KNOWLEDGE, ATTITUDE, AND BEHAVIOR TOWARD PREMARITAL SEX AMONG ADOLESCENTS IN INDONESIA

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ABSTRACT:

Background: Currently in Indonesia, premarital sex is one of the reproductive health issues that has been rising. More importantly, the number of adolescents who engage in premarital sexual intercourse is initiated at a younger age and has increased significantly. Little is known about the attitudes, knowledge, and sexual behavior of teenagers in Indonesia. It is important for public health personnel to examine this topic in order to improve gender studies, policy formulation, and prevention and intervention programs in Indonesia.

Method: This study employed secondary data from the National Medium Term Development Plan 2015 (RPJMN 2015). A total of 42,338 Indonesian adolescents aged 15 to 24 years old were selected for analysis. Logistic regression was applied to examine the influence of gender, age, education, schooling status, working status, area, region, knowledge about HIV and reproductive health toward to attitudes toward premarital sex.

Results: The sample size of this study totaled 42,338 adolescents comprising 22,522 males and 19,816 females. The mean age of the respondents was 18.75. It was found that forty-one percent of the adolescents graduated from senior high school and more than 50% still currently studied in school. Moreover, around 72.1% of adolescents didn't work while 53.7% of adolescents lived in rural areas. In addition, 30.4% of those sampled live in the Sumatra region. The respondents had a high level of knowledge about reproductive health and HIV ($\bar{X}$=4.86, SD=2.53). It was found that 1.8% of Indonesian adolescents have agreed in premarital sexual activity. About 25% of respondents reported having experience of kissing and caressing whilst 9.34% reported fingering with the opposite sex. A multiple logistic analysis found that being female, younger age groups, higher education levels, not working, living in rural areas, living in the Java and Bali region, higher reproductive health, lower HIV knowledge and contraceptive knowledge influenced on protective attitudes regarding premarital sexual intercourse.

Conclusion: The findings suggest that sexual and reproductive health education should be provided formally in schools and universities to include education on reproductive health and HIV knowledge in Biology or sport and health classes. Accordingly, having easy access to reproductive health information and providing information on against unhealthy reproductive activity is expected to prevent premarital sex and further reduce the risk of unwanted pregnancy and sexually transmitted infections. One of the roles of governments and the private sector in this regard should be to provide information and reproductive health services for at-risk adolescents.

Keywords: Premarital sex; Adolescent health; Adolescents, Indonesia

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INTRODUCTION

One of reproductive health problems that are in great need of attention in Indonesia is premarital sex,

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especially at a young age. Some of the risks that may arise from this behavior is sexually transmitted infection, which also includes HIV/AIDS [1, 2]. Over the last few decades, Indonesia's reproductive health problems have risen to a level that requires attention. About 3.7 percent of males in age group 15-19 in 2007 reported that they were engaged in premarital sex, a figure which increased to 7.2 percent in 2012, while females in the same age group showed the same percentage (1.3 %) for both 2007 and 2012 surveys [3, 4]. In addition, there were 10.5% (2007) of males in age group 20-24 who reported that they were engaged in premarital sex, a figure which increased to 20.93 % in 2012, while females in the same age group also showed an increasing proportion from 1.4 % in 2007 to 3.43 % in 2012 [3, 4]. Moreover, the result of National Basic Health Research from the Ministry of Health in Indonesia in (2013) reported that 15% of unwanted or unintended pregnancies negatively impact maternal and child health, either by morbidity or mortality [5].

The rapid modernization in big cities in Indonesia has had a rapid effect on social change. The country has witnessed the collapse of the traditional boundaries of interaction between men and women before they are married [6]. In addition, there are cultural taboos that prevent many children from talking easily about their sexual health issues with their own parents [7]. Accordingly, the information about sexual and reproductive health largely derives from their peers who may themselves have weak knowledge [8]. Some research suggests that there are some predisposing factors associated with premarital sexual behavior - for example, poor knowledge about reproductive health and transmitted infections [8, 9]. Some studies have found that young people have low knowledge about reproductive health and sexuality as well as a low level knowledge about the process of puberty [8-11]. Moreover, a study about premarital sexual intercourse in Indonesia by using Indonesia demography and health survey (IDHS) 2012 [12] found knowledge about reproductive health was not associated with premarital sexual intercourse but smoking and drinking behavior were [12]. The lack of knowledge about reproductive health on adolescents might produce positive or negative effects on their sexual behavior. Some research in other countries has found that risky behaviors such as unprotected sex are due to not receiving affordable and appropriate reproductive health information and services [13, 14]. On the other hand, previous studies have shown that knowledge about contraceptives has significantly influenced adolescents' sexual behavior [15]. Limited research in Indonesia has dealt with these associations and covers the context of the country. Therefore, this study endeavors to determine the attitude towards premarital sexual behavior among adolescents in Indonesia. The results of this study will provide clues to make the necessary interventions to promote healthy adolescent sexuality. Moreover, it can provide insight and understanding about the perceptions and behavior of teenagers in premarital sex.

MATERIALS AND METHODS

This study was conducted by employing the data from the survey of the National Medium Term Development Plan 2015 (RPJMN 2015) which has been conducted by the Family Planning National Board of Indonesia. The RPJMN 2015 endeavors to obtain information about the success of the Population Development and Family Planning and Family Development programs [10]. The survey was conducted in 34 Indonesian provinces. The samples were taken in two stages. The first stage used the whole census blocks (CB) accompanied by information on the number of households / number of families in each BS results of the Population Census (SP) in 2010. Under the first phase of the sample frame specified number of BS in PPS (Probability Proportional to Size). Furthermore, the sample frame is the second phase of the whole family and all adolescents 15-24 years in each BS selected. Based on the second phase of the sample frame prescribed, 25 families and 25 teenagers in a systematic random sampling in each BS were selected [4]. Respondents were families and young people aged 15-24 who were unmarried. The data that was analyzed in this paper is only concerning the male and female teenagers. After the data was cleaned there were 42,338 respondents.

This study was officially approved by the Institutional Review Board (IRB) in Kanchanabhishek Institute of Medical and Public Health Technology coded as KMPHT No. 2016/59010136. In addition, the researcher was authorized to use the data according to the letter No. 451/PL.301/H4/2017 from the research and development center of family planning and family welfare.

The current study attempts to predict the

Table 1 Respondents characteristics (N= 42,338)

Variables	Attitude on premarital sex			
	Agree (%)	Don't agree (%)	Total (%)	N
Gender				
Male	73.7	52.8	50.9	22,522
Female	26.3	47.2	49.1	19,816
Mean age (M ± SD)	19.04+2.71	18.46+2.72	18.75+2.71	
Age (years)				
15	10.4	16.4	16.3	6,154
16	11.4	14.2	14.1	5,353
17	11.1	12.8	12.8	4,846
18	13.4	12.2	12.2	4,613
19 or more	53.7	44.5	44.7	16916
Education				
No education	7.15	2.97	3.04	1,289
Elementary	16.78	13.55	13.61	5,763
Junior high	33.81	39.39	39.29	16,635
Senior high	38.62	40.07	40.05	16,955
College or higher	3.64	4.01	4.01	1,696
Current school status				
In school	41.5	56.8	56.5	23,943
Out of school	58.5	43.2	43.5	18,395
Working status				
Working	41.0	27.6	27.9	11,790
Not working	59.0	72.4	72.1	30,548
Area				
Rural	64.0	53.5	53.7	22,741
Urban	36.0	46.5	46.3	19,597
Region				
Sumatra	11.8	30.7	30.4	12,857
Java and Bali	26.0	29.0	28.9	12,254
Nusa Tenggara	8.6	6.3	6.3	2,679
Kalimantan	6.5	9.8	9.7	4,112
Sulawesi	19.0	15.4	15.5	6,545
Maluku	20.0	4.3	4.6	1,957
Papua	8.1	4.5	4.6	1,934
Total	1.8	98.2	100	42,338

teenagers attitude toward premarital sexual. The dependent variable was attitude on premarital sex. The construction of this variable was based on two questions in the National Medium Term Development Plan 2015 (RPJMN 2015): *1) Do you agree that woman can have sex before marriage*? 2) *Do you agree that men can have sex before marriage*? Respondent would answer whether they agree with the first or second question. We set up a variable measured by 1 if the respondent did not agree with premarital sex and 0 if otherwise. While the independent variable was sex, age, education, current schooling, working status, residential area, region, reproductive health knowledge and contraception knowledge. In addition, gender was comprised of 1 for male and 0 for female. The education attainment was coded 0 for "no education"; 1 for "Elementary level"; 2 for "Junior high level"; 3 for "Senior high level"; 4 for "Senior high level" and 5 for "College or higher level".

Moreover, the current schooling referred to the respondent's schooling status. It was coded as 1 if still at schooling and 0 as otherwise. The working status was derived from the respondent's answer as 1 if they work for gaining some money for their living and 0 if otherwise. The occupation was coded as 0 for "do not work" while 1 for "work" (such as professional, technical, managers and administration, clerical, sales, service, agricultural worker, industrial worker, other). The residential area was divided into two categories: 1 as urban and 0 as rural. The region in Indonesia comprises of 7 areas, namely Java and Bali, Kalimantan, Sumatra, Maluku, Sulawesi, Papua and Nusa Tenggara, which

Table 2 Respondents' knowledge, attitudes and behavior towards premarital sex (N= 42,338)

Variables	Attitude on premarital sex		
	Agree (%)	Don't agree (%)	Total (%)
Reproductive health-related and HIV knowledge (M ± SD)	4.24 ± 2.66	4.88 ± 2.52	4.86 ± 2.53
Contraception knowledge (M ± SD)	4.22 + 2.70	4.31 + 2.55	4.31 + 2.55
Ever held hands / fingers with friend(s) of opposite sex			
Yes	80.5	66.3	66.6
No	19.5	33.7	33.4
Ever kissed and caressed with friend(s) of opposite sex			
Yes	65.0	23.9	24.62
No	35.0	76.1	75.38
Ever sexually fingered with friend(s) of opposite sex			
Yes	51.9	8.5	9.34
No	48.1	91.5	90.66
Total	1.8	98.2	42,338

were coded as 1 to 7, respectively. In term of reproductive health-related and HIV knowledge, the questions were derived from the questions which are asked about women menstruation, pregnancy and HIV knowledge. The value of this variable is a range from 0 to 8 points. Contraception knowledge was considered as the recognition about the type of contraceptive method. This variable ranged from the lowest score as 0 to the highest score as 11 points. The descriptive statistics were implemented to describe the independent variables by presenting the mean and standard deviation for age, and the percentage for gender, education, school status, working status, area, region and attitude toward premarital sex. Furthermore, the logistic regression was applied to examine the influence of independent variables toward dependent variables. This study presented the unadjusted and adjusted odds ratios (AOR) with 95% Confidence Interval (CI) for measuring the effect of each variable. This study considers as *p*-values less than 0.05 and 0.01 as statistically significant.

RESULTS

Sample characteristic

The sample size of this study was 42,338 adolescents which comprised of 22,522 male and 19,816 female adolescents. As shown in Table 1, the result show almost 50% of adolescents to be above 19 year old. The mean age of the respondents was 18.75. In term of highest education level and current school status, it can be seen that 41% of respondents graduated from senior high school and more than 50% still currently study in school. Moreover, around 72% of adolescents did not work, and more than 50% of respondents lived in rural areas. In addition, approximately 30.4 percent live in the Sumatra region. Table 2 shows that the respondents had a high average level of reproductive health-related and HIV knowledge ($\bar{X}$= 4.86, SD = 2.53). It also showed that most adolescents had experienced holding hands or fingers with opposite sex (66.6%) and had experience kissing and caressing (24.6%). It found that 9.3% had engaged in fingering with opposite sex. Adolescent who agree with premarital sexual intercourse stands at 1.8% out of 42,338.

Determinant factors of attitudes toward premarital sex

To determine whether the association in univariate model was not dependent of other covariates, multivariate logistic regression was performed by entering all independent variables in this study: gender, age, level of education, current school status, working status, area, region, reproductive health-related and HIV knowledge and contraception knowledge (See Table 3). The purpose of the analysis is to measure the effect of certain independent variables which include socioeconomic factors and reproductive knowledge factors. In this analysis, gender, current school status, working status, and area are compiled become a single variable due to the multicollinearity which showed that two variables are very highly correlated each other's variables.

After controlling other variables, the odds ratio of female adolescents were 58% less likely to agree about intercourse before marriage than male adolescents, which is statistically significant (OR=0.44, 95%CI: 0.3738-0.5236). Interestingly, the older the age of respondents, the more they are permissive about premarital sex (OR=0.9628; 95%CI: 0.9375-0.9964).

Table 3 The adjusted odds ratio of factors effect to attitudes toward premarital sex (N= 42,338)

Characteristics	Unadjusted odds ratios (95% CI)	Adjusted odds ratios (95% CI)
Gender		
male (ref.)		
Female	0.3988 (0.339-0.469)	0.4424* (0.374-0.524)
Age	0.9363 (0.913-0.961)	0.9628 *(0.938-0.996)
Education		
No education (ref.)		
Elementary	1.9466 (1.411-2.685)	1.3058 (0.935-1.824)
Junior high or lower	2.8071 (2.087-3.776)	1.5360** (1.109-2.127)
Senior high	2.4999 (1.864-3.353)	1.5943**(1.150-2.209)
College or higher	2.6551 (1.675-4.210)	1.8204* (1.095-3.026)
Current school status		
Out of school (ref.)		
In school	1.8571 (1.607-2.1463)	1.3714* (1.133-1.660)
Working status		
Not working (ref.)		
Working	0.5496 (0.475-0.636)	0.7512* (0.631-0.895)
Area		
Urban (ref.)		
Rural	1.5423 (1.330-1.789)	1.2185** (1.040-1.428)
Region		
Java and Bali (ref.)		
Sumatra	0.4296 (0.335-0.551)	0.4005** (0.311-0.516)
Nusa Tenggara	0.2822 (0.205-0.389)	0.2803** (0.203-0.387)
Kalimantan	0.5791 (0.409-0.819)	0.5973** (0.422-0.846)
Sulawesi	0.3124 (0.240-0.407)	0.3259** (0.250-0.425)
Maluku	0.0835 (0.064-0.109)	0.0840** (0.064-0.110)
Papua	0.2152 (0.155-0.298)	0.2199** (0.158-0.307)
Reproductive health-related and HIV knowledge (M ± SD)	1.0308 (1.019-1.043)	1.0724** (1.037-1.109)
Contraception knowledge (M ± SD)	1.0138 (0.986-1.043)	0.9555 (0.926-0.987)
Constanta		251.104 (121.560-518.699)

Note: CI=Confidence interval

* =Significant at 0.05; ** =significant at 0.01; ref. =reference

In terms of education level, after controlling for other variables, odds of Indonesian adolescents who graduated college or higher were twice times more likely to disagree about premarital sex than those who didn't attend any education level (OR= 1.82, 95% CI: 1.0951-3.0262). Regarding current schooling status and residential area, adolescents who were in the school system and lived in a rural area were 1.37 and 1.21 times more likely to not agree with premarital sexual intercourse than those who still currently out of schooling and lived in urban area (OR= 1.37 and 1.21, 95% CI: 1.13-1.66 and 1.04-1.44, respectively).

In addition, unemployed adolescents were 25% less likely to agree about premarital sexual intercourse than those who were working (OR= 0.75, 95% CI: 0.63-0.90). Adolescents who lived in Java and Bali tend to have a lower agreement on premarital sex than other regions. For reproductive health-related and HIV knowledge, the higher level of reproductive health-related and HIV knowledge, the more likely for adolescents to not agree to have premarital sexual intercourse (OR= 1.07, 95% CI: 1.04-1.11) compared with those who had a low level of reproductive health-related and HIV knowledge. Furthermore, knowledge on contraception did not associate with the attitude on premarital sex (p>0.5).

DISCUSSION

The youth's sexual activity is an issue of greater concern in Indonesia these days than ever before. The findings show almost thirty percent engaged in kissing and caressing while 1.8% agree to premarital sexual intercourse. According to previous studies [11, 13, 14], researchers also have found that youth attitudes affect sexual behavior

before marriage. Those who have a receptive attitude will tend to have sex before marriage as well as engage in other risky sexual behavior. Other research has also shown that those with a more open attitude will tend to have sexual intercourse at an earlier age [16, 17].

Furthermore, males showed more accepting attitudes toward premarital sex than females. The male-female differential in attitude toward sexual activity may be better explained by the double-standard of norms in terms of sexual initiation [18, 19]. In most developing countries male sexual adventures are socially acceptable but not for women [11]. In this study, it can be assumed that premarital sexual intercourse among women is under-reported due to social and cultural standards. This study is in line with other studies that show gender is a significant predictor in premarital sexual behavior in adolescents. Male adolescences are more likely to agree and engage in premarital sex compared to adolescent girls [18, 20]. Similarly, the study about attitudes toward sex among adolescents in Hong Kong found men are more likely to be liberal and permissive toward premarital sexual behavior and other risky sexual behavior as compared to women [16, 17].

In this study, adolescents not attending school have more opportunities to engage in sexual activity. Due to their social life, they may have more relaxation and spare time than those who are in school [21, 22]. According to a study in Kenya, 10% of female students dropped out of secondary schools because they were pregnant [23]. This study showed that those with a higher educational level have a lower probability to initiate premarital sexual practices. These high levels of education mean that the respondent will receive information on sexual and reproductive health from school including the information about the consequences of premarital sex and sexually transmitted infections. They will more likely to have higher knowledge about the risk of sexual transmitted infection and health reproductive if they decide to have sex before marriage [24]. Regarding the working status, unemployed adolescents agreed about premarital sexual intercourse less than working adolescents. Adolescents who were working tend to meet a wide variety of social opportunities which are influenced by Western culture and changing attitudes [6, 7].

Furthermore, Indonesian adolescents who lived in rural areas were less likely to agree to premarital sexual intercourse than those who lived in urban area. The finding was in-line with the study of Kenya that rural residence was associated with a significantly less likely of beginning of childbearing than urban residence [24]. In addition, Jejeebhoy and Sebastian [25] found evidence of increased premarital onset of sexual activity, particularly among young males who live in urban areas. Lastly, the higher level of reproductive health-related and HIV knowledge, the more likely adolescents were to disagree about having premarital sexual intercourse. The reason could be that those sampled are aware about contraception and HIV which resulted in the changing of attitude and behavior toward premarital intercourse [5, 8].

CONCLUSION

This study indicates that attitudes toward premarital sex are affected by personal characteristics and reproductive health knowledge factors. The results of this study showed that the higher the education level, the higher attitude of disagreement towards premarital sexual intercourse. Thus, the government should encourage teens to continue and improve their education as an effort to improve adolescent reproductive health. Government should provide access to protective information and skills before they engage in premarital sex in order to reduce their risk of unwanted pregnancies and inviting risk of other sexually transmitted infections. Currently the reproductive health and sexual education program that is provided by school should go beyond only just giving information but should also include knowledge and practical advice, such as how to communicate and negotiate their position with the opposite sex, self-confidence and self-efficacy toward peer pressure. Moreover, adolescent students should be educated on how to search for the right information about their sexual and reproductive health [26, 27].

LIMITATION OF THE STUDY

Since this paper is based on secondary data, it may produce low reliability at some variables such as the reproductive health knowledge and the contraceptive knowledge which were derived from only a few questions. Moreover, this study tries to access sensitive issues associated with sexuality which might affect the accurate reporting of some behaviors. Thus, the findings should be understood with these limitations acknowledged.

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