

# Psychosocial Determinants of Risky Sexual Behavior among Senior High School Students in Merauke District

## Determinan Psikososial Perilaku Seksual Berisiko pada Siswa Sekolah Menengah Atas di Kabupaten Merauke

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### Abstract

Adolescents aged 10-24 years old are susceptible group to premarital sex, drugs abuse, and HIV/AIDS infection. Papua is the largest contributor to AIDS/HIV number in Indonesia. To overcome such problem, Rutgers WPF formed *Dunia Remajaku Seru!* (DAKU!), an intervention program aimed towards adolescent reproductive health at senior high school level. This study aimed to determine psychosocial determinants of risky sexual behavior among senior high school students in Merauke District through cross-sectional approach. The sample included 1,364 second grade students that took the DAKU! program and pairing was conducted with students from schools that did not take the DAKU! program. Data analyses included univariate analysis, bivariate (chi square test) and multivariate (logistic regression test). Results showed that variables significantly related to adolescent risky sexual behavior were peer group with negative behavior, self-efficacy, parental control, exposure to DAKU! program and sex. Meanwhile, based on multivariate analysis, peer group with negative behavior (RP = 4.7 CI = 2.8 - 7.7) was the most dominant factor influencing risky sexual behavior.

**Keywords :** Adolescent, peer group, psychosocial determinant, risky sexual behavior

### Abstrak

Remaja usia 10-24 tahun merupakan kelompok yang rentan terhadap perilaku seksual pranikah, penyalahgunaan narkoba dan infeksi HIV/AIDS. Papua merupakan penyumbang angka HIV/AIDS terbesar di Indonesia. Untuk menanggulangi permasalahan tersebut Rutgers WPF membentuk suatu program intervensi kesehatan reproduksi remaja di tingkat sekolah menengah atas (SMA) yakni program *Dunia Remajaku Seru!* (DAKU!). Penelitian ini bertujuan untuk mengetahui determinan psikososial perilaku seksual berisiko pada siswa SMA di Kabupaten Merauke dengan menggunakan pendekatan potong lintang. Sampel berjumlah 1.364 siswa SMA kelas dua yang mendapatkan program DAKU! dan dilakukan proses pencocokan pada sekolah yang tidak mendapat program DAKU!. Analisis data meliputi analisis univariat, bivariat (uji kai kuadrat) dan multivariat (uji regresi logistik). Hasil analisis menunjukkan bahwa variabel yang signifikan berhubungan dengan perilaku seksual berisiko remaja adalah kelompok teman sebaya dengan perilaku negatif, efikasi diri, kontrol orangtua, keterpaparan dengan program DAKU! dan jenis kelamin. Sedangkan berdasarkan hasil analisis multivariat, kelompok teman sebaya dengan perilaku negatif (RP = 4.7 CI = 2.8 - 7.7) merupakan faktor yang paling dominan memengaruhi perilaku seksual berisiko.

**Kata kunci :** Remaja, kelompok teman sebaya, determinan psikososial, perilaku seksual berisiko

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## Introduction

The important target elements in achieving the vision of reproductive health enhancement is adolescent. Based on census in 2010, Indonesia had a population of 63 million adolescents aged 10 – 24 years old. This age group deserves focus because of the reproductive health risks which they face, such as premarital sexual behavior, drugs abuse and HIV/AIDS infection. These problems occur in the adolescent transition phase between childhood and adulthood.<sup>1,3</sup>

Limited access to information about reproductive health contributes to the problems of reproductive health. Basic Health Research in 2010 showed that merely 25.1% of adolescent aged 10-24 years old in Indonesia were taught about reproductive health. Limited access to reproductive health information effects the likelihood of risky sexual behavior by adolescents. In the period of 2005-2008, sexual intercourse among adolescents increased. Male almost doubled from 7.6% in 2005 to 14.6% in 2008, meanwhile female did not increase significantly (1%).<sup>4</sup> This matter is pertinent as the World Health Organization (WHO) stated that half of HIV infection cases occurred among those aged 15-25 years old. The Asian Development Bank (ADB) recorded Indonesia as one of six countries in Asia with the highest HIV cases per 1,000 population and determined that 3.3% of HIV infection occurred in adolescents.<sup>4,5</sup>

Merauke District is part of Papua Province and became one of HIV prevalence rate contributors in Papua that reaches 2.4%. Result of the Integrated Bio-Behavioral Survey in 2007 indicated that 8% of prostitutes in Merauke District were students.<sup>6,7</sup> Based on Problem Behavior Theory, formation of risky behavior was influenced by psychosocial factors consisting of individual systems, environment systems and behavior systems. Psychosocial factors that influence behavior are self-efficacy, peer's negative behavior and parents' control.<sup>8-11</sup>

Through the adolescent reproductive health education program, known as *Dunia Remajaku Seru!* (DAKU!), Papua is expected to be able to control psychosocial risk factors and reduce risky sexual behavior of adolescents. This program used photo and video media to describe elements of adolescent reproductive health. Rutgers WPF Indonesia and *Yayasan Pelita Ilmu* (YPI) created and implemented this program in several locations in Indonesia including Jakarta, Lampung, Jambi and Bali since 2005. Meanwhile, in Papua, the program was launched in 2009 at six senior high schools. The intervention was conducted over a year and was divided into two semesters in the school's curriculum. This study aimed to identify psychosocial determinants influencing on risky sexual behavior among senior high school students in Merauke District.

## Method

The study design used cross sectional approach that was part of final evaluation towards adolescent reproductive health program (DAKU! Papua) in Merauke. This study involved 1,364 students as respondents from 17 senior high schools, including public and private schools in Merauke District in 2013. All students in the sample were in second grade of senior high school. Students that had been taught in the DAKU! program were paired with those who had not. Data were collected by self-assessment tools using the DAKU! Papua questionnaire. The questionnaire was tested to 30 *Yayasan Pendidikan Kristen* High School students in Merauke with the result that Crombach's alpha value was more than 0.616 indicating that it was reliable. The main dependent variable in this study was risky sexual behavior, while independent variables were self-efficacy, peer group's negative behavior and parents' control. Confounding variables included school types, sex, exposure to DAKU! program, residence, and place of living. Data analysis included univariate analysis, bivariate analysis (chi square) and multivariate (risk factor logistic regression models).

## Results

Results of study on 1,364 students in Merauke District showed distributions in which numbers of male and female respondents were almost equal; about 80% adolescents in total were public school students, 51.6% were not fully exposed to DAKU! program, almost 80% students lived in the city, and 64.2% of respondents were living with their parents. About half of students had low self-efficacy and parents' control and most of them had friends with negative behaviors. Table 1 showed respondent distributions based on demography and psychosocial factors.

48.2% of students participated in a risky sexual be-

**Table 1. Respondent Distributions Based on Demography and Psychosocial**

Variable	Category	N	%
Sex	Male	654	47.9
	Female	710	52.1
School type	Private	234	17.2
	Public	1130	82.8
Exposure to health program (DAKU!)	Full DAKU!	357	26.2
	Non-full DAKU!	248	18.2
	Non-DAKU!	759	55.6
Place of living	Urban	1080	79.2
	Rural	284	20.8
Residentiality	With parents	876	64.2
	Without parents	488	35.8
Self-efficacy	Low	634	46.5
	High	730	53.5
Peer group negative behavior	None	120	8.8
	Exist	1244	91.2
Parents' control	Low	692	50.7
	High	672	49.3

havior at least once. Common non-risky sexual behaviors included holding hands followed by hugging and caressing, cheek kissing, groping and self masturbation. Meanwhile, risky sexual behavior that were most commonly done by students were frenchkissing followed by vaginal sex intercourse, petting, oral sex, mutual-masturbations and anal sex. The overview of students' dating activities in Merauke District was shown in Table 2.

Bivariate analysis results with chi-square method showed that the students with low self-efficacy were nearly three times more likely to engage in risky sexual behavior, having a peer group with negative behavior were at nearly five times higher risk, and those with low parents' control were at two times higher risk. Besides, exposure to DAKU! program and sex also showed significant relations with risky sexual behavior and the risk was less than two times. Otherwise, variables such as school types, place of living, and residence did not significantly relate to risky sexual behavior (Table 3).

Multivariate test with logistic regression showed factors affecting on risky sexual behavior among students were peer group with negative behavior (RP = 4.7), self-

efficacy (RP = 2.6), parents' control (RP = 1.7), exposure to DAKU! program (RP = 1.5) and sex (RP = 1.6) (Table 4). The most dominant factors affecting on risky sexual behaviors was peer group with negative behavior in which the risk of respondents who had friends with negative behaviors were 4.7 times higher than those who did

**Table 2. Sexual Behavior Distributions Based on Dating Activities among Senior High School Students**

Sexual Behavior Variable	Category	N	%
Holding hands		1237	90.7
Hugging and caress		923	67.7
Cheek kissing		877	64.3
Frenchkissing		618	45.3
Groping		504	37.0
Self masturbation		175	12.8
Mutual masturbation		72	5.3
Genital kissing		78	5.7
Petting		122	8.9
Oral sex		113	8.3
Vaginal sex		199	14.6
Anal sex		67	4.9
Sexual behavior	Risky	657	48.2
	Unrisky	707	51.8

**Table 3. Respondent Distributions Based on Independent Variables and Risky Sexual Behavior among Senior High School Students**

Variables	Category	Sexual Behavior						p Value (n=1313)	RP (CI 95%)
		Risky		Unrisky		Total			
		n	%	N	%	n	%		
Sex	Male	355	54.3	299	45.7	654	100	0.000	(1.3-2.0)
	Female	302	42.5	408	57.5	710	100	1.6	
School type	Private	115	49.1	119	50.9	234	100	0.797	(0.8-1.4)
	Public	542	48.0	588	52.0	1130	100	1.0	
Exposure to health program (DAKU!)	Non-full DAKU!	507	50.3	500	49.7	1107	100	0.008	(1.1-1.8)
	Full DAKU!	150	42.0	207	58.0	357	100	1.4	
Place of living	Urban	523	48.4	557	51.6	1080	100	0.759	(0.8-1.4)
	Rural	134	47.2	150	52.8	284	100	1.1	
Residentiary	Without parents	242	49.6	246	50.4	488	100	0.466	(0.9-1.4)
	With parents	415	47.4	461	52.6	876	100	1.1	
Self-efficacy	Low	395	62.3	239	37.7	634	100	0.000	(2.4-3.7)
	High	262	35.9	468	64.1	730	100	2.9	
Peer group negative behavior	None	636	51.1	608	48.9	1244	100	0.000	(3.0-8.0)
	Exist	21	17.5	99	82.5	120	100	4.9	
Parents' control	Low	398	57.5	294	42.5	692	100	0.000	(1.7-2.7)
	High	259	38.5	413	61.5	672	100	2.2	

**Table 4. Multivariable Modeling Stage**

Variable	p Value	Full Model	Model I		Model II		Model III		Model IV		Model V	
		RP	RP	Δ RP	RP	ΔRP	RP	ΔRP	RP	ΔRP	RP	ΔRP
Peer group negative behavior	0.000	4.704	4.707	0%	4.715	0.23%	4.704	0%	4.665	0.83%	4.555	3.17%
Self-efficacy	0.000	2.615	2.614	0.04%	2.611	0.15%	2.615	0%	2.584	1.19%	2.576	1.49%
Parents' control	0.000	1.712	1.712	0%	1.710	0.12%	1.710	0.12%	1.697	0.88%	1.696	0.93%
Exposure to health program (DAKU!)	0.006	1.469	1.472	0.20%	1.468	0.07%	1.460	0.61%	1.464	0.34%	-	-
Sex	0.733	0.958	0.958	0%	0.958	0%	0.960	0.21%	-	-	-	-
School type	0.866	1.028	1.029	0.1%	1.024	0.33%	-	-	-	-	-	-
Residentiality	0.873	0.981	0.981	0%	-	-	-	-	-	-	-	-
Place of living	0.952	1.009	-	-	-	-	-	-	-	-	-	-

not have.

## Discussion

Dating activities among adolescents ranged from no risk to high risk. In many studies, holding hands was a sexual activity nearly always done by adolescents. In a more risky stage, adolescents engaged in mutual-masturbation, petting and sexual activities where vaginal sex was the most common, as compared to oral and anal sex.<sup>12</sup> The high number of risky sexual behaviors among adolescents was also shown by Youth Risk Behavior Survey in 2011 in Oklahoma.<sup>13</sup> Of the senior high school student respondents, 50% had engaged in sexual activities. Additionally, 5% of them said that it happened before the age of 13 years. The higher the percentage of adolescents sexually active, the higher the risks they faced, including from sexual transmitted disease and pregnancy. Therefore, there was a need for protective actions to prevent adolescents from the effects of risky sexual behaviors.

Risky sexual behavior could be prevented by strengthening the psychosocial circumstances of the adolescent, such as self-efficacy to abstain from sexual intercourse. Individuals with low self-efficacy would likely have had difficulty in controlling their lifestyles, and they may be less able to abstain from risky sexual behaviors.<sup>9</sup> This is related to a theory developed in 1977 by Jessor that showed that self-efficacy could be integrated as a risk and protective factor for risky sexual behavior, especially for adolescents.<sup>8</sup> Adolescent is a subject that needs to change, until there will be no pressure from outside.<sup>14</sup>

Component in social environment that takes a role in forming individual's behavior is peer group. Peer group is the closest group for an individual and has the potential to influence the individual towards risky behaviors. Adolescents with peer groups that tend towards negative behaviors are more likely to engage in for risky sexual behaviors. Peer group environment affected adolescent's behavior. Moreover, the perception of peer groups may be that sexually active individuals are cool and popular.<sup>10</sup> The existence of friends who are sexually active may increase the chance of others engaging in sexual activities, so individuals may find both encouragement and first-time sexual partners within their peer group.<sup>15</sup> Without high self-efficacy, individuals tend to be influenced by peer group's behavior. So, it is critical to optimize interventions towards adolescent reproductive health through peer education.

Parents' control is an important factor in controlling adolescents' risky behavior. Adolescent sexual behavior in Merauke showed the loss of parents' control. A contributing factor to this increase in risky sexual behaviors was the infrequent and low quality communication between parents and children regarding reproductive

health.<sup>16,17</sup> Communication between parents and children related sexuality in adolescent is one of parents' controls in order to prevent risky sexual behavior in adolescents.<sup>11</sup> Thus, there is a need to strengthen the family unit to aid in improving adolescent behavior.

Another study showed that there was no significant difference in sexual behavior pattern between public and private schools. This might be caused by information about reproductive health that were less well implemented in schools. Controversy about formal reproductive health education in schools is an obstacle for adolescents in getting high quality information about sexuality.<sup>18</sup> Instead, adolescents tend to use internet resources in which case the quality cannot be guaranteed. Schools are expected to take a lead role in providing reproductive health education for adolescents, and potentially in providing skills and positive values that may prevent risky sexual behaviors.

Beside those three main variables, another factor that influenced risky sexual behavior was sex. Similar to another study, this study found that adolescents in Merauke showed significant correlation in bivariate statistical test, although influence of sex towards risky sexual behavior was not found in the multivariate test. This might be because of other factors that were stronger in influencing risky sexual behavior after being tested with other independent variables.

Males were more likely to engage in risky sexual behavior than females. The difference results from biological and social factors. Biologically, males tend to be stimulated more easily than females. Socially, men are more aggressive and free than women. Men's dating styles tend to be more aggressive than women's, from groping, petting to sexual intercourse.<sup>18</sup> Furthermore, men need to talk about sexuality problems with women that could boost their sensitivity to their partners, so it could decrease the pressure of women to do sexual intercourse. Meanwhile, women are more comfortable with open discussions about sexual experiences and their feelings about societal pressures.<sup>19</sup>

Since most adolescents are still in school, health programs delivered in schools may be an effective strategy.<sup>20</sup> Access to adolescent reproductive health information in Indonesia could be through the DAKU! program, which is adapted from World Start With Me Program which was first developed in Uganda, which effectively increased adolescent's knowledge and attitude towards sexual behavior. This program is integrated with local school subject at senior high schools of five pilot provinces that are Special Capital Region of Jakarta, Bali, Lampung, Jambi and Papua.<sup>21</sup>

According to this study in Papua, researchers concluded that low adolescent exposure to reproductive health information could increase risky sexual behavior.



If there was a lack of formal education, adolescents may have accessed information through the internet, in which case the quality cannot be guaranteed. Because of this, implementation of reproductive health programs at schools needs to be continuously increased. Moreover, programs may be more successful when starting from an early age. In Tanzania, a program began with the highest three grades at elementary school through the *MEMA kwa Vijana* program. This program improved the knowledge and perception of adolescents regarding the effects of premarital sex, decreased the number of couples and increased the use of condoms.<sup>22</sup>

This study found that most students (79.2%) lived in urban areas, while 20.8% lived in rural areas. This phenomenon indicated the high rate of citizens from rural to urban areas, including adolescent. The aim of rural-urban migration may be to continue education or get a better job. This matter did not influence the differences of significant sexual behavior among demographic areas. Burkina Faso,<sup>23</sup> found that there was no difference in sexual behavior based on indicator of pairs between men and women in urban, rural, and border areas. Rural and urban areas had the same influence on adolescent sexual behavior. Adolescents in rural areas were prone to engage in risky sexual behavior as they wanted to be considered as modern adolescents, while adolescents in urban areas had more access to sexual information so they were also motivated to engage in risky sexual behaviors. A lack of parental control additionally enabled the sexual activities.<sup>24</sup> Generally this study noted that living in an urban or rural area affected the likelihood of obtaining information that either positively or negatively impacted the sexual behavior of adolescents.<sup>25</sup>

Urbanization of Merauke negatively impacted parents' control because one-third of students attended a school which was far from their parents. They may stay in dormitory, boarding, or relatives' house in order to reduce the transit distance. Similarly to another study, risk for adolescents that did or did not live together with their parents was not significantly different. Adolescent behavior styles depended on the level of control from their parents towards their behaviors. The higher the level of control from parents, the lower the level of deviant behavior for adolescents. Therefore, besides the need for good communication with adolescents, parents need to develop their trust. If adolescents are already confident, they will be more willing to share with their parents, especially regarding adolescent reproductive health information.<sup>21</sup>

## Conclusion

Peer group with negative behavior is the most dominant factor influencing risky sexual behavior among adolescents. The lack of access to good quality information

on reproductive health and low level of parents-child communication make adolescents more likely to discuss sexuality with their peer groups. Moreover, those who have the low self-efficacy may copy their friends' behaviors. These factors contribute to the issue of risky sexual behaviors in adolescents in Indonesia.

## Recommendation

Reproductive health education for high school students is necessary. Such programs can increase students' knowledge of reproductive health and life skills (ability to communicate, negotiate, and act assertively) to decrease the effects of risky sexual behavior among adolescents. Furthermore, such programs should involve peer groups and parents as educators in order to increase adolescents' self-efficacy and thus their ability to abstain from premarital sex.

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