DETERMINANTS OF PREMARITAL SEXUAL BEHAVIOR AMONGST ADOLESCENTS IN INDONESIA

Nadhirul Mundhiro[1], Ridhwan Fauzi[2], Mohammad Ainul Maruf[3], Nurfadhilah[4]
[1,2,3,4]Faculty of Public Health, Universitas Muhammadiyah Jakarta, Indonesia
Corresponding Author: Ridhwan Fauzi
E-mail: ridhwanfauzi@umj.ac.id

ABSTRACT

Premarital sex is a growing social issue in Indonesia. The number of adolescents who engage in premarital sex has increased over the years. This study aimed to analyze the determinants of premarital sex behavior among adolescents in Indonesia. The study used secondary data from the 2017 Indonesian Demographic Health Survey (IDHS) with a total of 22,583 adolescent participants. The chi-square and multiple logistic regression were performed to assess the association and the strength of relationship between premarital sex behavior and socio-demographic status, smoking status, alcohol consumption, and drugs use. The results revealed that premarital sex was associated with sex, age, education level, smoking status, alcohol consumption, and drug use. Adolescents who had drunk alcohol were almost twenty times more likely (AOR = 19,888; 95% CI = 16,124-24,531) to have premarital sexual intercourse compared to adolescents who had not. The results found that premarital sex was strongly correlated with addictive substance use. Therefore, the government should formulate integrated health intervention programs to prevent health risk behaviors among adolescents. These can include integrating education on the dangers of smoking, alcohol consumption, and drugs use into the Generation Planning (*Generasi Berencana,* GENRE) program or Youth Information and Counseling Center (*Pusat Informasi dan Konseling Remaja,* PIK-R), which focuses on reproductive health education and services in one package.

Keywords: adolescent, premarital sex, Indonesian Demographic Health Survey, Indonesia

ABSTRAK

Hubungan seksual pranikah merupakan salah satu permasalahan sosial yang sedang berkembang di Indonesia. Jumlah remaja yang melakukan perilaku seksual pranikah terus meningkat setiap tahunnya. Penelitian ini bertujuan untuk menganalisis determinan perilaku hubungan seksual pranikah remaja di Indonesia. Studi ini menggunakan data sekunder yang berasal dari Survei Demografi dan Kesehatan Indonesia (SDKI) 2017. Jumlah peserta penelitian sebanyak 22.583 remaja. Uji kai kuadrat dan regresi logistik ganda digunakan untuk menilai hubungan antara perilaku seks pranikah dengan sosiodemografi, penggunaan tembakau, alkohol dan obat terlarang. Hasil penelitian menunjukkan bahwa perilaku seks pranikah memiliki keterkaitan yang kuat dengan jenis kelamin, usia, tingkat pendidikan, status merokok, konsumsi alkohol dan penggunaan narkoba. Remaja yang mengkonsumsi alkohol sampai mabuk memiliki peluang hampir dua puluh kali lebih besar (AOR = 19,888; 95% CI = 16,124-24,531) untuk berhubungan seks sebelum menikah dibandingkan dengan yang tidak pernah meminum alkohol sama sekali. Penelitian ini menemukan bahwa hubungan seks pranikah sangat berkaitan dengan konsumsi zat adiktif. Oleh karena itu, pemerintah Indonesia harus memformulasikan program intervensi terintegrasi untuk remaja dalam rangka mencegah perilaku berisiko kesehatan. Seperti memasukkan edukasi bahaya merokok, konsumsi alkohol dan narkoba ke dalam program Generasi Berencana (GENRE) atau PIK R (Pusat Informasi Konseling Remaja) yang berfokus pada kesehatan reproduksi dalam satu paket.

Kata kunci: remaja, seks pranikah, Survei Demografi dan Kesehatan, Indonesia

INTRODUCTION

Adolescence is a transitional life phase from childhood to adulthood. This period is marked by the rapid development of a human being's biological, psychological, and social aspects (Sawyer *et al.*, 2018). These changes influence teenagers' attitude and behavior towards sexuality. They begin to be attracted to sexual experiments such as fantasies, masturbation, and even sexual intercourse (Tulloch and Kaufman, 2013).

The prevalence of premarital sexual intercourse varies widely across Asia. A study conducted in three major Asian cities showed that the rates of premarital sex among male adolescents aged 15-24 years old were 7.1% in Hanoi, 16.1% in Shanghai, and 37.7% in Taipei. The rates of premarital sex for women in those same cities were, respectively, 2.2%, 8.5%, and 29.4% (Gao *et al.*, 2012). Another study in Malaysia showed that the prevalence of sexual intercourse among students was as high as 2.8% (Azmawati *et al.*, 2017). In Indonesia, the proportion of teenagers having premarital sex according to Central Bureau of Statistics, National Board of Population and Family Planning, and Indonesian Ministry of Health (2018) was 8% in males and 2.5% in females. Even though these numbers were still considered low in comparison with other countries in the Asian regions, the rate of sexual intercourse among teenagers in Indonesia was relatively high. A study using data from the 2012 Indonesian Demographic Health Survey (IDHS) showed that the proportion of male adolescents who intended to engage in sexual intercourse was 21.1% (Maruf *et al.*, 2018).

Premarital sex in adolescents turns them sexually active at a very early age. Early age sexual activity can cause several negative consequences, including sexually transmitted diseases (STD), such as HIV/AIDS, and unwanted pregnancies (Musacchio and Forcier, 2008). In 2017, as many as 12% of female adolescents who had premarital sex reported that they also had unwanted pregnancies. Furthermore, Central Bureau of Statistics, National Board of Population and Family Planning, and Indonesian Ministry of Health (2018) stated that around 7% of male adolescents who had done it also reported that their sex partners experienced unwanted pregnancies.

Unwanted pregnancies in adolescents can lead to complications during pregnancy, complications during delivery, and unsafe abortions, which significantly contribute to maternal mortality (Darroch *et al.*, 2016). Between 2010-2014, there were 25.1 million unsafe abortion incidents yearly worldwide. In the Southeast Asia regions, as many as 2.08 million (40.4%) of the abortions administered were categorized as unsafe (Ganatra *et al.*, 2017). In addition, the effects of unwanted pregnancies in adolescents also include negative stigmatization, rejection from society, and losing future education and job opportunities (United Nations Population Funds, 2014).

Health risk behaviors such as alcohol consumption, smoking, and illicit drug use are associated with premarital sex. A study administered in Malaysia showed that smoking was correlated with premarital sex (Azmawati *et al.*, 2017). In addition, a cohort study in Taiwan showed that premarital sex behavior correlates significantly with alcohol consumption both in male and female adolescents (Chiao *et al.*, 2012). A study conducted by Umaroh*, et al* (2015) also presented the information that health risk behaviors such as smoking, alcohol consumption, and illicit drug use among adolescents in Indonesian had a significant correlation with premarital sex (Umaroh *et al.*, 2015).

The Basic Health Research (*Riskesdas*) showed an increase in smoking behavior among individuals aged 10-18 years. The results in 2013 put it at 7.2% and then showed an increase to 9.1% in 2018. Meanwhile, the highest proportion of alcohol-consuming behavior occurred in individuals aged 20-24 years (Ministry of Health, 2018). Furthermore, a national survey of drug abuse in 2017 showed as many as 3% of drug abuse within the past year was done by people below 30 years old (National Narcotics Agency, 2017). Based on this problem, this study analyzed determinants of premarital sex behavior in adolescents in Indonesia.

METHOD

This study analyzed secondary data from the 2017 Indonesian Demographic and Health Survey (IDHS) of adolescents' reproductive health component. The IDHS is a

household-based national representative survey that is carried out once every five years. The IDHS aims to monitor and provide data related to fertility, family planning, and maternal and child health. This survey has been conducted eight times since 1987.

The sampling method applied in the 2017 IDHS was two-stage random sampling. First, the number census blocks was selected systematically using the probability proportional to size (PPS) from the 2010 population census. Systematic selection was carried out by stratification according to urban and rural areas and then sorted by level of wealth. Second, about 25 households were selected systematically from each selected census block.

The participants were selected from 1,970 census blocks covering 49,250 households with 97,918 individuals. This study included unmarried male and female teenagers aged 15-24 years. Therefore, the total participants were 22,583 teenagers.

The dependent variable in this study was premarital sexual behavior. The independent variables consisted of age, sex, education level, place of residence, smoking status in the last 24-hours, alcohol consumption in the last three months, and illicit drug use. These variables were identified in the demographic and health survey (DHS) codebook.

The data analysis process was begun by studying the adolescent's components of the 2017 IDHS report, the male adolescent questionnaire, the questionnaire for women of childbearing age, and the DHS codebook. The next stage was cleaning data and selecting variables (filters) to filter data that were not needed in the study. Code was provided (recode) on the selected variables. Composited data from several variables were used on the questionnaire to fit the expected operational definition.

We conducted a univariate analysis by presenting the frequency distribution of each variable. Bivariate analyses were performed to examine the relationship between the dependent and independent variables using the chi-square test. Ultimately, the multiple logistic regression test with a prediction model was used to assess the dominant factors associated with the dependent variable.

RESULTS

As many as 55.8% of 22,583 teenagers were male. In term of age groups, more than half of the teenagers (64.1%) were 15-19-year-old. The majority of teenagers (56.5%) also lived in urban areas, and 59.8% had senior high school education background. As many as 4.9% of teenagers had engaged in premarital sexual intercourse. Almost half of the teenagers (46.8%) were active smokers. The proportion of teenagers consuming alcohol was 22.7%. Ultimately, around 2.8% of the teenagers reported that they had consumed drugs (Table 1).

Table 1. Socio-Demographic Characteristics and Risky Health Behaviors in Indonesian Adolescents in 2017

Variables	n	(%)
Sex		
Male	12,612	55.8
Female	9,971	44.2
Age (Years)		
15-19	14,482	64.1
20-24	8,101	35.9
Residence		
Urban	12,758	56.5
Rural	9,824	43.5
Education Level		
<Junior High	5,081	22.5
Senior High	13,497	59.8
University	4,005	17.7
Premarital Sexual Intercourse		
Yes	1,116	4.9
No	21,467	95.1
Smoking Status		
Yes	10,566	46.8
No	12,016	53.2
Alcohol Consumption		
Yes and Drunk	2,363	10.5
Yes and Sober	2,746	12.2
No Consumption	17,474	77.4
Illicit Drugs Use		
Yes	625	2.8
No	21,958	97.2

Based on the bivariate analysis results in Table 2, there was a significant correlation between premarital sexual behavior and sex, age, education level, smoking status, alcohol consumption, and illicit drug use with a p-value of < 0.001.

The multivariate analysis results in Table 3 shows there were four factors with a strong association towards premarital sexual intercourse among adolescents in Indonesia, namely age (AOR = 0.394; 95% CI = 0.343-0.454), smoking status (AOR =1.361; 95% CI = 1.096-1.690), and drug use (AOR = 2.558; 95% CI = 2.105-3.109). Moreover, adolescents who consumed alcohol and got drunk had 20 times the risk of committing premarital sex (AOR = 19.888; 95% CI = 16.124-24.531) compared to those who did not consume alcohol.

Table 2. Determinants of Premarital Sexual Behavior in Indonesian Adolescents in 2017

Variables	Premarital Sex				P value
	Yes		No		
	n	%	n	%	
Sex					
Male	963	7.6	11,649	92.4	< 0.001
Female	153	1.5	9,818	98.5	
Age (Years)					
15-19	348	2.4	14,134	97.6	< 0.001
20-24	768	9.5	7,333	90.5	
Residence					
Urban	602	4.7	12,157	95.3	0.077
Rural	514	5.2	9,310	94.8	
Education Level					
<Junior High	378	7.4	4,703	92.6	< 0.001
Senior High	532	3.9	12,965	96.1	
University Level	206	5.1	3,799	94.9	
Smoking Status					
Yes	960	9.1	9,606	90.9	< 0.001
No	156	1.3	11,860	98.7	
Alcohol Consumption					
Yes and Drunk	668	28.3	1,696	71.7	< 0.001
Yes and Sober	253	9.2	2,492	90.8	
No Consumption	195	1.1	17,279	98.9	
Illicit Drugs Use					
Yes	232	37.1	393	62.9	< 0.001
No	884	4.0	21,074	96.0	

Table 3. Main Determinants of Premarital Sexual Behavior among Indonesian Adolescents in 2017

Variables	P-value	AOR	95% CI	
			Lower	Upper
Aged 15-19 Years Old	<0.001	0.394	0.343	0.454
Smoking	0.005	1.361	1.096	1.690
Alcohol Consumption				
Yes and Drunk	<0.001	19.888	16.124	24.531
Yes and Sober	<0.001	6,240	5.020	7.757
Illicit Drugs Use	<0.001	2.558	2.105	3.109

DISCUSSION

This study revealed that the proportion of adolescents in Indonesia who had reported having premarital sexual intercourse was approximately 4.9%. This number was lower than prior studies in other Southeast Asian countries such as Vietnam and Laos (Gao *et al.*, 2012; Sychareun *et al.*, 2013). Furthermore, this number was also lower than that found in a study conducted on students at senior high school and tertiary education in Jakarta, which was 35% (Nurfadhilah and Ariasih, 2019). However, the rate of premarital sexual intercourse in this study was almost twice as big compared to other studies in Muslim majority countries such as Malaysia, where it was 2.8% (Azmawati *et al.*, 2017).

Based on the multivariate results, age was significantly associated with premarital sexual behavior with a p-value of < 0.001. These results are the same as a previous study in India which found that adolescents aged 15-19 were less likely (OR: 0.454) of having premarital sexual intercourse compared to those aged 20-24 years (Kumar *et al.*, 2011). In Indonesia, there has been a decrease in the age onset of puberty in recent years (Nugroho, 2018). On the other hand, the average age of marriage according to Central Bureau of Statistics, National Board of Population and Family Planning, and Indonesian Ministry of Health (2018) has increased. Thus, many late adolescents or young adults may engage in premarital sexual intercourse to fulfill their sexual desires due to the widening gap between puberty and marriage.

Smoking had a significant relationship with premarital sexual intercourse (AOR = 1.361; 95% CI = 1.096-1.690). This result is in line with a study conducted in Taiwan which showed that adolescents having premarital sex also reported having lower health status (p < 0.10), actively smoking (p < 0.01), and drinking alcohol (p. <0.01) (Chiao and Yi, 2011). Another study on high school students in South Korea showed a dose response relationship between the number of cigarettes smoked per day and the amount of alcohol consumed per week with sexual behavior. Students who smoked more than 10 cigarettes per day and seven glasses of alcohol per week had 22,245 times the chance of being sexually active (Kim and Cho, 2019).

Previous studies have shown that the use of addictive substances such as cigarettes can be a gateway for risky sexual behavior (Charrier *et al.*, 2019). Molecularly, nicotine addiction exerts a priming effect on cocaine. Studies in mice have shown that addiction to nicotine increases the effects of cocaine. The mice who were given nicotine for seven days, then cocaine for four days was much more active (98%) than mice that were not given the two substances. In contrast, mice given cocaine then nicotine showed no significant difference with the control group (Kandel and Kandel, 2014).

The theory of risk behavior developed by Jessor (1991) states that one of the ways for teenagers to gain validation and honor from their peers is by doing risky things such as smoking, unsafe riding/driving, drugs abuse, alcohol consumption, and risky sexual behavior. Health risk behavior is also a symbol of freedom from the pressure of parental norms and values, which can be considered too restraining (Jessor, 1991). A study conducted on students in Italy showed that heavy smokers had a higher probability of consuming alcohol, using marijuana, and having sexual intercourse compared to students who did not smoke (Charrier *et al.*, 2019). Another study in New Delhi, India showed that smoking cigarettes was a gateway to alcohol consumption, especially among adolescents who came from poor families (Mathur *et al.*, 2018). The profile of health statistics in 2019 shows that the proportion of smokers in families with the lowest economic status (27.27%) was much higher than those in the top economic status (26.24%) (Central Bureau of Statistics, 2019). The high prevalence of smoking among the poor causes smoking behavior to be considered normal in the context of their social life. The poor have a high level of stress but they do not have many choices of recreational activities to do in their free time because of their limited economic capacity. Therefore, smoking is an easy alternative for them to experience pleasure (Hefler and Chapman, 2014).

According to the previous findings, teenagers who consumed alcohol and got drunk had a higher chance of having premarital sexual intercourse (AOR = 19.888; 95% CI = 16.124-24.531) compared to those who had never consumed alcohol. However, there was a difference in the effect of alcohol consumption towards premarital sexual behavior in males

and females. A longitudinal study in Taiwan showed that alcohol consumption increased the risk of having premarital sexual behavior both in males who were heavily drunk (OR = 2.7; 95% CI = 1.1-6.8) and females who were lightly drunk (OR = 2.1; 95% CI = 1.2-3.6) compared to teenagers who were abstinent from alcohol consumption (Chiao *et al.*, 2012).

Health risk behaviors including alcohol consumption, smoking, drug abuse, and premarital sexual intercourse are some of many ways taken by adolescents to overcome anxiety, frustration, and failure. This means also serves as ways to show that they are no longer kids (Jessor, 1991). Excessive alcohol consumption also causes a person to behave aggressively and boldly and lose control over their actions (Beck and Heinz, 2013). A study conducted on students in the UK showed that alcohol consumption had a significant correlation with impulsive behavior and unplanned sexual intercourse (p < 0.001) (Townshend *et al.*, 2014). This action has the potential to cause unwanted pregnancies and sexually transmitted diseases, including HIV/AIDS. Based on the multivariate analysis, drug use was a factor related to premarital sexual behavior in adolescents. The findings of this study indicated that adolescents who had used drugs had 2.55 times the chance of having premarital sexual intercourse compared to those who had not (AOR = 2.558; 95% CI = 2.105-3.109). This result is in line with research in Riyadh, Saudi Arabia which showed that drug use had a significant correlation with premarital sexual intercourse behavior (AOR = 2.51; 95% CI = 1.14–5.52) (Raheel *et al.*, 2013).

Drug use, alcohol, smoking, and premarital sexual intercourse were a cluster of risky behaviors that were closely related. The involvement of a teenager in one health risk behavior will increase the likelihood of engaging with other behavioral problems. For example, a teenager who consumes drugs has a greater chance of drinking alcohol, committing criminal acts, and having unsafe sex (Jessor, 1991). Research in Lebanon showed that about 10% of students were under the influence of drugs when they had sex for the first time (Ghandour *et al.*, 2014). This condition certainly increases the risk of sexually transmitted infections, including HIV/AIDS.

CONLUSION AND RECOMMENDATION
Conclusion

There was a relationship between gender, age, educational level or status, smoking status, alcohol consumption, and drug use with premarital sexual intercourse. The multivariate results showed that alcohol consumption to the point of drunkenness had the highest OR-value (AOR = 19.888; 95% CI = 16.124-24.531) on premarital sexual intercourse behavior. This means that Indonesian adolescents who consumed alcohol until they were drunk had 19.8 times more lukely to conduct sexual intercourse before marriage compared to those who do not.

Recommendation

The government should integrate the education on the dangers of smoking, alcohol, and drug consumption through the Generation Planning program or Youth Information and Counseling Center one package. This program integration will help the government decrease not only the number of unwanted pregnancies and prevent the spread of sexually transmitted diseases, but also to minimize the impact from addictive substance consumption. Further longitudinal research on the effects of smoking, alcohol consumption, and drug use towards premarital sexual behavior is still necessary to determine which behavior is done first in order to uncover the flow of cause and effect between these behaviors.

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