

A Spiritual Biopsychosocial Model On Muslim Adolescents' Premarital Sexual Behaviors Through Sexual Perceptions

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Keywords:

Adolescents, premarital sex, spiritual biopsychosocial, sexual perception

ABSTRACT

Free sex has a negative impact on the biopsychosocial condition of adolescents. Free sex poses a real danger to reproductive health, including the transmission of Sexually Transmitted Infections (STIs), out-of-wedlock pregnancy, which consequently increases the abortion rate, psychological pressure, and depression. This study aims to analyze the biopsychosocial and spiritual factors of sexual behaviors of adolescents in an Islamic boarding school. It was designed as an analytic survey with a cross-sectional time approach conducted in 2021 with a sample of 384 adolescents aged 16-19 years who were selected through random cluster sampling. The data were collected through questionnaires and analyzed by confirmatory factor analysis using structural equation modeling. The results showed that there was an influence of spiritual biopsychosocial factors, namely biological factors with puberty as the indicator ($T > 1.96$; R square 0.213), psychological factors with self-efficacy, self-esteem, and emotional intelligence as the indicators ($T > 1.96$; R square 0.242), social factors with parents' role, peers' role, schools' role, teachers' role, Islamic boarding school education system, and social media's role as the indicators ($T > 1.96$; R square 0.187), spiritual factors with spiritual intelligence and religiosity as the indicators ($T > 1.96$; R square 0.332), as well as sexual perception with cognitive and affective indicators ($T > 1.96$; R square 0.310). Spiritual factors were the most dominant factor influencing the premarital sexual behavior of Muslim adolescents. It indicated that religiosity and spiritual intelligence served as protective factors in the premarital sexual behavior of Muslim adolescents.



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1. INTRODUCTION

Adolescence is the transition from childhood to adulthood, involving all developments experienced in preparation for adulthood, including various changes such as physical, cognitive, psychological, spiritual, as well as social and economic changes [1]. This transition period may lead to an adolescent crisis, usually

evidenced by a tendency for deviant behaviors to emerge. One of these deviant behaviors is premarital sex. Adolescence is a period of growth and development with distinctive characteristics, such as great curiosity, fondness for adventure and challenges, and the tendency to take risks for their actions, often performed without careful consideration. Risky sexual behavior is a premarital sexual activity consciously performed by adolescents, resulting in the disruption of their physical, mental and social health. This behavior's potential reproductive health risks include unwanted pregnancy, abortion, and STIs.

The 2017 Indonesian Adolescent Reproductive Health Survey (*Survei Kesehatan Reproduksi Remaja Indonesia* or SKKRI) stated that 0.9% of unmarried female adolescents aged 15-24 years and 2.6% and those aged 20-24 years had had premarital sex. Even worse, 3.6% of unmarried male adolescents aged 15-19 years and 14.0% of those aged 20-24 years had had premarital sex [2].

A study conducted by revealed that perceptions greatly influenced adolescent sexual behavior intentions [3]. It is in line with the results of Sanjaya's research (2014) on 30 members of a motorcycle club Kawasaki Ninja Club (KNC) Bandung, proving that perceptions and free sex behavior were highly correlated [4]. In addition, respondents with positive perceptions (56.67%) tended to avoid this behavior (60%) and vice versa.

Risky decision-making theory provides a framework within which social environmental factors, as well as biological and psychological predispositions, interact to influence risk-taking behavior [5], [6]. In particular, the biological maturation timing directly affects psychosocial functioning (i.e., cognition, perceptions of self and social environment, and personal values). According to this theory, biological, psychological, and social or environmental variables, mediated by risk perception and peer group characteristics, accurately predict adolescent risk-taking. Biological variables that influence adolescent risk-taking behavior include the hormonal and genetic variables of pubertal timing. Psychological variables associated with risk-taking include self-esteem, sensation seeking, and cognitive and affective states. Social influences on adolescent risk-taking may come from peers, parents, and schools. The consistency of study results in this model theoretically requires replicating the study model in different cultures.

This study is essential since risky sexual behavior is one of the reproductive health problems of adolescents, in which the target respondents were adolescents aged 16-19 or the middle and late adolescents. Unlike early adolescents whose emotional and cognitive development are still sensitive and reactive and tend to focus on the process of identifying their identity, middle and late adolescents have experienced changes in their physical maturity, especially their sexual function [7]. Without being directed to positive behaviors, adolescents tend to experience crises and make wrong decisions for their future, which is also related to adolescents' sexuality [8].

In dealing with this problem, health workers shall analyze the understanding of the community, especially adolescents, regarding premarital sex behavior and its risks and impacts. Based on the above data, the researchers finally decided to discuss adolescent perceptions of risky sexual behaviors.

2. METHOD

It is a quantitative descriptive study with a cross-sectional approach, taking 384 respondents selected based on the cluster sampling technique as the sample. The variables in this study include biological factors (puberty), psychological factors (self-efficacy, self-esteem, emotional intelligence), social factors (parents' role, peers' role, schools' role, teachers' role, Islamic boarding school education system, and social media's role), as well as spiritual factors (spiritual intelligence and religiosity). This study has received an ethical clearance approval number NJ.T06/LP3M/SK/005/01/2021. The researchers utilized biological,

psychological, social, and spiritual factors that influence adolescent sexual behaviors as the instruments. These instruments have been tested for validity and reliability with a product-moment correlation coefficient of 0.3 and a Cronbach alpha value of 0.920. The obtained data were analyzed using Confirmatory Factor Analysis (CFA) technique with Structural Equation Modeling (SEM).

3. RESULTS

Most of the respondents were 16 years old (30%), lived in an Islamic boarding school for 3 years (39%), and studied in high school (58%). In terms of the biological factors, 71.1% of respondents had normal pubertal timing. In terms of the psychological factors, 184 (53.2%) respondents had low self-efficacy, 174 (50.3%) respondents had low self-esteem, and 185 (53.5%) respondents had low emotional intelligence. Then, in terms of social factors, a total of 175 (50.6%) respondents experienced an insignificant parents' role, 182 (52.6%) respondents experienced an insignificant peers' role, 173 (50.5%) respondents experienced an insignificant schools' role, 175 (50.6%) respondents experienced an insignificant teachers' role, 204 (59.0%) respondents experienced a less supportive Islamic boarding school education system, 178 (51.4%) respondents experienced a less supportive social media role. Lastly, in terms of spiritual factors, 175 (50.6%) respondents had low spiritual intelligence, and 166 (48.0%) respondents had low religiosity (Table 1).

Table 1. Research Variables

Research Variables	Frequency	Percentage
Biological Factors (Puberty)		
Normal	179	46.6%
Abnormal (Early/Delayed)	205	53.4%
Psychological Factors		
Self-Esteem		
Low	144	37.5%
High	240	62.5%
Self-Efficacy		
Low	173	45.1%
High	211	54.9%
Emotional Intelligence		
Low	183	47.7%
High	201	52.3%
Social Factors		
Parents' Role		
Significant	191	49.7%
Insignificant	193	50.3%
Peers' Role		
Significant	214	55.7%
Insignificant	170	44.3%
Schools' Role		
Significant	199	51.8%
Insignificant	185	48.2%
Teachers' Role		
Significant	222	57.8%
Insignificant	162	42.2%
Islamic Boarding School Education System		
Supportive	308	80.2%
Less Supportive	76	19.8%
Social Media's Role		

High	209	54.4%
Low	175	45.6%
Spiritual Factors		
Spiritual Intelligence		
Low	179	46.6%
High	205	53.4%
Religiosity		
Low	180	52.0%
High	166	48.0%
(Cognitive) Sexual Perceptions		
Positive	205	53.4%
Negative	179	46.6%
(Affective) Sexual Perception		
Positive	201	47.7%
Negative	183	52.3%
Sexual Behaviors		
Risky	197	48.7%
Healthy	187	51.3%

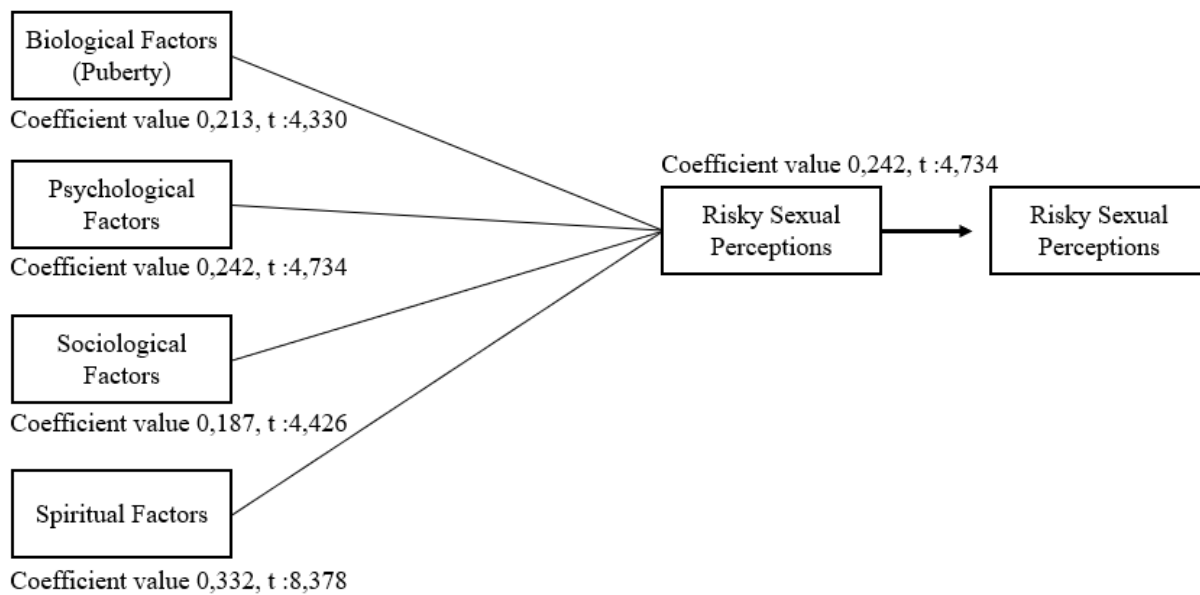


Figure 1 describes the relationship between exogenous and endogenous variables. Exogenous variables have a significant correlation if the T statistic ≥ 1.96 .

Hypotheses	Affects	Coefficients	T Statistics (O/STDEV)	P-Values
H1	Biological Factors (X1) -> Risky Sexual Perceptions (Y1)	0.213	4.330	0.000
H2	Psychological Factors (X2) -> Risky Sexual Perceptions (Y1)	0.242	4.734	0.000
H3	Social Factors (X3) -> Risky Sexual Perceptions (Y1)	0.187	4.426	0.000
H4	Spiritual Factors (X4) -> Risky Sexual Perceptions (Y1)	0.332	8.378	0.000
H5	Risky Sexual Perceptions (Y1) -> Risky Sexual Behaviors (Y2)	0.310	6.940	0.000

Figure 1. Path diagram of spiritual biopsychosocial factors that influence adolescents sexual behavior through sexual perception.

All variables showed a significant correlation with the following explanation:

a. The Influence of Biological Factors (X1) on Sexual Perceptions (Y1)

A test on the Influence of Biological Factors (X1) on Sexual Risk Perceptions (Y1) resulted in a T statistics value of 4.330 with a p-value of 0.000. The test results indicated that the value of T statistics > 1.96 and the p-value < 0.05 . It indicated that Biological Factors (X1) significantly influenced Risky Sexual Perceptions (Y1). The resulting coefficient value (0.213) was positive. Thus it can be interpreted, better Biological Factors (X1) tend to lead to higher Risky Sexual Perceptions (Y1).

b. The Influence of Psychological Factors (X2) on Sexual Perceptions (Y1)

A test on the Influence of Psychological Factors (X2) on Risky Sexual Perceptions (Y1) resulted in a T statistics value of 4.734 with a p-value of 0.000. The test results indicated that the value of T statistics > 1.96 and the p-value < 0.05 . It indicated that Psychological Factors (X2) significantly influenced Risky Sexual Perceptions (Y1). The resulting coefficient value (0.242) was positive. Thus it can be interpreted, better Psychological Factors (X2) tend to lead to higher Risky Sexual Perceptions (Y1).

c. The Influence of Social Factors (X3) on Sexual Perceptions (Y1)

A test on the Influence of Social Factors (X3) on Risky Sexual Perceptions (Y1) resulted in a T statistics value of 4.426 with a p-value of 0.000. The test results indicated that the value of T statistics > 1.96 and the p-value < 0.05 . It indicated that Social Factors (X3) significantly influenced Risky Sexual Perceptions (Y1). The resulting coefficient value (0.187) was positive. Thus it can be interpreted, better Social Factors (X3) tend to lead to higher Risky Sexual Perceptions (Y1).

d. The Influence of Spiritual Factors (X4) on Sexual Perceptions (Y1)

A test on the Influence of Spiritual Factors (X4) on Risky Sexual Perceptions (Y1) resulted in a T statistics value of 8.378 with a p-value of 0.000. The test results indicated that the value of T statistics > 1.96 and the p-value < 0.05 . It indicated that Spiritual Factors (X4) significantly influenced Risky Sexual Perceptions (Y1). The resulting coefficient value (0.332) was positive. Thus it can be interpreted, better Spiritual Factors (X4) tend to lead to higher Risky Sexual Perceptions (Y1).

e. The Influence of Risky Sexual Perceptions (Y1) on Sexual Behaviors (Y2)

A test on the Influence of Risky Sexual Perceptions (Y1) on Risky Sexual Behaviors (Y2) resulted in a T statistics value of 6.940 with a p-value of 0.000. The test results indicated that the value of T statistics > 1.96 and the p-value < 0.05 . It indicated that Risky Sexual Perceptions (Y1) significantly influenced Risky Sexual Behaviors (Y2). The resulting coefficient value (0.310) was positive. Thus it can be interpreted, higher Risky Sexual Perceptions (Y1) tend to lead to higher Risky Sexual Behaviors (Y2).

The total R-square value is 0.438 or 43.8%. It indicated that the diversity of Sexual Risk Perceptions (Y1) variables could be explained thoroughly by Biological Factors (X1), Psychological Factors (X2), Social Factors (X3), Spiritual Factors (X4), both directly or indirectly, through Risky Sexual Perceptions (Y1) of 43.8%. In other words, the contribution of the influence of Biological Factors (X1), Psychological Factors (X2), Social Factors (X3), and Spiritual Factors (X4) either directly on Internet gaming behaviors (Y1) or through sexual perception (Y1) was 43.8 %. Meanwhile, the remaining 56.2% is the contribution of other variables undiscussed in this study.

4. DISCUSSION

In this study, biological factors with an indicator of puberty had an influence of 21.3% on risky sexual perceptions. Puberty, which is characterized by biological changes such as increased levels of sex hormones, plays a vital role in brain development and adolescent risk-taking [5], [9], [10]. Sex hormones contribute to

the reorganization of dopaminergic neurons in the motivational system, which can then lead to increased risk-taking and sensation-seeking [9], [10], [11].

According to [12], the effects of androgens, such as testosterone, on female adolescents' sexual behavior act directly on sexual motivation, libido, and personality. These factors make adolescence and puberty a vulnerable period, especially for female adolescents when it comes to making sexual decisions.

A meta-analysis study by discussed the relationship between pubertal timing and status with sexual behavior and risky sexual behavior among adolescents aged 10 to 22 years [13]. The results of this study displayed that (1) pubertal status and sexual behaviors, (2) pubertal timing and sexual relationship status, sexual behaviors, and risky sexual behaviors were stronger in female adolescents than that in males. It was found that the correlation between pubertal status, timing, and sexual behaviors, and risky sexual behaviors were stronger for younger adolescents.

Psychological factors with indicators of self-efficacy and self-esteem had an influence of 24.2% on sexual perceptions. Research conducted by proved that self-efficacy is a psychological factor that influences the emergence of risky sexual behavior. In this case, self-efficacy is how confident a person is in handling certain tasks, challenges, and contexts [14]. Individuals with higher self-efficacy are more likely to be able to face obstacles and are not easily influenced to engage in risky behavior, in this case, risky sexual behaviors. Several studies demonstrated that the other indicator of psychological factors, namely self-esteem, highly correlates with risky sexual behaviors. This statement is supported by stating that adolescents with low self-esteem reported experiencing their first sexual intercourse earlier and having risky partners [15].

Social factors with indicators of parents' role, schools' role, peers' role, teachers' role, the education system, and social media's role had an influence of 18.7% on sexual perceptions.

It is in line with a study revealing that adolescents in school are strongly influenced by their teachers. Teachers should have a beneficial influence in teaching and learning activities in the classroom and their personal "modeling," both for students and all school community members. The school community is very influential on the development of adolescents since schools teach their students the prevailing values and norms in society.

Explains that conformity in adolescent relationships is not just acting according to the actions taken by others, but also means influencing others to perform imitating behaviors to enforce their group identity or social identity [16]. It also explains how adolescents behave sexually according to the influence and pressure of their social group and influence their friends to behave sexually like themselves and in accordance with the values their group holds.

Spiritual factors with indicators of spiritual intelligence and religiosity had an influence of 33.2% on sexual perceptions. According to, spiritual intelligence helps place human behavior and life in the context of a broader and richer meaning [17]. Therefore, humans develop into creative, flexible, broad-minded, courageous, optimistic, and flexible beings since they are directly related to their problems in life.

Sexual perceptions with cognitive and affective indicators had an influence of 31.0% on sexual perceptions. Perceptions build adolescents' opinions about something they believe, which then they realize in actual actions. This theory also complies with the stages of social influence, personality, and biological changes, explains that each individual has a different perception and response to a stimulus and provides a stimulus

that can affect the emergence of a reaction in the brain called perception. Furthermore, these stimuli will activate physiological system changes in the body as a response [18]. Based on this explanation, biological and psychological factors are important determinants of risk-taking behaviors.

Adolescents' perceptions of sexual behavior will be formed through exposure to the knowledge they obtain from school, social media, parents, and other sources. Perception forms adolescents' opinions about something they believe, which then, with the support of intention, they realize in actual actions. Adolescents' perceptions of positive sexual behaviors will affect their intentions not to engage in risky sexual behaviors [19].

A positive perception of sexual behavior can lower adolescents' intention towards risky sexual behavior. Positive attitudes, positive subjective norms, and perceptions of positive behavioral control, positive behavioral beliefs, positive normative beliefs, and strong control beliefs increase positive/healthy sexual behaviors.

5. CONCLUSIONS

Based on the results of this study conducted on 384 adolescent respondents at the Probolinggo Islamic Boarding School, it can be concluded that in terms of the biological factors, 71.1% of respondents had normal pubertal timing. In terms of the psychological factors, 184 (53.2%) respondents had low self-efficacy, 174 (50.3%) respondents had low self-esteem, and 185 (53.5%) respondents had low emotional intelligence. Then, in terms of social factors, a total of 175 (50.6%) respondents experienced an insignificant parents' role, 182 (52.6%) respondents experienced an insignificant peers' role, 173 (50.5%) respondents experienced an insignificant schools' role, 175 (50.6%) respondents experienced an insignificant teachers' role, 204 (59.0%) respondents experienced a less supportive Islamic boarding school education system, 178 (51.4%) respondents experienced a less supportive social media role. Lastly, in terms of spiritual factors, 175 (50.6%) respondents had low spiritual intelligence, and 166 (48.0%) respondents had low religiosity.

In this study, the biological factors (pubertal timing), the psychological factors (self-efficacy, self-esteem), the social factors (parents' role, peers' role, teachers' role, schools' role, Islamic boarding school education system, and social media's role), as well as the spiritual factors (spiritual intelligence and religiosity) significantly influenced sexual perceptions. The most influential variables on sexual perception are spiritual factors and sexual perceptions (cognitive and affective).

On that ground, health workers, especially nurses, are suggested to become educators through collaboration with various schools and communities in providing counseling on sexual education as a preventive effort in increasing adolescents' (cognitive) knowledge and attitudes regarding sexual education.

Besides, educational institutions such as schools are advised to integrate sexual education into their curriculum to increase adolescents' knowledge and attitudes and prevent risky sexual behaviors. In addition, schools can also apply peer education as a learning method for adolescents.

The limitation in this study was the possibility of confounding factors that the researchers could not control, namely the respondents' honesty in answering questions. The researchers could not directly observe the role of biopsychosocial and spiritual factors but only based on adolescent perceptions of risky sexual behavior. In addition, this study was limitedly conducted on female adolescents. Further studies are expected to expand the range of the respondents, not only on female adolescents, in order to obtain risky sexual behaviors of adolescents with different life settings.

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