

Peer Influence and Dating as Predictors of Pre-Marital Sexual Behavior Among Indonesia Unmarried Youth

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ABSTRACT

Background & purpose: Indonesia are facing demographic dividend in the next decade, as the main responsible human resource, identification of potential factors associated to sexual-risk behavior among unmarried youth must be undertaken. This study aims to investigate the association and identify the robust predictor between peer-influence, substance use and dating with pre-marital sexual. **Methods:** A cross sectional study of the 2017 Indonesia Demographic and Health Survey carried out 11,299 unmarried youth aged 15-24 year old. **Result:** The proportion of pre-marital sexual in Indonesia unmarried youth in this study was 11,5%. Based on logistics regression analysis, pre-marital sex was significantly associated with gender, type of residence, smoking behavior, alcohol drinking, drug usage experience, peer influence, and dating. The most robust predictor was peer influence with the adjusted odds ratio (aOR) 10,91, 95% CI 9,55 – 12,47. **Conclusion:** The proportion of unmarried youth pre-marital sex in Indonesia remains high with peer influence as the robust predictor. Youth specific needs must tailor the education intervention.

Keywords: *pre-marital sex, unmarried youth, sexual risk behavior, peer influence, dating*

1. INTRODUCTION

United Nations defined youth as those who aged 15 to 24 years old [1]. UN also estimates there are 1.2 billion of youth globally, which 87% of them live in developing countries, especially in Asia [2]. One of the most populous countries in Asia is Indonesia which is occupied by more than 44 million youth who represented almost 16% of its total population [3]. As part of societies, youth deserve proper access to education and healthcare in order to shed the light on their own lives and take the lead as Indonesia will face demographic dividend in the next decade [4]. Beside addressing those objectives, it is also important to acknowledge youth characteristics as a stage of transition from childhood to adulthood, when they like to try new things, including risk behaviors such as pre-marital sexual [5].

National Population and Family Planning Board of Indonesia (BKKBN) started a campaign called as *Triad KRR* (Kesehatan Reproduksi Remaja) in 2015. This campaign focused on the avoidance of three risk behaviors impacted on youth reproductive health such as pre-marital sexual, HIV/AIDS and drug/substance abuse [6]. Pre-marital sexual is defined as a voluntary and

uncommitted sexual activity performed by unmarried folks [7,8]. This becomes main health priority among youth since it leads to life-threatening consequences such as unwanted pregnancy, unsafe abortion, HIV/AIDS, and sexual transmitted infection [9]. In 2017, BKKBN noted a median age discrepancy between first marriage and sexual debut among men, which can be attributed from pre-marital sexual practices. It showed the median age of sexual debut among men were younger (24,2) than their median age of married (24,6) [10]. Another youth health impairment activity was reported by Southeast Asia Tobacco Control Alliance (SEATCA) in 2018, that Indonesia has the highest percentage of youth smokers (19.4%) and adult smoker (36.3%) compare to other Southeast Asia countries [11]. All of these risk behaviors lead to physical, mental and social impairment, such as schools drop out, depression, unemployment, cervical and lung cancer, abortion and even mortality [12–15].

Dating was known to be the starting point for youth to build a romantic relationship with a partner that potentially direct to pre-marital sex. The 2007 and 2012 IDHS reported more than half of both male and female youth ever had a relationship with age of first dating mostly around 15-17. In 2007 the proportion of pre-marital sex among male youth was 6%. In the following

survey, the proportion was increased to 8%, while among female youth the two surveys noted less than 1% proportion. Both surveys noted curiosity as the major motive behind the practices and friends' influences as the least factor [16,17].

As Indonesian Youth is the main agent to face the next decade's demographic dividend, thus it is important to give prime identification of factors associated with youth pre-marital sexual. This study aims to assess the magnitude of and factors associated with pre-marital among youth in Indonesia, and also identify the robust predictor in predicting pre-marital sex. To the best of the author's knowledge, there are no other studies are using recent national scale data source (The 2017 IDHS) to assess the factors associated with pre-marital sex.

2. MATERIALS AND METHODS

A. Study population and design

The subjects were unmarried Indonesian youth aged 15 to 24 years' old who domiciled in 34 provinces in Indonesia. The data derived from the 2017 Indonesia Demographic and Health Survey (IDHS), a national scale cross sectional survey conducted by National Population and Family Planning Board. Sample size was calculated by considering relative standard error (RSE) of primary variable. RSE used in the study was 3.5% with 5% non-response rate. Then proportional distribution was performed to the urban and rural domain using the formula

$$n_u = \frac{n \cdot p_u}{(1 + \frac{RSE^2}{p_u})} \approx 1.05 \cdot n \cdot p_u$$

Stratified two-step sampling method was used in the study. First step using PPS (proportional to size) to select number of census blocks and second step conducted for select the household. From all visited household, 9971 female youth and 12.612 male youth were successfully interviewed. Those with missing data on pre-marital sexual, smoking behavior and alcohol consumption were excluded from the study.

B. Youth sexual-risk behavior

Sexual-risk behaviors studied on this research were pre-marital sexual. Pre-marital sexual data was obtained from the question of "have you ever had sexual intercourse?". Smoking behavior and alcohol were obtained from the question of "do you currently smoke cigarettes?", and alcohol consumption was obtained from the question of "in the last 3 months, how many days did you drink an alcohol-containing beverages?". The responses were coded as yes/no answer.

C. Covariates

Characteristics data from IDHS were used to obtain covariates. Sex, age of respondents as well as type of residence derived from household roster section. Sex were grouped as male and female. Age were grouped as under twenty years old and above. Type of residence was identified as urban or rural based on the sub-district categorization from Indonesia Statistics. Educational

attainment was grouped into four categories: primary school, secondary school, high school and higher education. The study also assessed the potential peer influence by examining the question of "because you have friends who have sex, are you motivated to do so?" and current relationship from the question of "do you currently have boy/girlfriend?" [10].

D. Statistical analysis

Data was analyzed using SPSS 25 for univariate, bivariate and multivariate with confidence interval 95%. Univariate analysis was done to present youth's characteristics and the magnitude of pre-marital sex. All characteristics variables were reported using frequencies and percentages. Bivariate analysis was conducted using chi square to identify any potential association between covariates and pre-marital sex. Further, multivariate analysis was performed using logistics regression to assess crude and adjusted odd ratio. Variables that show significant values less than 0,05 are treated as covariates on the analysis. Pre-marital sexual was assessed as outcome variable with smoking behavior, peer-pressure and current relationship as predictors adjusted with age.

3. RESULT

A total of 23,769 subjects aged 15-24 years old were assessed. From those assessed, 12,473 were excluded with detail of 159 missing data of pre-marital sexual, 9275 due to missing data on peer-pressure, 3039 due to missing data on smoking behavior, drugs use and education attainment. The final analytical sample involving 11,299 respondents.

In our analysis, out of 11,299 youth, there are 1294 youth practiced pre-marital sexual in 2017 with the proportion of 11.5% (95%CI). Table 1 display the respondent's characteristics based on several variables and it showed most respondents were male, aged 15-19 years old and lived in urban residence. Most respondents were high school graduate and currently have boy/girlfriend as well as befriended with those who practiced pre-marital sexual debut with the proportion of 23.9%. One third of the respondents were smokers, nearly half of them are alcohol drinker and a few never experience to use drugs.

Table 2 present a cross tabulation between pre-marital sexual practices and all explanatory variables. There were significant association for all variables examined between those who was practicing and not practicing pre-marital sexual. It showed that the respondent's age, sex, place of residence, education attainment, smoking and drinking behavior, peer influence and current relationship were significantly associated with pre-marital sex among youth.

In logistics regression (Table 3), all covariates were significantly associated with pre-marital sex prior and after adjusted with age. The odds for practicing pre-marital sex is about 6.12 times higher on male as

compared to female. It also showed that the odds for practicing pre-marital sex was higher among smoker and those who ever use drugs as compare to abstinent (5.97 and 5.85 respectively). Having boy/girlfriend also showed to be the odds for practicing pre-marital sex 2.52

times higher compare to single. Befriended with peer who practicing pre-marital sexual evidently giving the odds for practicing pre-marital sex about 10.91 times higher as compare to none.

Table 1 Respondent’s characteristics

Explanatory variables	n=11,299	%
Age group		
15-19	6925	55.7
20-24	5004	44.3
Sex		
Male	5990	53.0
Female	5309	47.0
Place of residence		
Urban	6843	60.6
Rural	4456	39.4
Education		
Primary school	614	5.4
Secondary school	1232	10.9
High school	6619	58.6
Higher education	2834	25.1
Pre-marital sexual practices		
Yes	1294	11.5
No	10,005	88.5
Smoking		
Yes	4394	38.9
No	6905	61.1
Drinking alcohol*		
Yes	1712	42.3
No	2337	57.7
Experience to use drugs		
Yes	535	4.7
No	10,764	95.3
Peer influence		
Yes	2698	23.9
No	8601	76.1
Currently have boy/girlfriend		
Yes	6327	56.0
No	4972	44.0

*n= 4049

Table 2 Proportion of pre-marital sexual by characteristics

	Practicing pre-marital sex				P
	Yes	%	No	%	
	1294	11,5	10,005	88.5	
Age group					
15-19	406	6.4	5889	93.6	0.00
20-24	888	17.7	4116	82.3	
Sex					
Male					0.00

Female	1118	18.7	4872	81.3	
	176	3.3	5133	96.7	
Place of residence					
Urban	696	10.2	6147	89.9	0.00
Rural	598	13.4	3858	86.6	
Education					
Primary school	164	26.7	450	73.3	
Secondary school	204	16.6	1028	83.4	0.00
High school	634	9.6	5985	90.4	
Higher education	292	10.3	2542	89.7	
Smoking					
Yes	1000	22.8	3394	77.2	0.00
No	294	4.3	6611	95.7	
Drinking alcohol*					
Yes	660	38.6	1052	61.4	0.00
No	418	17.9	1919	82.1	
Experience to use drugs					
Yes	226	42.2	309	57.8	0.00
No	1068	9.9	9696	90.1	
Peer influence					
Yes	931	34.5	1767	65.5	0.00
No	363	4.2	8238	95.8	
Currently have boy/girlfriend					
Yes	968	15.6	5341	84.4	0.00
No	308	6.2	4664	93.8	

*n=4049

Table 3 Logistics regression

	COR (95% CI)	P	AOR (95% CI)	P
Sex				
Female	-	-	-	-
Male	6.69 (5.68 – 7.88)	0.00	6.12 (5.19 – 7.22)	0.00
Place of residence				
Urban	-	-	-	-
Rural	1.36 (1.21 – 1.53)	0.00	1.52 (1.35 – 1.71)	0.00
Education				
Primary school	-	-	-	-
Secondary school	0.54 (0.43 – 0.68)	0.00	0.64 (0.50 – 0.81)	0.00
High school	0.29 (0.23 – 0.35)	0.00	0.34 (0.28 – 0.42)	0.00
Higher education	0.31 (0.25 – 0.39)	0.00	0.23 (0.18 – 0.29)	0.00
Smoking				
No	-	-	-	-
Yes	6.62 (5.78 – 7.59)	0.00	5.97 (5.20 – 6.85)	0.00
Drinking alcohol*				
No	-	-	-	-
Yes	2.88 (2.49 – 3.32)	0.00	3.05 (2.63 – 3.54)	0.00
Experience to use drugs				
No	-	-	-	-

Yes	6.64 (5.53 – 7.97)	0.00	5.85 (4.85 – 7.06)	0.00
Peer influence				
No	-	-	-	-
Yes	11.95 (10.48 – 13.64)	0.00	10.91 (9.55 – 12.47)	0.00
Currently have boy/girlfriend				
No	-	-	-	-
Yes	2.79 (2.44 – 3.19)	0.00	2.52 (2.20 – 2.89)	0.00

*n=4049

4. DISCUSSION

Although sexual activity is basic biological needs for human, however some societies still hold on believe that it should only be practiced by those who is married, including Indonesian. Islam as the major religion in Indonesia taught the abstinence until marriage and believe punishment will be given to those who disobeyed [18]. Beyond religion matter, Indonesian also perceived they were eastern society who uphold the culture and norm of courtesy [19,20]. However, pre-marital sex among Indonesia youth is currently a growing concern. The proportion of pre-marital sex among Indonesia unmarried youth in our analysis was 11.5% (95% CI). This finding is higher than the 2007, 2012 and 2017 IDHS report [16,17,21].

The most robust factor associated with pre-marital sex is the peer influence. Youth who are befriended with person who practiced pre-marital sex are more likely to behave the same way. This is can be described from the Social Learning Theory point of view, that it is not require a person to observe then proceed with behavior adoption, however it is sufficient only with perception that their peers accept it, in order to copy the behaviors and receive conformity during identity discovery [22]. A study conducted in Nigeria among secondary students suggest that they seek sexual issues information from their peers rather than from parents and those who did are likely to engage in pre-marital sex [23]. Overall, peers play pivotal role in influencing youth pre-marital sex behavior.

Current study found that being male is 6.12 times higher to practice pre-marital sex compare to female. This is can be elaborated as males usually initiate such practices. Males also perceive to be freer than females [23]. In agreement to this, a study conducted among Latin-American youth found that gender was positively associated with permissive attitudes regarding pre-marital sex. This can be explained that males often show sexual commencement as way to show their masculinity and manhood (30-32). This differ from finding of a study among youth in three cities of Hanoi,

Shanghai and Taipei that showing culture of protection toward youth reproductive health by maintaining gentleman value for being modest and not overt their sexual activity [24]. Even though Indonesian perceived to be embedded on eastern culture, however western influence among youth is currently rising especially on this social media era that know no border [25]. Entertainment sector like movies, music, fashion, magazine, internet can be a channel for a new culture adaptation [8,26,27].

Nearly same odd ratio was found in association between smoking and drug use experience toward pre-marital sex (AOR 5.97 and 5.85 respectively). It indicated that the odd for conducting pre-marital sex among smoker and drug user was 5 times higher than the abstinence counterparts. While the odd for pre-marital sexual activity among alcohol drinker is 3.05 times higher than the non-drinker. In agreement to this, a cohort study conducted among college students in Taiwan reported significant association between smoking/alcohol use and pre-marital sex [28]. A secondary analysis of the 2012 IDHS reported positive correlation between smoking and sexual debut. The more numbers cigarettes smoked the higher the risk for pre-marital sexual activities [29]. Smoking addiction can pervade to other substances, for instance alcohol and drugs, which able to impairs judgment and increase risk to unplanned sexual activity by fading person's ability to contemplate the hostile consequences [30].

This study found the odd of practicing pre-marital sexual among those who dated was 2.52 times higher than those who was single. Consistent with this finding, an Indonesian study conducted to 15-24 years old unmarried respondent reported those who were dating had an opportunity of 4.56 times having pre-marital sex compared to those who was single. Dating activities among youth were often coupled with negative actions, for instance holding hands, kissing, hugging and stimulating sensitive body parts that can lead to sexual activity [20]. In line with this, a cross sectional study among Korean college student found that female youth partner on sexual debut was boyfriend, while only two-third of male youth who practiced pre-marital sex with

girlfriend and one-seventh of them reported sexual debut with prostitute worker [31]. Then it becomes clear explanation concerning median age discrepancy of male when married and sexual debut but not among female, because male have the option to do the activity with sex worker, while it was not common among female. There are two limitations of the study. First is the use of

secondary data that allow researcher undergo the analysis with available data only. Second is the cross-sectional study design that let the researcher not able to state the direct cause of pre-marital sex. Future prospective cohort studies are required to obtain clearer occurrence of pre-marital sex.

5. CONCLUSION

The proportion of pre-marital sex among Indonesia unmarried youth has increased compared to previous study. Some factors with strong association with pre-marital sex are gender, smoking behavior, drug usage experience. With the robust predictor was peer influence. Education concerning pre-marital sex must be tailored to specific stage of youth and their educational attainment.

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REFERENCES

- [1] United Nations. Youth. Vol. 215. 2009.
- [2] United Nation. The United Nations Programme on Youth [Internet]. New York: United Nations; 2015. Available from: <http://www.un.org/disabilities/>
- [3] Statistics Indonesia. Indonesia Population Projection 2010-2035. BPS. Jakarta: Badan Pusat Statistik; 2013. 468 p.
- [4] Hayes A, Setyonaluri D. Taking advantage of the demographic dividend in Indonesia: a brief introduction to theory and practice. Jakarta; 2015.
- [5] Springe AE, Selwyn BJ, Kelder SH. A descriptive study of youth risk behavior in urban and rural secondary school students in El Salvador. *BMC Int Health Hum Rights*. 2006;6(February).
- [6] Priohutomo S. Mencegah Pernikahan Anak Melalui Program KKBPK [Internet]. Banjarmasin: BKKBN; 2018. p. 47. Available from: https://www.bkkbn.go.id/po-content/uploads/2018.03.10.Banjarmasin.MENCEGAH_PERKAWINAN_ANAK_MEL_PROG_KKBPK.pdf
- [7] Arega WL, Zewale TA, Bogale KA. Pre-marital sexual practice and associated factors among high school youths in Debretabor town, South Gondar zone, North West Ethiopia, 2017. *BMC Res Notes* [Internet]. 2019;12(1):1–7. Available from: <https://doi.org/10.1186/s13104-019-4348-3>
- [8] Garcia JR, Reiber C, Merriwether AM. Sexual Hookup Culture: A Review. *Rev Gen Psychol*. 2013;16(2):161–76.
- [9] Abdissa B, Addisie M, Seifu W. Pre-marital Sexual Practices, Consequences and Associated Factors among Regular Undergraduate Female Students in Ambo University, Oromia Regional State, Central Ethiopia, 2015. *Heal Sci J*. 2017;11(1):1–7.
- [10] National Population and Family Planning Board (BKKBN), Statistics Indonesia (BPS), Ministry of Health (Kemenkes) and I. Indonesia Demographic and Health Survey 2017. Jakarta, Indonesia; 2017.
- [11] Lian T, Dorotheo U. The Tobacco Control Atlas: ASEAN Region [Internet]. Fourth Edi. Clove Cigarettes May Prompt U.S., Indonesia Dispute. Bangkok, Thailand: Southeast Asia Tobacco Control Alliance (SEATCA); 2018. 1–2 p. Available from: <https://seatca.org/clove-cigarettes-may-prompt-u-s-indonesia-dispute/>
- [12] World Health Organization. Global standards for quality health-care services for adolescents. In: World Health Organization [Internet]. Switzerland: WHO; 2015. p. 1–40. Available from: http://apps.who.int/iris/bitstream/10665/183935/1/9789241549332_vol1_eng.pdf
- [13] Hodgkinson S, Beers L, Southammakosane C, Lewin A. Addressing the mental health needs of pregnant and parenting adolescents. *Pediatrics*. 2014;133(1):114–22.
- [14] Neal S, Mahendra S, Bose K, Camacho AV, Mathai M, Nove A, et al. The causes of maternal mortality in adolescents in low and middle income countries: Systematic review of the literature. *BMC Pregnancy Childbirth* [Internet]. 2016;16(1). Available from: <http://dx.doi.org/10.1186/s12884-016-1120-8>
- [15] Patui NS, Dasuki D, Wahyuni B. The roles of parents and peer friends on adolescent Pre-marital sex behavior in high school students of Buol District. *J Kesehat Reproduksi*.

- 2018;5(1):50–9.
- [16] Statistics Indonesia and Macro International. *Indonesia Young Adult Reproductive Health Survey 2007*. Calverton, Maryland, USA; 2008.
- [17] Statistics Indonesia, National Population and Family Planning Board, Ministry of Health, ICF International. *Indonesia Demographic and Health Survey 2012: Adolescent Reproductive Health*. Jakarta, Indonesia; 2013.
- [18] Ali MS. *The Holy Quran with English Translation*. Preset Edi. Surrey, UK: Islam International Publications Ltd.; 2015.
- [19] Moffatt A. *Indonesian Cultural Profile* [Internet]. Diversicare. Diversicare; 2012. Available from: <http://dx.doi.org/10.1016/j.jsames.2011.03.003> %0Ahttps://doi.org/10.1016/j.gr.2017.08.001%0Ahttp://dx.doi.org/10.1016/j.precamres.2014.12.018%0Ahttp://dx.doi.org/10.1016/j.precamres.2011.08.005%0Ahttp://dx.doi.org/10.1080/00206814.2014.902757%0Ahttp://dx.doi.org/10.1016/j.jsames.2011.03.003
- [20] Oktriyanto O, Alfiasari A. Dating and Pre-marital Sexual Inisiation on Adolescence in Indonesia. *J Kesehat Masy*. 2019;15(1):98–108.
- [21] National Population and Family Planning Board (BKKBN), Statistics Indonesia (BPS), Ministry of Health (Kemenkes) and I. *Indonesia Demographic and Health Survey 2017: Adolescent Reproductive Health*. Jakarta, Indonesia; 2018.
- [22] Tomé G, Matos M, Simões C, Diniz JA, Camacho I. How can peer group influence the behavior of adolescents: explanatory model. *Glob J Health Sci*. 2012;4(2):26–35.
- [23] O L Badaki, M F Adeola. Influence of Peer Pressure as a Determinant of Pre-marital Sexual Behaviour among Senior Secondary School Students in Kaduna State, Nigeria. *J Multidiscip Res Healthc*. 2017;3(2):151–9.
- [24] Zuo X, Lou C, Gao E, Cheng Y, Niu H, Zabin LS. Gender differences in adolescent Pre-marital sexual permissiveness in three Asian Cities: Effects of gender-role attitudes. *J Adolesc Heal*. 2012;50(3 SUPPL.):1–17.
- [25] Sawyer R, Chen G. The Impact of Social Media on Intercultural Adaptation. *Intercult Commun Stud*. 2012;2:151–69.
- [26] Collins RL, Martino SC, Shaw R. Influence of New Media on Adolescent Sexual Health: Evidence and Opportunities [Internet]. *RAND Health*. 2011. Available from: <papers2://publication/uuid/3C158F41-078C-4B43-82B7-91F5F4D4D48F>
- [27] Lou, C, Cheng, Y, Gao, E, Zuo, X, Emerson, MR, Zabin L. Media’s contribution to sexual knowledge, attitudes, and behaviors for adolescents and young adults in three Asian cities. 2008;42(2):157–62.
- [28] Chiao C, Yi CC, Ksobiech K. Exploring the relationship between Pre-marital sex and cigarette/alcohol use among college students in Taiwan: A cohort study. *BMC Public Health* [Internet]. 2012;12(1):1. Available from: [BMC Public Health](https://doi.org/10.1186/1471-2382-12-1)
- [29] Mulyandari IT, Utomo B. *Merokok, Minum Alkohol, dan Hubungan Seksual Pada Remaja: Survei Demografi dan Kesehatan Indonesia Tahun 2012*. Library UI. Jakarta, Indonesia; 2014.
- [30] Kim SJ, Cho KW. Interaction between smoking cigarettes and alcohol consumption on sexual experience in high school students. *Osong Public Heal Res Perspect*. 2019;10(5):274–80.
- [31] Cha ES, Doswell WM, Kim KH, Charron-Prochownik D, Patrick TE. Evaluating the Theory of Planned Behavior to explain intention to engage in Pre-marital sex amongst Korean college students: A questionnaire survey. *Int J Nurs Stud*. 2007;44(7):1147–57.