

THE THEORY OF PLANNED BEHAVIOR ON ADOLESCENTS SEXUAL BEHAVIOR IN MALANG, EAST JAVA

Santy Irene Putri¹⁾, Dian Jayantari Putri K. Hedo²⁾, Rayi Apriananda³⁾

¹⁾Midwifery Study Program, University of Tribhuwana Tungadewi Malang

²⁾National Population and Family Planning Board (BKKBN)

³⁾Wilujeng General Hospital, Padangan, Kediri

ABSTRACT

Background: The adolescents' reproductive organs function begins to be active and develops during this phase. It will elicit adolescents' curiosity about sexuality that can impact their behavior. One of them is sexual behavior. Because adolescents' risky sexual behavior hurts health, it is crucial to study sexual behavior further. This study aimed to determine adolescents' sexual behavior using the Theory of Planned Behavior.

Subjects and Method: This observational analytic study with a cross-sectional design was conducted in Malang in September 2021. A total of 300 adolescents aged 15-24 years old was selected by simple random sampling. The dependent variable was adolescents' sexual behavior. The independent variables were attitude, subjective norm, perceived behavioral control, and intention. The data were collected by questionnaire and analyzed by multiple logistic regression.

Results: Adolescents' sexual behavior has correlation with positive attitude (OR= 1.80; 95% CI = 1.09 to 2.97; p = 0.022), supportive subjective norm (OR= 2.75; 95% CI = 1.66 to 4.55; p<0.001), strong perceived behavioral control (OR= 2.45; 95% CI = 1.48 to 4.08; p = 0.001), and strong intention (OR= 2.06; 95% CI = 1.25 to 3.39; p = 0.005).

Conclusion: There was a significant relationship between positive attitude, supportive subjective norm, strong perceived behavioral control, and strong intention with adolescents' sexual behavior.

Keywords: adolescents, sexual behavior, theory of planned behavior

Correspondence:

Santy Irene Putri. Midwifery Study Program, University of Tribhuwana Tungadewi Malang. Jl. Telaga Warna, Tlogomas, Malang, East Java. Email: santyirene@gmail.com. Mobile: +6285785836884

BACKGROUND

Risky sexual behavior among adolescents is a global public health problem that continues to happen these days (Warner, 2018; Guzzo, Lang and Hayford, 2019). In Indonesia, someone starts their first relationship with the opposite sex in their teens (Setiowati, Pamungkasari and Prasetya, 2019).

In general, adolescents have their first relationship with the opposite sex at a median age of 15 years. Women start having relationship at the age of 15-17 years (33.3%). In addition, men start having a relationship at the age of 15 years (34.5%) (Kementerian Kesehatan RI, 2015; BKKBN, 2019). The opposite sex relationship in adolescents can lead to some forms of sexual behavior. The forms of sexual behavior in adolescents are feeling sexually

attracted to the opposite sex, dating, holding hands, hugging, kissing cheeks, kissing lips, touching, stimulating, and having unsafe sex (Lehmiller, 2014; BKKBN, 2019). Risky sexual behavior include unprotected sex, having multiple sexual partners, early sexual behavior, sexual relations with commercial sex workers, and sex transactions for money, goods, or other (Lehmiller, 2014; Silva *et al.*, 2018; Setiowati, Pamungkasari and Prasetya, 2019). Adolescent boys in Indonesia have risky sexual intercourse for the first time at a median age of 18 years, while the median age for female adolescents is 17-19 years. In East Java, 0.3% of 2,837 adolescent boys and 0.2% of 2,463 adolescent girls have had risky sexual behavior (BKKBN, 2019).

Risky sexual behavior can increase adolescents' susceptibility risks of sexually transmitted infections (STIs) (Lehmiller, 2014; Mori *et al.*, 2019; Gibson *et al.*, 2020), HIV/AIDS (Do *et al.*, 2020), unwanted pregnancies (BKKBN, 2019; Leung and Lin, 2019; Hedo, 2020), and some psychological problems. Adolescents who engage in risky sexual behavior tend to experience psychological problems such as posttraumatic stress disorder, depression, anxiety, low psychological well-being, prolonged trauma, negative emotions, suicidal ideation, guilty feeling, fear, shame, and low self-esteem (Lehmiller, 2014; Silva *et al.*, 2018; Taylor, 2018; Warner, 2018; Werner *et al.*, 2018; Guzzo, Lang and Hayford, 2019; Leung and Lin, 2019). Adolescents' lack of knowledge about risky sexual behavior and also accompanied by poverty, are some predictors of adolescents' risky sexual behavior (Fetene and Mekonnen, 2018; Warner, 2018; Tseng *et al.*, 2020).

The adolescents' conditions are also related to sexual behavior. In accordance with the task of development, in the adolescent phase there is a strong urge to explore oneself and the environment, including exploration related to sexuality because in the adolescent phase the sexual organs are undergoing significant development. Negative sexual exploration can lead to risky sexual behavior (Erikson, 1994; Bongardt *et al.*, 2014; Werner *et al.*, 2018; Hedo, 2020). Related to these conditions, sexual education and health promotion can be one of the preventive efforts to control risky sexual behavior in adolescents (Green *et al.*, 2017; Taylor, 2018). Health workers have important role in reproductive health's promotion and orientation towards contraception. In addition, parents of adolescents need to be involved in discussion or dialogue about sexuality with adolescents (Miranda *et al.*, 2018; Silva *et al.*, 2018; Leung and Lin, 2019; Steele *et al.*, 2020). It is also important to conduct further study of the factors that underlie adolescents' sexual behavior, especially risky sexual behavior that can have a negative impact on themselves.

Adolescents' risky sexual behavior can be reviewed using the Theory of Planned Behavior (TPB). According to Taylor (Taylor, 2018), Theory of Planned Behavior is one of the theories that can be used in studying sexual behavior, especially in adolescents. TPB explains that attitude, subjective norm, and perceived behavioral control affect individual's intention to elicit certain behavior. According to this theory, health-related behavior is the direct result of a behavioral intention (Taylor, 2018). The first construct of this theory is behavioral intention, which is the motivational factor that influences behavior. The

stronger intention to engage in a particular behavior, the more likely someone to perform that behavior. The second construct of TPB is attitude towards behavior, which is the extent to which person has favorable or unfavorable evaluation of particular behavior. Attitude consists of behavioral beliefs and evaluation results. Subjective norms are the third construct of TPB, which is defined as social pressure to perform or not to perform certain behaviors. The combination of normative beliefs and motivation to comply elicit a subjective norm. The fourth construct of TPB is perceived behavioral control, which refers to people's perceptions that one can perform or cannot perform certain behavior and that the behavior will have the intended effect (Protogerou *et al.*, 2012; Asare and Heights, 2015; Darabi *et al.*, 2017; Setiowati *et al.*, 2019; Gibson *et al.*, 2020).

Adolescents' physiological, psychological, social, cultural, educational, and environmental conditions can trigger risky or unsafe sexual behavior among them. As explained before, that adolescents' risky or unsafe sexual behavior can bring negative impact to them. It makes sexual behavior in adolescents need to be understood and studied further because it relates to the adolescents' potency as an asset for the development of nation's human resources and generation (BKKBN, 2020b, 2020a). In order to study adolescents' sexual behavior, several constructs in TPB can be implied to the study. This study aimed to determine adolescents' sexual behavior using Theory of Planned Behavior.

SUBJECTS AND METHOD

1. Study Design

This was an observational analytic study with cross-sectional design. The study was conducted in Malang on September 2021.

2. Population and Sample

The population in this study were adolescents in Malang. Sample in this study were adolescents aged 15-24 years old with total of 300 subjects. The sampling technique used in this study was simple random sampling.

3. Study Variables

There were five variables in this study consisting of dependent and independent variables. The dependent variable was adolescent sexual behavior. The independent variables were attitudes, subjective norms, perceived behavioral control, and intention.

4. Operational Definition of Variables

Adolescent sexual behavior was all adolescent activities based on impulses sex from within to achieve sexual satisfaction and fulfillment done with oneself or with others.

Attitudes was the response and judgment adolescents on sexual behavior.

Subjective norms were the adolescents' perceptions or opinion of other people's expectations that can influence adolescents' decisions to perform or not to do sexual behavior.

Perceived behavioral control was adolescent's perception of the ability to control themselves to do or not to do sexual behavior

Intention was an estimation of how likely to display a behavior that indicates the presence or absence of adolescents' planning intentions and efforts to try to show sexual behavior

5. Instruments

The data were collected by questionnaire.

6. Data Analysis

Univariate analysis was carried out to see the distribution of the frequency and percentage of each variable, while multivariate analysis described the relationship of the effect among variables. Multivariate analysis was conducted using multiple logistic regression.

Table 1. Characteristic of the sample

Variable	Category	(n)	(%)
Age	< 20	82	27.3
	20-24	218	72.7
Mother's education	< Senior High School	80	26.3
	≥ Senior High School	220	73.7
Mother's occupation	Unemployed	31	10.3
	Employed	71	89.7
Family income	< regional minimum wage	125	41.7
	≥ regional minimum wage	175	58.3
Attitude	Negative	118	39.3
	Positive	182	60.7
Subjective norms	Non-supportive	161	53.7
	Supportive	139	46.3
Perceived behavioral control	Weak	133	44.3
	Strong	167	55.7
Intention	Weak	125	41.7
	Strong	175	58.3

Table 1 shows that subjects' most dominant age in this study were 20-24 years (218 subjects or 72.7%). Most of mothers' education of the subjects in this study were diploma (125 subjects or 41.7%). Most of subjects' mothers work in private sector (158 subjects or 52.7%). The most dominant subjects' family income was greater than or equal to the regional minimum wage (175 subjects or 58.3%). Most of the study subjects had positive attitude (182 subjects or 60.7%), non-supportive

RESULTS

1. Univariate Analysis

The univariate analysis (dichotomous data) included age, mother's education, mother's occupation, family income, attitude, subjective norms, perceived behavioral control and intention. It demonstrated the percentage of respondents in each category of the required variable.

subjective norms (161 subjects or 53.7%), strong perceived behavioral control (167 or 55.7%), and strong intention (175 subjects or 58.3%).

2. Multivariate Analysis

Multiple logistic regression explained the effect of more than one independent variable, namely attitude, subjective norms, attitudes, perceived behavioral control, intention toward the dependent variable, namely adolescent sexual behavior.

Table 2. Multiple linear regression analysis of the theory of planned behavior on adolescents' sexual behavior

Independent variables	OR	95 % CI		P
		Lower limit	Upper limit	
Positive attitude	1.80	1.09	2.97	0.022
Supportive subjective norms	2.75	1.66	4.55	<0.001
Strong perceived behavioral control	2.45	1.48	4.08	0.001
Strong intention	2.06	1.25	3.39	0.005
N Observation = 300				
-2 log Likelihood = 371.43				
Nagelkerke R ² = 0.18%				

Table 2 shows some research results which can be explained as follows. There is relationship between positive attitudes and adolescent sexual behavior. Adolescents with positive attitudes are 1.80 times more likely to engage in safe sexual behavior than adolescents with negative attitudes (OR= 1.80; 95% CI = 1.09 to 2.97; p = 0.022).

There is relationship between supportive subjective norms and adolescent sexual behavior. Adolescents with supportive subjective norms are 2.75 times more likely to engage in safe sexual behavior than adolescents with non-supportive subjective norms (OR= 2.75; 95% CI = 1.66 to 4.55; p<0.001). There is relationship between perception of strong perceived behavioral control with adolescent sexual behavior. Adolescents with strong perception of behavioral control are 2.45 times more likely to engage in safe sexual behavior than adolescents with weak perception of behavioral control (OR= 2.45; 95% CI = 1.48 to 4.08; p = 0.001).

There is relationship between strong intention and adolescent sexual behavior. Adolescents with strong

intention are 2.06 times more likely to engage in safe sexual behavior than adolescents with weak intention (OR= 2.06; 95% CI = 1.25 to 3.39; p = 0.005).

DISCUSSION

1. Relationship between attitude and sexual behavior in adolescents

Attitude emphasizes on what possible results will be obtained if the individual performs certain behavior, and evaluation of the individual's assessment about behavioral outcome (Taylor, 2018). Adolescents' risky sexual behavior occurs in the context of sexuality. Sexuality begins its extensive development in adolescent phase. Sexuality is related to the involvement of sexual behavior and sexual experiences experienced by adolescents. These will affect adolescents' beliefs and attitudes about sexuality and also determine whether adolescents tend to internalize positive or negative attitudes regarding their sexual behavior. Efforts are needed to encourage adolescents to have positive attitudes towards sexual behavior through health promotion of positive attitudes and healthy sexual

behavior, in order to avoid the destructive impact produced by negative attitude towards sexual behavior. Adolescents internalize positive attitudes related to sexual behavior by understanding and being aware about reproductive health and benefits of using proper contraception to prevent unwanted pregnancies and sexually transmitted diseases (Pringle *et al.*, 2017; BKKBN, 2019).

Adolescents with positive attitudes regarding sexual behavior will also tend to postpone engaging in risky sexual behavior. Adolescents who have disapproving attitude regarding risky sexual behavior are also less likely to engage in this behavior, compared to adolescents who have approving attitude (BKKBN, 2019). Results obtained in this study are also in line with study conducted by Lee *et al* (2011) which states that attitudes have correlation with sexual behavior. This study state that positive attitude towards condom predicts the use of condoms by adolescents in their sexual behavior as a form of avoiding risky sexual behavior.

2. Relationship between subjective norms with sexual behavior in adolescents

Adolescence is a critical phase related to sexual development (Silva *et al.*, 2018). At this phase, sexual behavior needs to be considered because of its negative impact in adolescent (Srahbzu and Tirfeneh, 2020). Adolescents who understand and realize that risky sexual behavior lead to sexually transmitted infections, HIV infection, unwanted pregnancies, and belief that they need to protect themselves, tend to be motivated

to pay attention to their sexual behavior (BKKBN, 2019). This refers to subjective norm that is held by adolescents. Subjective norms are beliefs about certain references that adolescents need to perform particular behavior to fulfill the normative beliefs of others around them about what they should do. (Taylor, 2018). Adolescents form and develop subjective norms according to self-evaluation of what they should do, which is accompanied by socialization and internalization from figures in their social environment such as parents, peers, teachers, and religious leaders (Bongardt *et al.*, 2014; Padilla-Walker, 2018; Leung and Lin, 2019).

In sexual context, subjective norms also contribute to adolescents' safe sexual behavior that can protect them from negative effects of risky sexual behavior (Kalolo & Kibusi, 2015). In the adolescent phase, social environment has important role in contributing to the norms believed by adolescents. Adolescents increase their social interaction and absorb the values and norms around them. Adolescents also tend to adapt and internalize their behavior with the influences from their social environment (Erikson, 1994; Monks, Knoers and Hadinoto, 2014). Previous study related to subjective norms conducted by Kalolo & Kibusi (2015) also explained similar results regarding the understanding above. The study explains that there is influence of subjective norms on adolescent sexual behavior. Subjective norms are the determinants for adolescents in doing or not doing safe sexual behavior.

3. Relationship between perceived behavioral control with sexual behavior in adolescents

Perceived behavioral control is individual's perception of the control one has regarding certain behaviors. Perceived behavioral control also can be understood as perception that one can perform the action and that the action will have intended effect (Taylor, 2018). Adolescents gain control by the availability of resources, skills, knowledge, and opportunities to perform certain behaviors. In the context of sexual behavior, adolescents who believe that they have sufficient resources, skills, knowledge, and opportunities to perform safe sexual relations, will have strong perceived behavioral control and also strong intention to behave in positive way (Lehmiller, 2014; Warner, 2018; Leung and Lin, 2019). On the other hand, adolescents who have limited knowledge regarding sexuality tend to have difficulty and lack cognitive and emotional readiness in performing safe and healthy sexual behavior such as agreement with their partner to use condoms because they believe that they are not capable enough to do these behaviors. (Lehmiller, 2014; Silva *et al.*, 2018; Taylor, 2018; Guzzo, Lang and Hayford, 2019).

Previous study related to perceived behavioral control conducted by (Kalolo and Kibusi, 2015; Lin *et al.*, 2021) explains similar results regarding the understanding above. Results of the study stated that perceived behavioral control has the greatest influence on adolescents' intentions to do safe sexual behavior.

4. Relationship between intention with sexual behavior in adolescents

One's behavior is influenced by the intentions of the individual. Behavior is a direct result of the intention to perform the behavior. Attitude, subjective norm, and perceived behavioral control within individuals produce intentions that trigger certain behavior (Taylor, 2018). The stronger intention to engage in certain behavior, the more likely the behavior is performed. Intention influenced by attitudes, perceptions, individual subjective evaluation, and individual backgrounds (Setiowati, Pamungkasari and Prasetya, 2019).

Intention is combination of attitude that individuals have regarding certain behaviors, norms that support behavior, and individual beliefs in doing or not doing certain behavior (Taylor, 2018). In the context of sexuality, adolescents who have positive attitudes, norms, and perceptions regarding sexual behavior, tend to have intention to avoid risky sexual behavior and perform behaviors that can protect their health, for example using condoms when having sex (Green *et al.*, 2017; Gibson *et al.*, 2020). Based on the study conducted by Shek & Leung (2016), it is known that adolescents with positive social function have weaker intentions to engage in sexual behavior. Adolescents with good family function also tend to have intention to perform safe sexual behavior (Steele *et al.*, 2020).

Adolescents from families with low economic status tend to have intention to engage in risky sexual behavior. In addition, the intention of adolescents to

do sexual behavior is also related to adolescents' age. Older adolescents have higher intention to do sexual behavior than younger adolescents. This is in line with the results of BKKBN survey which states that risky sexual behavior is performed by 5% of adolescents in their aged of 20-24 years old, 1% in their aged of 15-19 years old, and 0.1% in their aged of 10-14 years old. The older group of adolescent boys (20-24 years old) have greater proportion in doing risky sexual intercourse four times more often than the younger age group (15-19 years old) (BKKBN, 2019).

Low self-control in adolescents also influence adolescents to act inconsistently with their intentions. In terms of risky sexual behavior, adolescents who have weak perceived behavioral control that maybe caused by their unconscious bodily state or increased sexual arousal, tend to engage in risky sexual behavior even though they did not initially intend to do that behavior (Turchik and Gidycz, 2012). Positive attitudes, supportive subjective norms, strong perceived behavioral control and strong intentions have positive correlation with sexual behavior in adolescents and are statistically significant. Positive attitudes regarding sexual behavior help adolescents to postpone performing risky sexual behavior. In line with that, disapproving attitude regarding risky sexual behavior also help adolescent become less likely to engage in this behavior. Subjective norms are also become the determinants of adolescents' sexual behavior.

Adolescents internalized and evaluate their social environment norm rela-

ted to what they should do in terms of sexuality and sexual behavior. Adolescents who perceived that they have sufficient control over themselves because of the availability of resources, skills, knowledge, and opportunities to perform safe sexual behavior, tend to have strong intention to behave in positive way related to sexual behavior. Having positive attitudes, supportive subjective norms, and perceptions regarding sexual behavior control, help adolescents to have intention to perform safe sexual behavior, which will lead to the action of the behavior itself.

AUTHOR CONTRIBUTION

Santy Irene Putri and Dian Jayatri Putri K Hedro made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data, involved in drafting the manuscript or revising it critically for important intellectual content, also given final approval of the version to be published. Rayi Apriananda agree to be accountable for all aspects of the work in ensuring that questions.

CONFLICT OF INTEREST

There is no conflict of interest in this study.

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