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# 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 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. Samples were 1,364 second grade students that got DAKU! Program and matching process was conducted on schools that did not get DAKU! Program. Data analysis 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, parents' 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 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 63 million population of adolescent aged 10 – 24 years old. This age group needs a serious concern because of the reproductive health risks which can be faced by them, such as premarital sexual behavior, drugs abuse and HIV/AIDS infection. These problems occur along the transition phase in adolescent after childhood to adult.[1,3]

The low access to information about reproductive health is one of triggers toward the problems of reproductive health. Basic Health Research in 2010 showed that merely 25.1% of adolescent aged 10-24 years old in Indonesia experienced reproductive health promotion. Access limitation to reproductive health information affects on risky sexual behavior at adolescent. In the period of 2005-2008, experiences of sexual intercourse among adolescents tend to increase. Male increased almost two times from 7.6% in 2005 to 14.6% in 2008, meanwhile female did not really significantly increase (1%).[4] This matter is relevant with statement of World Health Organization (WHO) that half of HIV infection cases occurred among those aged 15-25 years old. Asian Development Bank (ADB) recorded Indonesia as one of six countries in Asia with the highest HIV cases per 1,000 population and detected 3.3% of HIV infection occurred on adolescent.[4,5]

Merauke District is part of Papua Province and became one of HIV prevalence rate contributors in Papua that reaches 2.4%. Result of Integrated Bio-Behavioral Survey in 2007 indicated that 8% of prostitutes in Merauke District were students.[6,7] Based on Problem Behavior Theory, formation of risky behavior was influenced by psychosocial factors consisted of individual system, environment system and behavior system. Psychosocial factors that influence behavior are self-efficacy, peer's negative behavior and parents' control.[8-11] Through adolescent health reproductive education program, known as *Dunia Remajaku Seru!* (DAKU!), Papua is expected to be able to control psychosocial risk factors and reduce risky sexual behavior towards adolescents. This program is conducted by using media based on technology providing pictures or videos 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 has been conducted in a year which divided into two semesters in school's curriculum. Thus, 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. Sample was taken based on criteria the second grade of senior high school students that were given adolescent reproductive health program (DAKU!), then matching process took place for the second grade students who did not get DAKU!. Data were collected by self-assessment tools using DAKU! Papua questionnaire. The questionnaire was tested to 30 *Yayasan Pendidikan Kristen* High School students in Merauke with the result of crombach's alpha value more than 0.616 that meant reliable. The main dependent variable in this study was risky sexual behavior, while independent variables were self-efficacy, peer group's negative bahavior and parents' control, meanwhile confounding variables included school types, sex, exposure to DAKU! Program, residentiary, and place of living. Data analysis included univariate analysis, bivariate analysis (chi square) and multivariate (risk factor logistic regression models).

## Result

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; 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 respon-

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

| 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 |
| Residentiary | With parents | 876 | 64.2 |
| | Without parents | 488 | 35.8 |
| Self-efficacy | Low | 634 | 46.5 |
| | High | 730 | 53.3 |
| Peer group negative behavior | None | 120 | 8.8 |
| | Exist | 1244 | 91.2 |
| Parents' control | Low | 692 | 50.7 |
| | High | 672 | 49.3 |

dent distributions based on demography and psychososial.

In general, known that 48.2% of students ever did risky sexual behavior. Unrisky sexual behavior that majority ever experienced by students are holding hands followed by hugging and caress, cheek kissing, groping and self masturbations. Meanwhile, risky sexual behavior that majority ever did by students are French kissing then followed by vaginal sex intercourse, petting, oral sex, together 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 at risk of risky sexual behavior, those having peer group with negative behavior were nearly five times at risk, and those with low parents' control were two times at 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 residentiary 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

**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 |
| French Kissing | | 618 | 45.3 |
| Groping | | 504 | 37.0 |
| Self masturbation | | 175 | 12.8 |
| Together 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% | - | - | - | - | - | - |
| Residentiary | 0.873 | 0.981 | 0.981 | 0% | - | - | - | - | - | - | - | - |
| Place of living | 0.952 | 1.009 | - | - | - | - | - | - | - | - | - | - |

4) . The most dominant factors affecting on risky sexual behaviors were peer group with negative behavior in which the risk of respondents who had friends with negative behaviors was 4.7 times higher than those who did not have.

**Discussion**

Dating activities among adolescents were various from the most unrisky to the most risky. In many studies, holding hands was sexual activity nearly always done by adolescents. In more risky stage, adolescent did together masturbation, petting and sexual activities where vaginal sex is the most chosen, compared to oral and anal sex.[12] The high number of risky sexual behavior among adolescents was also shown by Youth Risk Behavior Survey in 2011 in Oklahoma.[13] Of senior high school students as respondents, 50% had sexual activities before. Besides, 5% of them admitted that it happened before the age of 13 years. The higher percentage of adolescents sexually active, the higher risks they faced, including sexual transmitted disease and pregnancy. Therefore, there was a need of protection actions to prevent adolescents from risky sexual behavior effects.

Risky sexual behavior could be prevented by strengthening the psychosocial of adolescent, such as self-efficacy to deny sexual intercourse (abstinence). Individuals with low self-efficacy were likely not having confidence in controlling their lifestyle, so that risky sexual behavior easily trapped them.[9] This is related to theory by Jessor 1977 that self-efficacy could be integrated as risk and protective factor to risky sexual behavior, especially to adolescents.[8] Adolescent is a subject that needs to change, until there will be no pressure from outside.[14]

Component in social enviroment that takes a role in forming individual's behavior is peer group. Peer group is the closest group for individual that potentially give influences to risk-taking process or individual actions. Adolescent with peer group negative behavior is having higher risk to do risky sexual behavior. Peer group environment allowed one to another in adopting behavior. Moreover, among peer groups, there is assumption stating that men and women sexually active are cool and popular.[10] The existence of friends sexually active will trigger others to do sexual activities, so peer group could be sexual partners of one another for the first time among adolescents.[15] Without high self-efficacy, individuals tend to be influenced by peer group's behavior. So, it is potential to optimize intervention towards adolescent reproductive health through peer educator.

Parents' control is one of important things to control adolescent risky behavior. Adolescent sexual behavior in Merauke showed the loose of parents' control. This matter was caused by the low intensity and quality of communication about adolescent reproductive health between parents and children, so that influence the number of risky sexual behavior among adolescents.[16,17] Communication between parents and children related sexuality in adolescent is one of parents' controls due to prevent risky sexual behavior in adolescents.[11] Thus, there is a need to raise up the strength of family to resolve adolescent behavior.

Another study also 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 socialized in almost every school. Controversy about formal reproductive health education at schools is an obstacle for adolescents in getting high quality information about sexuality.[18] So that, adolescents tend to find those information through the internet which cannot be guaranteed in giving 100% true information about sexuality. Schools are expected to take a role as an institution for main mediator in giving reproductive health education for adolescents and potentially in giving skills and positive values to prevent risky sexual behavior among adolescents.

Beside those three main variables, another factor that influenced toward 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 multivariate test. It might be happened because of the other factors that were stronger in influencing risky sexual behavior after being tested with other independent variables.

Males were more likely to do risky sexual behavior than females. The difference was caused by biological and social factors. Biologically, males tend to be stimulated 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.[18] 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 on sexual experiences and their feelings toward pressure from environment.[19]

Most adolescents are at school age, so it may become a strategical target to form a reproductive health program at schools in aim to expand the program reaches on adolescent.[20] Access to adolescent reproductive health information in Indonesia could be through DAKU! Program, which is adapted from World Start With Me Program that first developed in Uganda, which effectively increases adolescent's knowledge and attitude to sexual behavior. This program is integrated to local school subject at senior high schools of five pilot provinces that are Special Capital Region of Jakarta, Bali, Lampung,

Jambi and Papua.[21]

According to our study in Papua, researchers took a conclusion that low adolescent exposure to reproductive health information could increase the risky sexual behavior. If there was no further actions, such as facilitating through formal education, there would be possibilities of adolescents to access information through the internet, which the truth cannot be guaranteed. So that, the implementation of reproductive health program at schools needs to be continously increased. Moreover, it will be more optimum if it is done since the early age. In Tanzania, the program had started since top three classes at elementary school through *MEMA kwa Vijana* Program. This program proved to increase the knowledge and perception of adolescents on premarital sex effects and increase the anticipation towards outcome by decreasing the number of pairs and increasing the use of condom.[22]

This study found that most students (79.2%) lived in urban areas, meanwhile 20.8% of them lived in the rural areas. This phenomenon indicated the high rate of citizens from rural to urban areas, including adolescent. The aim of urbanization is to continue their school level and get a better job, so that men and women were centralized in urban areas rather than rural areas. This matter did not influence the differences of significant sexual behavior among demographic areas. As well as in Burkina Faso,[23] there was no difference of sexual behavior proportion based on indicator of pairs between men and women in urban, rural, and border. Rural and urban had the same influence to adolescent sexual behavior. Adolescents in rural areas wanted to do risky sexual behavior as they wanted to be considered as modern adolescents, on the contrary adolescents in urban areas had more sexual information access, so they were motivated to do risky sexual behavior. Besides, the lack of parents' control made students free enough to do sexual activities.[24] Otherwise, the differences of living places (urban and rural) allow a different information obtained by adolescents, including positive or negative information that impacting sexual behavior.[25]

Urbanization of Merauke adolescents affected toward the lack of parents' control because one-third of them went to school which far from their parents. They would consider to stay in dormitory, boarding, or relatives' house to be able to get closer to their schools. Similar 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 level of control from parents, the lower of deviant behavior possibilities among adolescents. Therefore, beside the need of good communication to adolescents, parents need to develop their trust to the children. If the confidence is already developed inside of adolescents, they will be more opened and share more to their parents, especially related to adolescent reproductive health information.[21]

## Conclusion

Peer group with negative behavior is the most dominant factor influencing risky sexual behavior among adolescents. The lack access to adequate information on reproductive health and less parents' communication make adolescents more open to discuss about sexuality with their peer groups. Moreover, those who have the low self-efficacy copy their friends' behaviors, so it affects to the magnitude of sexual behavior problem among adolescents.

## Recommendation

Scope of reproductive health education among high school students is a need. This program may facilitate the students to improve the knowledge of reproductive health and life skills (ability to communication, negotiation, and assertivity) to decrease the effects of risky sexual behavior among adolescents. Besides, the program should involve peer groups and parents as educator related to sexuality, so it can increase adolescent's self-efficacy to refuse premarital sex.

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