



THE RELATIONSHIP BETWEEN KNOWLEDGE ABOUT SEXUALLY TRANSMITTED INFECTIONS WITH THE SEXUAL BEHAVIOR OF ADOLESCENT WOMEN IN SMKN 5 JEMBER

Maulidia Fahmadina Rozana ¹ , Ratna Dwi Jayanti ¹, Gatut Hardianto ²

¹Midwifery Education Study Programme, Faculty of Medicine, Universitas Airlangga

² Department of Obstetrics and Gynaecology, Faculty of Medicine, Universitas Airlangga

Alamat korespondensi:

Jalan Mayjen Prof. Dr Moestopo No 47 Surabaya, Indonesia

Email : maulidiafahmadina84@gmail.com

Abstract

Introduction: Adolescence is a period in which hormonal developments affect physical, psychological and cognitive development. At this time adolescents show an interest in sexuality so that adolescents are at risk of contracting Sexually Transmitted Infections (STIs). Many factors can influence adolescent sexual behavior, one of which is knowledge about STIs. Adolescents must have good knowledge to control their sexual behavior in order to avoid sexual behavior that is at risk of STIs. This study aims to analyze the relationship between adolescent knowledge of STIs and female adolescent sexual behavior. **Method:** This research is an observational analytic study with a research design cross sectional. The number of samples as many as 103 teenagers who fit the inclusion criteria. The sampling technique was carried out by total sampling. the independent variable is adolescent knowledge about STIs, while the dependent variable is adolescent sexual behavior. The collected data was tested with the statistical Fisher Exact Test. **Results:** The results showed that as many as 68 respondents (66.0%) had less knowledge and 35 respondents (34.0%) had good knowledge. The variable of adolescent sexual behavior was found that 90 people (87.4%) had sexual behavior that were not at risk of STIs and 13 people (12.6%) had STI risky sexual behavior. After the carried out Fisher Exact Test was , the p value = 0.357 (p>0.05) which means that statistically there is no relationship between knowledge about STIs and sexual behavior of adolescent girls. **Conclusion:** There is no relationship between knowledge of STIs and sexual behavior of adolescent girls at SMKN 5 Jember

Keywords: adolescents, knowledge, risky sexual behavior, sexually transmitted infections

INTRODUCTION

WHO defines adolescents as individuals in the age group of 10-19 years. Adolescence is associated with the transition from childhood to adulthood. It is a period of preparation for adulthood that will transcend several important developmental stages in life. Adolescence is also a time of hormonal development that affects physical, psychological and cognitive development. Physical sexual development is characterised by the development of sexual organs in adolescents





and the onset of puberty which causes adolescents to start showing interest in sexuality.

According to the Indonesian Demographic and Health Survey (2017) adolescents aged 15-17 years as many as 80% of women and 84% of men claimed to have dated, dating behaviour itself can increase to sexual contact. Following a survey on dating behaviour, it was found that what teenagers often do when dating is hand holding (76%), then hugging (33%), kissing lips (14%), and fingering or stimulating (4%). Then as many as 34% of female teenagers had their first premarital sexual intercourse when they were 15-17 years old (BKKBN, 2018). Research conducted by Lintang (2019) on the sexual behaviour of adolescents dating at SMKN 5 Jember obtained the results of students who did necking and petting (holding hands, hugging, kissing cheeks, kissing foreheads, kissing lips, kissing necks) as much as 88.3%. Heavy petting (groping sensitive parts, rubbing genitals together, oral sex) was 4.9% and copulation (sexual intercourse) was 2.5%. This needs to be watched out for because teenagers are not supposed to have sexual intercourse. If the sexual behaviour of adolescent girls is not equipped with sufficient knowledge, there will be an increase in the rate of premarital sex in adolescents which will result in unsafe premarital sex or risky sexual behaviour.

Unsafe premarital sex can lead to sexually transmitted infections. Sexually transmitted infections (STIs) are infectious diseases that are mainly spread through sexual intercourse. According to WHO, every year there are new cases of STIs, especially aged 15-49 years. And according to CDC estimates of 20 million STI cases per year half of these cases are aged 15-24 years. Data from the Jember District Health Office (2017) states that the number of patients visiting STI services was 3,251 patients where the number of female patients contributed more than male patients, namely 2,921 patients. Women in this case are often victims of sexually transmitted diseases (Notoatmodjo, 2012). From a biological perspective, adolescent females are particularly susceptible to STIs such as clamidya trachomatis (CT) and human papillomavirus (HPV) due to lower cervical mucus production and increased cervical ectopics. Therefore, if exposed to STIs, adolescent girls are more likely to be infected than adults (Shannon et al., 2018).

Knowledge is the result of humans knowing something, or all actions of humans to understand a particular object (Notoatmodjo, 2013). The results of research conducted by Triningtyas (2015) in Bogor regarding the level of knowledge of STIs in adolescents are in the moderate category, which is 54.5% of 72 respondents. According to SDKI (2017) regarding knowledge of STI symptoms, in women aged 15-24 years, 65% of women did not know about STI symptoms and those aged 15-19 years did not know about STI symptoms higher than those aged 20-24 years.

Based on the description above, the purpose of this study is to determine the relationship between the level of knowledge about sexually transmitted infections with the sexual behaviour of adolescent girls. In order to avoid sexual behaviour, especially those at risk of STIs, adolescents must have knowledge about STIs as well. If adolescents understand the dangers of STIs and how to prevent them, it is expected that adolescents will be able to avoid these risky behaviours.

METHOD

This study is an observational analytic study. This research was conducted at SMKN 5 Jember, Sukorambi District, Jember Regency in April 2021. The population in this study were female students in grades X,XI,XII of SMKN 5 Jember in the 2020/2021 school year. The research subjects used in this study were adolescent girls in grades X,XI,XII who met the following inclusion and exclusion criteria: female gender, aged 15-17 years (middle adolescence), and willing to become respondents and agree to informed consent. For exclusion criteria, namely: students who are seriously ill and undergoing long treatment and students who do not fill out the questionnaire completely and including those who do not engage in sexual behaviour. The research variables consisted of independent and dependent variables. The independent variable is adolescent knowledge about sexually transmitted infections. The dependent variable is adolescent sexual behaviour. The data collection technique in this study used a questionnaire, for the independent variable using a questionnaire from Rahmi et al (2015) and for the dependent variable using a questionnaire from Muflih and Syahfitri (2018) which was distributed online to adolescent girls in class X, XI, XII SMKN 5 Jember. The data analysis method used was univariate and bivariate analysis. Univariate analysis was



used to describe general data of respondents consisting of age, exposure to information about STIs, sources of information, knowledge about STIs, and categories of adolescent sexual behaviour. Bivariate analysis was used to determine the relationship between knowledge about STIs and sexual behaviour of adolescent girls at SMKN 5 Jember using Fisher Exact Test.

RESULT AND DISCUSSION

Based on the results of research on univariate analysis of general data of respondents based on age, exposure to information about STIs, sources of information, knowledge about STIs, and categories of adolescent sexual behaviour. Can be seen in the following table:

Table 1. General data of respondents based on age, information about STIs, sources of information, knowledge of STIs, and categories of adolescent sexual behaviour.

Age	Frequency	Percentage
15	17	16,50%
16	52	50,49%
17	34	33,01%
Total	103	100%
STI Information Access	Frequency	Percentage
Have got	92	89,32%
Nevet got	11	10,68%
Total	103	100%
Information Resources	Frequency	Percentage
Teacher (school)	45	23,20%
Parents	17	8,76%
Friend	22	11,34%
Health workers	28	14,43%
Mass media (television, radio, internet, newspapers, magazines or books)	82	42,27%
Total	194	100%
STI Knowledge	Frequency	Percentage
Good	35	33,98%
Less	68	66,02%
Total	103	100%
Sexual behaviour	Frequency	Percentage
Risky	13	12,62%
No Risk	90	87,38%
Total	103	100%

Table 1 shows the results of the study that the average age of adolescent girls who are still in vocational high school is 15-17 years. General data based on age shows that most respondents are 16 years old which is classified as middle

adolescence where the characteristics of this period of adolescent sexual arousal reach a peak so that they have a tendency to use opportunities to do physical touch (Berhman & Kliegman 2010). Age is also one of the factors that influence a person's knowledge in action. Research conducted in Semarang on factors affecting the level of parental knowledge found that the increasing age of a person increases the maturity in thinking (Khairiyah 2016).

Adolescent girls at SMKN 5 Jember almost entirely have received information about Sexually Transmitted Infections (STIs) and 11 have not received information about STIs. The results of this study indicate that 92 respondents who have received information about STIs most of the respondents get information from Mass Media, because the location of SMKN 5 Jember which is close to the city centre makes it easy for them to access various information through printed mass media and electronic mass media with a good internet network. The internet plays a significant role in shaping adolescent sexuality because it is the main source of adolescents in seeking knowledge about sexual and reproductive health. This is in line with research in Surakarta which shows that most high school adolescents access comprehensive sexual and reproductive health information through the internet (Arifah, 2019).

Based on the categorisation of the results showed that most of the 68 respondents had poor knowledge and 35 respondents had good knowledge. Most of the adolescents in SMKN 5 Jember have poor knowledge about STIs, this is because the information received is mostly sourced from print and electronic mass media such as the internet. It is known that the internet is not a reliable source of information. According to Tulloch and Kaufman (2013), the internet is a poor source for adolescents in finding information about STIs because adolescents are considered less wise in accessing things on the internet. Good knowledge of adolescents is because adolescents have received information about STIs from trusted sources, namely teachers (schools) and health workers. Poor knowledge of adolescents is because the information obtained by adolescents is different. This affects the knowledge of the adolescent. Subjective sources of information obtained from friends, girlfriends or parents are only based on the knowledge of the source,



so it can provide wrong information. Another cause of lack of knowledge is that the adolescent has never received information about STIs at all.

The results of the study from 103 respondents showed that most adolescents at SMKN 5 Jember had sexual behaviour that was not at risk of STIs, namely 90 respondents. A total of 13 respondents had risky sexual behaviour. Sexual behaviour that is not at risk is because adolescents have good knowledge about STIs, so they can limit themselves in behaviour. Information that has been known about STIs makes adolescents more careful to engage in sexual activity and avoid risky actions. Adolescents with risky sexual behaviour are not necessarily caused by lack of knowledge. Many factors can influence such as environment, age, and exposure to information, gender, parental supervision, and attitudes towards various sexual behaviours (Mahmudah, 2016).

Table 2. The relationship between knowledge of sexually transmitted infections and adolescent sexual behaviour.

Category	Sexual Behaviour				Total	P Value	
	No Risk		Risky				
	N	%	N	%	N		%
Pengetahuan Mengenai IMS	Kurang	61	89.7	7	10.3	68	100
	Baik	29	82.9	6	17.1	35	100
Total		90	87.4	13	12.6	103	100

Out of 103 respondents, 13 respondents had risky sexual behaviour. 7 of them have less knowledge and 6 have good knowledge. A total of 29 respondents who have good knowledge have non-risky sexual behaviour. Based on the Fisher Exact Test, the value ($p = 0.357$) means that there is no relationship between knowledge about sexually transmitted infections and sexual behaviour of adolescent girls at SMKN 5 Jember. These results were obtained because there was a significant imbalance in the data on adolescent sexual behaviour. A total of 90 respondents have sexual behaviour that is not at risk of STIs, this number almost covers all respondents.

Knowledge is a factor that plays a role in the formation of a person's behaviour. Lawrence Green's theory suggests that knowledge is a predisposing

factor in the formation of a behaviour. This is in line with the results of research conducted by Kumalasari (2014) which states that there is a relationship between knowledge and attitudes with sexual behaviour in adolescents at SMK PATRIA Gadingrejo ($\rho = 0.000$). Likewise, research conducted by Fitriana (2019) also shows the results that there is a relationship between knowledge and sexual behaviour in students of SMK Muhammadiyah 1 Semarang ($\rho = 0.047$). However, there is also research that shows different results by Maitimo and Katiandagho (2018) which states that there is no significant relationship between the level of knowledge and attitudes of adolescents and adolescent sexual behaviour ($\rho = 0.631$). Research in Semarang also showed different results that there was no relationship between reproductive health knowledge and self-control with sexual behaviour in adolescent students of X Semarang City (Rosdianingrum & Sugiasih, 2018).

In general, the better one's knowledge, the lower one's tendency to engage in risky behaviour. Unrelated research results can be caused because basically risky sexual behaviour is not only caused by knowledge factors. Some other factors that can affect sexual behaviour include increasing libido sexuality, delaying the age of marriage, knowledge, and promiscuity (Sarwono, 2011). In addition to these factors, according to Sari (2020) there are several factors that play a role in adolescent sexual behaviour including mass media, parenting patterns and peer support so that the chances of adolescents engaging in risky behaviour are even greater.

Sources of information are factors that can influence sexual behaviour. Research conducted by Liswati and Lestari (2015) shows that adolescent sexual activity and behaviour are influenced by information media. Teenagers easily get things that smell like pornography from magazines, television, and the internet. Meanwhile, teenagers tend to imitate or try new things to answer their curiosity. The above can encourage adolescents to have risky sexual behaviour even though they have been equipped with sufficient knowledge about sexual health. Parenting can also lead to sexual deviance, mainly due to the unstable attitude of adolescents, great curiosity, and tend to be influenced by their peers. Adolescents are likely to date secretly and engage in risky behaviour without telling their parents (Kosati, 2018). Therefore, the role of the family, especially parents, is very important in



supervising adolescent relationships because parents have a role in adolescent sexual behaviour, namely helping to increase self-confidence, teaching adolescents to make decisions so as not to be influenced by their friends, and supervising the development of children so that they do not fall into unwanted things (Haryani et al 2015). In addition, a factor that also influences adolescent sexual behaviour is peer support. Mesra and Fauziah (2016) suggest that adolescents who have negative peers are likely to have severe sexual behaviour by 27.34 times compared to positive peers.

Exposure to appropriate information can also lead adolescents to stay away from risky behaviour. It is necessary for teachers and health workers to optimise information about education and health services in their area. The guidance and education process provided by teachers can provide understanding and increase insight in students so that they can prevent free sex in schools and the environment and adolescents know the impact of risky sexual behaviour (Putri et al 2018). Participation of adolescents in various positive activities at school can also build positive associations so as to create a good and psychologically healthy environment.

CONCLUSION, SUGGESTION, AND ACKNOWLEDGMENT

This study concluded that most of the respondents had knowledge about STIs in the lacking category, almost all respondents had sexual behaviour in the non-risk category, and there was no relationship between knowledge about STIs and sexual behaviour of adolescent girls at SMKN 5 Jember.

It is expected that teachers can slip sexuality education to prevent free sex. The school is also expected to provide additional information on reproductive health learning modules regarding sexually transmitted infections through cooperation with local health workers to increase adolescents' knowledge of sexually transmitted infections.

REFERENCES

- Aids, H. I. V, & Ims, D. A. N. (2017). Sms Reminder Untuk Peningkatan Perilaku Pencegahan Hiv/Aids Dan Ims. *Journal of Health Education*, 2(1), 1–10. <https://doi.org/10.15294/jhe.v2i1.18814>
- BKKBN. (2017). Survei Demografi Dan Kesehatan : Kesehatan Reproduksi Remaja 2017. *Badan Kependudukan Dan Keluarga Berencana Nasional*, 1–606. <http://www.dhsprogram.com>.
- Buaton, A., Sinaga, A. S., & Sitorus, M. A. (2019). Pengetahuan Remaja dan Keterpaparan Informasi Remaja Tentang Kesehatan Reproduksi. *Scientific Periodical Journal Of Public Health and Coastal Health*, 2(2), 97–107. <http://jurnal.uinsu.ac.id/index.php/contagion>
- Djama, N. T. (2017). Kesehatan Reproduksi Remaja. *Jurnal Kesehatan Poltekkes Ternate*, 10(1), 30. <https://doi.org/10.32763/juke.v10i1.15>
- Haryani, D. S., Wahyuningsih, W., & Haryani, K. (2016). Peran Orang Tua Berhubungan dengan Perilaku Seksual Pra Nikah Remaja di SMKN 1 Sedayu. *Jurnal Ners Dan Kebidanan Indonesia*, 3(3), 140. [https://doi.org/10.21927/jnki.2015.3\(3\).140-144](https://doi.org/10.21927/jnki.2015.3(3).140-144)
- Kesetyaningsih, T. W., Ana, M., & Sri, S. (2015). Pengetahuan tentang Penyakit Menular Seksual , Sikap dan Perilaku Seks Bebas pada Siswa Sekolah Menengah Atas Islam dan Umum di Yogyakarta. *Mutiara Medika*, 15(2), 116–123. <http://journal.umy.ac.id/index.php/mm/article/view/3758/3140>.
- Kora, F. T., Dasuki, D., & Ismail, D. (2016). Pengetahuan tentang Infeksi Menular Seksual dengan Perilaku Seksual Tidak Aman pada Remaja Putri Maluku Tenggara Barat di Daerah Istimewa Yogyakarta. *Jurnal Kesehatan Reproduksi*, 3(1), 50. <https://doi.org/10.22146/jkr.13880>
- Kumalasari, D. (2016). Correlation of Knowledge and Attitude With Premarital Sexual Behavior Toward the Student in Smk. *Jurnal Ilmu Kesehatan Aisyah*, 1(1), 93–97. <https://aisyah.journalpress.id/index.php/jika/article/view/DK>
- Mahmudah, M., Yaunin, Y., & Lestari, Y. (2016). Faktor-Faktor yang Berhubungan dengan Perilaku Seksual Remaja di Kota Padang. *Jurnal Kesehatan Andalas*, 5(2), 448–455. <https://doi.org/10.25077/jka.v5i2.538>
- Mesra, E. M., & Fauziah, F. (2015). PERAN ORANG TUA MERUPAKAN FAKTOR DOMINAN TERHADAP PERILAKU SEKSUAL REMAJA. *Jurnal Ilmu Dan Teknologi Kesehatan*, 2(2), 35-40. Retrieved from <https://ejurnal.poltekkesjakarta3.ac.id/index.php/jitek/article/view/41>
- Pandjaitan, M. C., Niode, N. J., & Suling, P. L. (2017). Gambaran Pengetahuan dan Sikap terhadap Infeksi Menular Seksual pada Remaja di SMA Frater Don Bosco Manado. *E-CliniC*, 5(2). <https://doi.org/10.35790/ecl.5.2.2017.18281>
- Prawirohardjo, S. (2016). *Ilmu Kebidanan*. Jakarta: Yayasan Bina Pustaka Sarwono Prawirohardjo. hal 197, 921-933
- Rahmi, U., Gustini, K., & Puspita, A. P. W. (2018). Pengetahuan Siswa kelas XI Tentang Penyakit Menular Seksual. *Jurnal Pendidikan Keperawatan Indonesia*, 1(2), 105. <https://doi.org/10.17509/jpki.v1i2.9748>
- Rokhmah, D., Nurwidyanisya, S. D., & Rif'ah, E. N. (2020). Perempuan dan IMS : Perilaku Menjaga Personal Hygiene Organ Reproduksi pada Pekerja Seks Langsung di Indonesia. *Jurnal Promosi Kesehatan Indonesia*, 15(1), 36. <https://doi.org/10.14710/jpki.15.1.36-41>



- Rudolph, A. M., Hoffman, J. I. E., & Rudolph, C. D., (2006). *Buku Ajar Pediatri Rudolph Edisi 20 Volume 1: Pediatri Perkembangan Perilaku*. Jakarta: Penerbit Buku Kedokteran EGC.
- Sari, N. W. (2020). Faktor Yang Berhubungan Dengan Perilaku Seksual Pada Remaja. *Human Care Journal*, 5(3), 813. <https://doi.org/10.32883/hcj.v5i3.857>
- Sarwono, S. W. (2015). *Psikologi Remaja Revisi*. Jakarta: PT RajaGrafindo Persada.
- Wawan, A. dan Dewi, M. (2010). *Teori Pengukuran Pengetahuan, Sikap, dan Perilaku Manusia*. Yogyakarta: Nuha Medika.
- WHO. (2020). Adolescent Health in The South-East Asia Region. [online] who.int.. diperoleh dari : <https://www.who.int/southeastasia/health-topics/adolescent-health>.