that the perception of the majority of respondents was high as evidenced by filling out the questionnaire. This means that if their perception is vulnerable from risky sexual behavior then they will not do it. In line with the research in Kalimantan, if a person with a high perception of vulnerability believes that he is at high risk of disease if he is not healthy (20).

### **The relationship between perceived seriousness and adolescent risky sexual behavior**

The results showed that there was no relationship between perceived seriousness and risky sexual behavior at SMA X Kotamobagu where the test results obtained  $p=0.386$ . Perception of seriousness is a person's assessment of the severity of a disease (10). This shows that respondents have a serious perception of risky sexual behavior but not all adolescents consider that what they are doing is serious because they have high knowledge. evidenced by many respondents answered strongly agree on the questionnaire given as a result or risk that can occur from the severity of a disease obtained. The perception of seriousness is based on the knowledge, medical information and beliefs that a person has that will have an impact on his life if not abandoned, but each person's perception is different. Based on the results of the researcher's analysis, the better the perception of the seriousness of adolescents towards risky sexual behavior, the higher the behavior to take the prevention. This is in line with the results of the study that the seriousness / distress felt by adolescents on the seriousness questionnaire about the impact of sexual relations outside of marriage motivates adolescents not to have sexual relations, if they are pregnant while in school they cannot finish school or there is a delay in school which is at risk of developing the condition. Poor health such

as stigma, social isolation and depression(19). Everyone's perception of health problems will be different.

### **The relationship between perceived benefits and adolescent sexual behavior**

The results showed that there was no relationship between perceived benefit and risky sexual behavior in adolescents  $p=0.429$  ( $<0.05$ ).

The individual's belief in a behavior that brings benefits to him, the individual will adopt the good behavior but on the contrary if the behavior does not bring benefits to the individual himself then the behavior will not be carried out or occur(18).

In the Health Belief Model theory, someone who takes preventive action depends on beliefs and assessments of the advantages and disadvantages obtained (Rosenstock et al., 1988). However, in some countries, adolescents have many obstacles in sexual behavior as prevention of sexually transmitted diseases and pregnancy, in some countries it is applied to use condoms for adolescents who will have sexual relations, but in this case it becomes an obstacle for adolescents, for example there is no access to condoms, poverty/cost issued, the adolescent's own judgment, lack of Health information and low access to care(21). However, in some countries, adolescents have many obstacles in sexual behavior as prevention of sexually transmitted diseases and pregnancy, in some countries it is applied to use condoms for adolescents who will have sexual relations, but in this case it becomes an obstacle for adolescents, for example there is no access to condoms, poverty/cost issued, the adolescent's own judgment, lack of Health information and low access to care (22).

### **The relationship of self-efficacy with adolescent risky sexual behavior**

The results showed that there was a relationship between self-efficacy and risky

sexual behavior in adolescents with  $p=0.002$  ( $<0.05$ ). The majority of respondents have high self-confidence as many as 228 (76.0%).

The results of this study are supported by (23) that there is an influence of premarital sex behavior with self-efficacy in students where  $p$  value is 0.020 ( $<0.05$ ), which means the higher a person's efficacy, the lower or reduce premarital sexual behavior. However, if someone has low self-efficacy, then a person has a 1.99 times chance to perform risky sexual behavior, the results of low adolescent self-efficacy and negative sexual behavior are indicated by a  $p$  value of 0.023 (0.005) which means that there is an influence between self-efficacy and behavior teen sex (24).

Low self-efficacy is a factor that causes adolescents to have premarital sex compared to adolescents who have high self-efficacy (25). Other studies also explain that there is a strong significant relationship where if it is not in the same direction between self-efficacy in avoiding free sex and adolescent sexual behavior, both of these variables indicate that it is not surrender, meaning that the lower a person's self-efficacy, the higher the risky sexual behavior of adolescents (26). Low self-efficacy are more sexually active than adolescents who have high self-efficacy (27).

The majority of respondents chose the answer strongly agree and agree on the questionnaire given. Self-efficacy is an individual's belief in his ability to do something, in this case the individual must believe in adopting a behavior to overcome his obstacles, control or certain actions (28).

### **Cues to action relationship with adolescent risky sexual behavior**

The results of the analysis test show that  $p = <0.05$ , this indicates that there is a relationship between cues to act and adolescent risky sexual behavior. A person's behavior depends on the

information obtained during social interaction, if the information is received in a favorable manner, a person will adopt the correct behavior and vice versa (29).

This study is in line with research conducted in Kupang, namely as many as 64 respondents have signs to act well (54.2%), there is a relationship between cues to act with HIV/AIDS prevention behavior (30). Adolescents who have knowledge about reproductive health have strong enough cues to act but there is no significant relationship between reproductive health and sexual behavior in adolescents  $p = 0.882$  where adolescents who have high knowledge about sexuality but adolescents do not try to prevent it, all depending on the perception of each teenager regarding sexual behavior (31).

### **The dominant variable most related to adolescent risky sexual behavior**

The results of the multivariate test that have been carried out show that the cue to act variable  $p$  value = 0.002 this variable is the most related variable among other variables. Cues to action is one of the factors that play a very important role in shaping the behavior of a teenager, cues to action are a form of campaign from the mass media that teenagers can get to add sources of health information. Signals to act as a driver of youth in changing behavior are obtained in the mass media and obtained in Health campaigns by Health workers (32). A person's behavior depends on the information received, if the information received is correct then the individual will do so.

### **CONCLUSION AND RECOMMENDATION**

The development of adolescents and the perception of adolescent knowledge is very important as an intervention that must be given. The findings in this case are important to develop adolescents' perceptions of all matters relating to risky sexual behavior because there are still

many adolescent who have the wrong perception about sexuality. Risky sexual behavior is indirectly influenced by the perceived susceptibility, perceived barriers and self-efficacy, while the influencing factor is a cues to action. This finding has many implications for respondents, research sites, government and nurses as well as further researchers to improve students' perceptions of risky sexual behavior as well as for schools to work together with relevant agencies to implement and develop interventions to prevent and hopefully the PKPR (Health Care Counseling for Teenagers) program and Genre (Generation Planning) can be implemented well so that it can help adolescents with great curiosity. In addition, it is hoped that further researchers can examine more deeply about the perceived of cues to action and replace research methods with interviews so that research is studied more deeply or by using mixed methods.

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