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# THE CONTRIBUTION OF PREMARITAL PERMISSIVENESS AND REPRODUCTIVE RELATED KNOWLEDGE TO FEMALE ADOLESCENT SEXUAL BEHAVIOR IN INDONESIA

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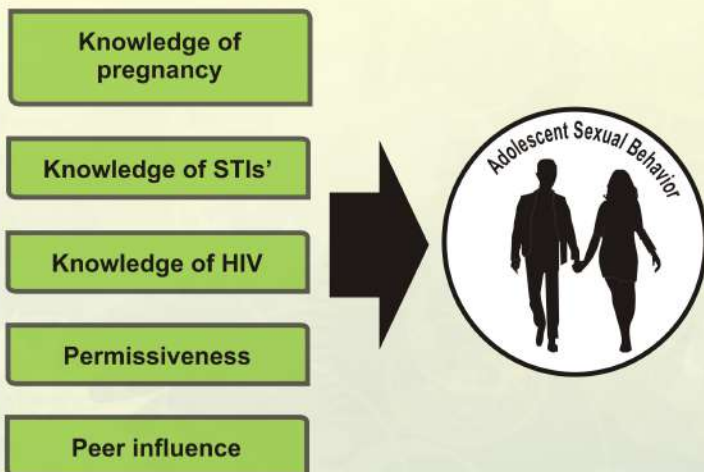
## BACKGROUND

Indonesia faces hidden problem where more than two million abortions performed every year, with thirty percent involving adolescent. Female adolescent become vulnerable to the risks since they become more permissive toward sexual behavior before marriage. This study examined contribution of premarital permissiveness and reproductive related knowledge to female adolescent sexual behavior.

## METHODOLOGY

Data derived from Indonesia Young Adult Reproductive Health Survey (IYARHS) carried out by Indonesia Bureau of Statistics in 2007 with total of 19.311 young adult interviewed and 44 percent of them are female (8.481) as focus of this study analysis.

## CONCEPTUAL FRAMEWORK



## RESULT

### Reason ??

- 40.7% happened without any purpose/just happened
- 8.7 % forced by their couple.

1.8% had ever done sexual intercourse

42.3 % had poor HIV/AIDS knowledge

71.3 % had poor STI's knowledge

90.4% had poor pregnancy knowledge

18 % approve premarital sexual behavior

Logistic regression analysis, factors contributed to female adolescent sexual behavior

Variable	OR	p value	95.0% C.I.for EXP(B)	
			Lower	Upper
Knowledge of HIV	1.71	0.003	1.20	2.45
Attitude about pre-marital sex	10.99	<0.001	7.16	16.85
Attitude toward virginity	8.49	<0.001	5.82	12.39
Have friends had sex before marriage	7.04	<0.001	4.13	12.02

Poor HIV/AIDS knowledge, approve pre-marital sexual behavior, disapprove virginity and had friend that ever have premarital sex, likely to have sexual behavior about 51.2%

## CONCLUSION

- Immense need to implement gender based reproductive health program
- Life skill training such as assertive behavior to ensure adolescent overcome peer influence
- Prevention efforts should also encourage parents and peers to be role model in having appropriate sexual attitude and behavior.

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increasing, stakeholders' role is still very low, weak coordination, and the pressure on the people is growing.

Poster 17

## The Contribution of Premarital Permissiveness and Reproductive Related Knowledge to Female Adolescent Sexual Behavior in Indonesia

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**Background/ objectives:** Indonesia faces hidden problem where more than two million abortions performed every year, with 30 percent involving adolescent. Female adolescent become vulnerable to the risks since they become more permissive toward sexual behavior before marriage. This study examined contribution of premarital permissiveness and reproductive related knowledge to female adolescent sexual behavior.

**Method:** Data derived from Indonesia Young Adult Reproductive Health Survey (IYARHS) carried out by Indonesia Bureau of Statistics in 2007 with total of 19.311 young adult interviewed and 44% of them are female (8481) as focus of this study analysis. In this paper reproductive related knowledge consists of HIV/AIDS, STI's and pregnancy knowledge. Permissiveness reflected toward attitude pre-marital sexual behavior. Peer influence reflect by friend ever have sex and friend experience unwanted pregnancy. The contribution of each variable to sexual behavior was assessed using logistic regression.

**Results:** 1.8 percent of female adolescent convince that they had ever done sexual intercourse. The study found that 42.3 percent had poor HIV/AIDS knowledge, 71.3 percent had poor STI's knowledge and 90.4 percent had poor pregnancy knowledge. Result also showed that 18 percent permissive toward premarital sexual behavior. Logistic regression analyses estimated for female adolescent with poor HIV/AIDS knowledge approve pre-marital sexual behavior and had friend that ever have premarital sex, likely to have sexual behavior about 51.2 percent.

**Conclusions:** Result indicates that there was an immense need to implement gender based reproductive health program about STI's including HIV/AIDS. Adolescent also need life skill training such as assertive behavior to ensure adolescent overcome peer influence. Prevention effort should also encourage parents and peers to model appropriate sexual attitude and behavior.

Poster 18

## Visual Characteristic Among Elderly Drivers in Fukuoka City, Japan

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**Background/ objective:** The main range of human sight for an object can be measured on a horizontal line in the field of sight. However, a driver's eyesight must not only capture the below-line sight but also the above-line sight. Since elderly drivers have decreasing on visual skill then

# The contribution of premarital permissiveness, reproductive related knowledge and peer influence to female adolescent sexual behavior in Indonesia

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## Abstract

**Background/ objectives:** Indonesia faces hidden problem where more than two million abortions performed every year, with thirty percent involving adolescent. Female adolescent become vulnerable to the risks since they become more permissive toward sexual behavior before marriage. This study examined contribution of premarital permissiveness and reproductive related knowledge to female adolescent sexual behavior.

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**Conclusions:** Result indicates that there was an immense need to implement gender based reproductive health program about STI's including HIV/AIDS. Adolescent also need life skill training such as assertive behavior to ensure adolescent overcome peer influence. Prevention effort should also encourage parents and peers to be role model off appropriate sexual attitude and behavior. Prevention efforts should also encourage parents and peers to be role model in having appropriate sexual attitudes and behavior.

## Background

Adolescents defined as a life phase from 10 to 14 years of age which characterized by profound biological, cognitive, emotional and social changes associated with the passage through puberty<sup>1</sup>. They put the first step of the opportunities for health and future pattern of adult health. Health of adolescence is the result of interactions between prenatal and early childhood development and the specific biological and social-role changes that accompany puberty. It was also shaped by social determinants and risk and protective factors that affect the uptake of health-related behaviors<sup>2</sup>.

Indonesian adolescent are experiencing rapid change in values, attitudes and behavior regarding sexuality. They are becoming more permissive in expressing their sexual feelings and sexual behavior. The open opportunity to access variety of entertainment facilities, including night-clubs, and pornographic materials through movies, videos on their mobile phones, magazines, and the internet, may encourage adolescent natural curiosity to experiment more.

In contrast adolescent girls were expected to remain chaste until marriage; an intact hymen was evidence of this <sup>3</sup>. Virginty was regarded as a symbol of morality, therefore a woman's virginty was very important in a marriage. Boys in contrast were commonly given more sexual freedom than girls and were not burdened by any physical evidence of sexual experience.

Adolescent girl health issues currently become a global concern because they become vulnerable to the risks since they become more permissive toward sexual behavior before marriage.<sup>4</sup> Negative health consequences associated with early and unsafe sexual activity such as sexually transmitted Disease (STD) including Human Immunodeficiency Virus (HIV/AIDS) and unintended pregnancy <sup>5</sup>.

Pregnancy for adolescent girls would cause some adverse effect because their bodies not physically mature yet to cope with pregnancy and childbirth, this conditions are inceasing the risk of pregnancy and childbirth complications. Women aged 15-19 have to three times the maternal death rate as those aged 20-24; they are specially likely to suffer from pre eclampsia, eclampsia, obstructed labor, and iron deficiency anemia. Unintended pregnancy can result in unsafe abortion which lead to another problems <sup>6</sup>.

Globally every year there are 48.3 million abortions in which 3 million of them are adolescent under 20 years <sup>7,8</sup>. The unsafe abortion among Indonesian adolescent is estimated around 2.6 million abortions in which 700,000 of them are adolescent under 20 years which contribute to the high number of matenal mortality in Indonesia <sup>9</sup>. The fear of parental notification, shame and the lack of knowledge, unavailibity of safe and legal abortion may combine to constrain adolescent girl from seeking timely and safe abortion.

The teenage pregnancy is not only influence the mother but the children also. Teenage pregnancy can result in low birth weigth newborn and preterm delivery, and has associated higher infant mortality rate. The children of adolescent mother are more likely to live in less stimulating environments and more likely to be at risk for abuse and neglect than children born to elder mothers <sup>10</sup>.

The risk associated with unprotected sex not only teenage pregnancy but also sexually transmitted diseases. STDs can lead to infertility, ectopic pregnancy, cancer and numerous other health problem. STDs also increase the chances of HIV infection and transmission. Biological, social and economic factors make adolescent girls more vulnerable to HIV/AIDS. Nearly half of the 19 million new STDs each year are among young people aged 15–24 years<sup>11</sup>. Estimated 8,300 young people aged 13–24 years in the 40 states had HIV infection<sup>12</sup>. More than 400,000 teen girls aged 15–19 years gave birth in 2009<sup>13</sup>.

Prior studies have identified many factors that put adolescent at risk for early involvement in sexual activity. Several studies found that factors that influence to adolescents' early sexual behavior was the lack knowledge of pregnancy, sexual transmitted Infections (STI's), HIV/AIDS, social norms such as permissiveness to premarital sexual behaviors and also sexual attitude of peers<sup>14, 15, 16, 17</sup>.

Early sexual activity not just only had health-related outcomes but often more complex. In some settings, adolescents who stay in school longer are less likely to engage in sexual risk behaviors<sup>18</sup>. It is unclear, however, whether adolescents who stay in school are less likely to engage in risky sex or whether sexually active adolescents who engage in risky sex are more likely than others to drop out of school, and are missed in school based studies.

The aim of this study was to assess contribution of premarital permissiveness, reproductive related knowledge and peer influenced to female adolescent sexual behavior. The result about permissiveness, reproductive related knowledge and peer influence through surveys is essential to policy makers to get better understanding of the dynamics insights of adolescent. This information is also important in assessing changes over time as a result of prevention efforts.

## **Methods**

### **Data source**

Data derived from Indonesia Young Adult Reproductive Health Survey (IYARHS) carried out by Indonesia Bureau of Statistics in 2007. The 2007 IYARHS was conducted in all provinces in Indonesia as part of the 2007 Indonesia Demographic and Health Survey (IDHS) which are openly available from the Measure DHS website<sup>19</sup>. The 2007 IYARHS sample aimed to provide reliable estimates of key characteristics for never married women and men age 15-24 in Indonesia as a whole, in urban and rural areas, and in each of the 33 provinces included in the survey.

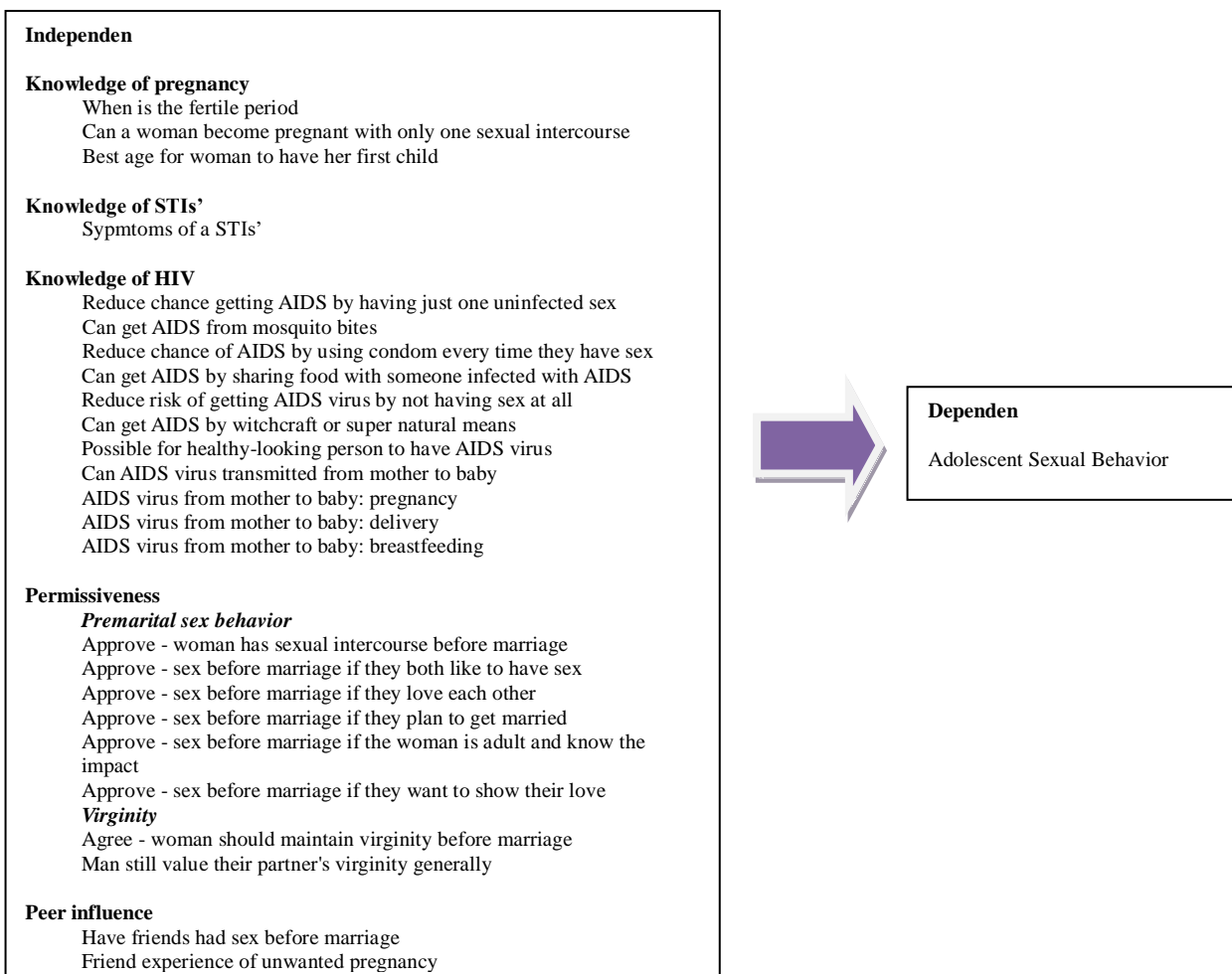
## Sample

From total of 19.311 young adult interviewed selected 8.481 female adolescent (44%) without any missing in variables and become the focus of this study analysis.

## Variables

Variables in this study adopted from ecological models framework of adolescent health risk behaviors which posit that behavior is produced by the interactions between people and their environments, for example, school, peers, and family<sup>20</sup>.

Dependent variable of this study is premarital sexual practice while independent variables consist of reproductive related knowledge (pregnancy and STI's include HIV/AIDS knowledge), permissiveness reflected toward approval attitude about pre-marital sexual behavior and approval attitude about virginity. Peer influence reflect by friend ever have sex and friend experience of unwanted pregnancy.



Frequency tabulations were performed to describe the characteristics of female adolescent included in this study. In bivariate analysis logistic regression was used to performed factors associated with female adolescent sexual behavior. The multiple logistic regression was used to find out the contribution of each variable to sexual behavior. It was conducted by entering all variables and then eliminated or remove one by one factors that not significantly associated with the study outcome using a significance level of 0.05.

## Result

Our study found that from 4.841 female adolescent, 152 (1.8%) ever had sexual intercourse. 40.7 percent explained that sexual intercourse happened without any purpose or just happened and 18.7 percent do the activity because forced by their couple. Result also showed that 49.5 percent female adolescent have friends who had ever done premarital sex and 3.9 percent of them motivated to do the same behavior.

**Table 1** Characteristics of study population by respondent who ever had sexual intercourse

	Ever had sexual intercourse N (%)	
	Yes N (%)	No N (%)
<b>Type of place of residence</b>		
Urban	61 (40.1)	4270 (51.3)
Rural	91 (59.9)	4059 (48.7)
<b>Highest educational level</b>		
Primary	31 (21.5)	1218 (14.8)
Junior high	39 (27.1)	1684 (20.4)
Senior high	56 (38.9)	4092 (49.6)
Academy	11 (7.6))	511 (6.2)
University	7 (4.9)	742 (9)
<b>Knowledge of Pregnancy</b>		
Poor	136 (89.5)	7531 (90.4)
Good	16 (10.5)	798 (9.6)
<b>Knowledge of STIs'</b>		
Poor	93 (61.2)	5956 (71.5)
Good	50 (38.8)	2373 (28.5)
<b>Knowledge of HIV</b>		
Poor	72 (47.4)	3513 (42.2)
Good	80 (52.6)	4816 (57.8)
<b>Permissiveness</b>		
<b>Attitude about pre marital sex</b>		
Approve	123 (80.9)	1406 (16.9)
Disapprove	29 (19.1)	6923 (83.1)
<b>Attitude toward virginity</b>		
Disapprove	65 (42.8)	295 (3.5)
Approve	87 (57.2)	8034 (96.5)



**Peer influence****Have friends had sex before marriage**

Yes	135 (88.8)	4061 (48.8)
No	17 (11.2)	4268 (51.2)

**Friends experience of unwanted pregnancy**

Yes	77 (50.7)	2137 (25.7)
No	75 (49.3)	6192 (74.3)

The detailed characteristics of variables used in these analyses are presented in Table 1. A high proportion of female adolescent from poor knowledge of HIV (47.4%), approve pre-marital sex (80.9%), have friends had sex before marriage (88.8%) and had friends experience of unwanted pregnancy (50.7%) were ever had sexual intercourse.

The proportion of female adolescent who never had sexual intercourse was higher in female adolescent from urban (51.3%), good knowledge of HIV (57.8%), disapprove pre-marital sex (83.1%) and hadn't friends experience of unwanted pregnancy (73.4%).

Table 2. Bivariate analysis, factors associated with female adolescent sexual behavior

Variable	OR	p value	95.0% C.I.for EXP(B)	
			Lower	Upper
Knowledge of pregnancy	0.90	0.70	0.53	1.52
Knowledge of STIs'	0.63	0.01	0.45	0.87
Knowledge of HIV	1.23	0.20	0.89	1.70
Attitude about pre marital sex	20.88	<0.001	13.88	31.43
Attitude toward virginity	20.35	<0.001	14.46	28.64
Have friends had sex before marriage	8.35	<0.001	5.03	13.85
Friends experience of unwanted pregnancy	2.97	<0.001	2.16	4.10

Bivariate analysis shows that there was a significant association between have friends had sex before marriage and female adolescent sexual behavior. Female adolescent who had friends that ever had sex before marriage were eight times more likely to do sexual intercourse compared to those who hadn't. The result also showed the association with friends experience of unwanted pregnancy (OR=2.97 p <0.001).

The highest odds found in attitude about premarital sex (OR=20.88 p <0.001) and attitude towards virginity (OR 20.35 p < 0.001). Female adolescent who approve pre marital sex were twenty times more likely to do sexual intercourse compared to those who didn't approve. Another significant association between female adolescent sexual behavior and knowledge of STIs' also shown with the lowest odds (OR=0.63, p 0.01)

Table 3. Logistic regression analysis, factors contributed to female adolescent sexual behavior

Variable	OR	p value	95.0% C.I.for EXP(B)	
			Lower	Upper
Knowledge of HIV	1.71	0.003	1.20	2.45
Attitude about pre marital sex	10.99	<0.001	7.16	16.85
Attitude toward virginity	8.49	<0.001	5.82	12.39
Have friends had sex before marriage	7.04	<0.001	4.13	12.02

Table 3 shows result of logistic regression that four of seven variables contributed to female adolescent sexual behavior. They were knowledge of AIDS, attitude about pre-marital, attitude towards virginity and friend ever have pre-marital sex. Of the four variables, the most dominant variable is attitude about pre-marital sex (OR10.99; CI: 7.16-16.85).

Formula Result from this study :

$$\begin{aligned} \text{Logit (female adolescent sexual behavior)} \\ = 1.162 + 1.709 * \text{knowledge of AIDS} + 10.988 * \text{attitude about premarital sex} \\ + 8.49 * \text{attitude toward virginity} + 7.044 * \text{have friends had sex before marriage} \end{aligned}$$

Or formula for probability :

$$\begin{aligned} P(\text{female adolescent sexual behavior}) \\ = \frac{1}{1 + e^{-(1.162 + 1.709 * \text{knowledge of AIDS} + 10.988 * \text{attitude about premarital sex} + 8.49 * \text{attitude toward virginity} + 7.044 * \text{have friends had sex before marriage})}} \end{aligned}$$

From the formula or model we can estimated for female adolescent with poor HIV knowledge, approve pre-marital sexual behavior, disapprove virginity and had friend that ever have premarital sex, likely to have sexual behavior about 51.2 percent.

## Discussion

The result showed sexually active adolescent girl had poor knowledge of HIV, poor knowledge and poor knowledge of pregnancy. Lack of knowledge regarding human reproduction has caused some adolescent to engage in risky sexual behavior. Many believe that a woman cannot become pregnant from a single act of sexual intercourse. This condition showed that there were problems to information gain and limited access to reproductive health information and services.

The adolescent girl had high knowledge about HIV/AIDS but had low knowledge about STDs which means they are aware about HIV/AIDS but not the role of STDs play in HIV

transmission. Emphasizing that STDs increase the likelihood of HIV transmission, may increase adolescent awareness and lead to less risky behavior.

Information regarding reproductive and sexual health, mostly gained from friends, mass media, and religious teachers, is likely to be incomplete, uninformative or obscured by religious and moral messages. As most parents still hold conservative norms, they feel uncomfortable about discussing sexual issues with their teenage children. Reproductive health education is rarely found in school curricula. Talking about reproductive health is assumed the same with talking about sex, which in public is still taboo, and at the state level there is a strong belief that sex should be treated as a private matter and not a public concern.

Changes in knowledge are not strongly associated with changes in adolescent sexual behavior, which is primary concern of most prevention efforts, but knowledge are believed to be the necessary precursor, and adolescent need basic information to assess risk and avoid unprotected sex.

Rates of adolescent sexual activity are strongly related to teens' views and attitudes toward sex. In a longitudinal study over two years periods found that teens with accepting attitudes toward sex were significantly more likely than other teens to initiate sexual intercourse <sup>21</sup>. Another study found that boys and girls who initiate sexual intercourse in early adolescence are more likely than abstinent teens to approve of sex among unmarried teenagers <sup>22</sup>.

Other finding notes that changing teens' attitudes toward sex may be one of the most effective ways to reduce youth involvement in risky sexual behaviors and help prevent teenage pregnancy, because his studies have consistently found a strong link between teens' attitudes toward sex and their later sexual behaviors, and because attitudes can ostensibly be changed through intervention, unlike other predictors of adolescent sexual behaviors such as race/ethnicity or gender <sup>23</sup>.

Sexual behavior is one of many areas in which adolescent are influenced by their peer. According to that key to modify adolescent sexual behavior is to understand how adolescent are influenced by their peers. Adolescent report that they are most likely to get information about sexual health issues from their peers. Survey on students of French highschool showed that sexual permissiveness of peers is associated with a higher frequency of sexual practices considered risky attitude that encourage premarital sex influence the attitude and behaviors of adolescent girls <sup>24</sup>. Pressure to engage in sex increases during middle adolescence. Youth who did not sexually active tend to have friends who are abstinent as well. They also tend to have higher knowledge and discourage premarital sexual behavior.

Asian based culture societies have some norms and rules about the adolescent sexuality. Most encourage virginity; discourage premarital sexual activity and childbearing outside marriage. Despite that traditional culture, modernization seems to play an important role in the determination of attitudes towards premarital sexuality. Modernization may have an effect on people through immigration or through imposition of North-Western industrialized nations' common social rules and norms on other nations through cultural imperialism <sup>25</sup>.

A study examined the challenges presented by a modern society and the influences of the cultural and social backgrounds among young Moroccan Islamic immigrants to Belgium <sup>26</sup>. They found their participants tended to be minimally influenced by the social environment they found themselves in. Almost all the boys wanted to marry a woman with no prior sexual experience. They tended to look down on Muslim girls who did not hold to this standard. Among girls, who were aware that most Moroccan men wanted a bride who did not have any premarital sexual experience, premarital sexuality was similarly unacceptable. Other research showed that prevalence of premarital sexual relations are significantly increasing in Nigeria, speculated that increased age of marriage and higher levels of urban migration played an important role in changing premarital sexual attitudes <sup>27</sup>.

A contemporary investigating Indonesia identified the availability of public and private transport, modern meeting places such as malls and touristic destinations, and the resulting absence of parental supervision and relative privacy as critical modernist influences contributing to higher rates of premarital sexual behaviors. Although the public pressure against premarital sex still existed, the probability of having opportunities of covert sexual behaviors was higher. In this context, argued that female peer groups and sisters functioned as social support networks and confidants of women who engaged in premarital sex, while male relatives and brothers acted as control agents and the police of women's "honor" and "reputation", similar to the general society and the parents <sup>28</sup>.

## **Conclusions**

Our result revealed that sexual norms of peers related to female adolescent individual sexual attitudes and behavior. Permissiveness attitude about pre-marital sex were highly contributed to female adolescent sexual behavior. Knowledge also play an important role especially knowledge of specific STIs, such as AIDS/HIV was reassuring, however, lack of knowledge regarding common STIs was concerning.

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