

# Students' Knowledge on Adolescent Reproductive Health

1<sup>st</sup> Sri Bulan Musmiah2<sup>nd</sup> Nuryani Y. Rustaman3<sup>rd</sup> Saefudin

*Masters' Degree Program in Biology Education  
Universitas Pendidikan Indonesia  
Bandung, Indonesia  
[sribulanmusmiah@student.upi.edu](mailto:sribulanmusmiah@student.upi.edu)*

*Departement of Biology Education  
Universitas Pendidikan Indonesia  
Bandung, Indonesia  
[nuryanirustaman@upi.edu](mailto:nuryanirustaman@upi.edu)*

*Departement of Biology Education  
Universitas Pendidikan Indonesia  
Bandung, Indonesia  
[adenimi@hotmail.com](mailto:adenimi@hotmail.com)*

**Abstract**— A preliminary study about supplementary book as learning resource on reproductive health was carried out to investigate the profile of students' knowledge on adolescent reproductive health. This study used descriptive quantitative method with the involvement of 154 middle school students from different public schools, namely SMPN 6 Makassar (urban) and SMPN 1 Bontonompo (suburban) based on purposive sampling. The data were collected using an adolescent reproductive health test which was developed based on aspects of knowledge on reproductive health that are important for adolescents according to the National Population and Family Planning Board (BKKBN) and a set of adolescent reproductive health information questionnaire. Research results show that their knowledge about adolescence' reproductive health is very poor, girls' knowledge is higher than boys' knowledge. While upper grade students have better knowledge than lower grade, and students' knowledge from urban is higher than those from suburban. Students' knowledge about the reproductive organ structure-function, adolescent growth and development, pregnancy and contraception, disorder aspects on reproductive organs, sexually transmitted diseases, deviant behavior and sexual orientation are very poor. Whereas students' knowledge about social aspects is moderate. All students got information about adolescent reproductive health, mostly from their school teachers (90.26%) and from textbooks (90.26%). The information most likely students eager to know is information about reproductive organ health (51.30%). The result of this study will be used as basis to develop supplementary book about adolescent reproductive health, which then can be used as additional learning resource for middle school students who are in the adolescence age or as teenagers.

**Keywords**— *development, supplementary book, knowledge, adolescent, reproductive health*

## I. INTRODUCTION

Adolescence is the most crucial period in the development of human life. Adolescence is associated with the transition from childhood to adulthood. Adolescents develop into physical, mental, social and emotional maturity. At this time, there are physical

changes that affect the psychological changes. Generally, this period lasts around the age of 13 years until the age of 18 years, i.e. the child's age in high school [1]. Physical changes and psychology influenced by hormonal changes, supported by the character of adolescents who have great curiosity, love adventure and challenge and tend to take risks without being preceded by careful consideration to make adolescents vulnerable to reproductive health problems, both physical problems and psychosocial, which have short-term and long-term effects on their lives, such as premarital sex, abortion, sexually transmitted diseases, and HIV-AIDS [2].

Survey results on adolescent reproductive health in Indonesia show the number of adolescents whose first date under the age of 15 is classified as many, namely 34.5% adolescent boys, and 33.3% adolescent girls. Adolescents under the age of 17 are not feared to have adequate life skills, so they are at risk of unhealthy dating behavior, such as premarital sex. The results of the same survey showed an increase in the percentage of the number of adolescents who have premarital sex. Premarital sex in adolescents is at risk for adolescent pregnancy and transmission of sexually diseases. Unmarried pregnancy in adolescent girls may continue in adolescent abortion and marriage. Both will have an impact on the future of the adolescents, the conceived fetus and her family, both physically and psychologically [3]. Other studies have also shown that those who engage in early sexual intercourse will lead to a generally negative risk of sexual and reproductive outcomes, such as those who are more likely to have sexual intercourse, have sex with more different sexual partners, the probability of pregnancy and adolescent abortion larger, more varied and different sexual practices (oral sex, anal sex, and pay for sex), and are more likely to have sexually transmitted diseases [4].

The problem of adolescent reproductive health is not only a problem in Indonesia alone but a problem in the world, for example, the problem of pregnancy in adolescents. A review of adolescent pregnancy surveys from adolescents from around the world shows that adolescents pregnancy rates for ages 10 to 14 are the highest in Hungary, while the age of 15-19 is the highest in the United States. The proportion of

adolescent pregnancies ending in abortions ranged from 17% in Slovakia and 69% in Sweden. The proportion of pregnancies ending in live births tends to be higher in countries with high adolescent pregnancy rates. Although adolescent pregnancy has declined since the 1990s, adolescent pregnancy remains high in many countries [5]. Research on sexual and reproductive health rights of adolescent girls in low- and middle-income countries including Indonesia shows that many countries have not made significant progress in delaying marriage and childbearing in adolescents, reducing unwanted labor, narrowing the gender gap that makes girls at risk of poor sexual and reproductive health, expanding health awareness or allowing access to sexual and reproductive health services [6].

These issues point to the importance of knowledge about adolescent reproductive health. This study aims to obtain a description of students' knowledge about adolescent reproductive health in SMPN 6 Makassar and SMPN 1 Bontonompo. Research was conducted on middle school students because at this level students begin entering the adolescent years so that researchers consider it necessary to know the extent of their knowledge about adolescent reproductive health and what information they want to know about adolescent reproductive health. This research will be followed up with the development of supplementary book on adolescent reproductive health theme. This book can be used as a learning resource for students to gain and to improve knowledge about adolescent reproductive health.

## II. METHOD

This research is descriptive quantitative, using purposive sampling technique. A number of middle school students ( $n=154$ ) come from two schools located in different locations, namely SMPN 6 Makassar located in the urban and SMPN 1 Bontonompo located in the suburban. Student demographic information is shown in Table 1. The instruments used were a set of adolescents' reproductive health knowledge test and a set of questionnaire. The test of knowledge consists of 30 questions in the form of multiple choice with five options. Questions were divided into five aspects of reproductive health knowledge: (1) Structure and function of reproductive organs, (2) Growth and development of adolescents, (3) Pregnancy and contraception, (4) Intercommunication among adolescents, and (5) Reproductive organ disorders, sexually transmitted diseases, behavior and distorted sexually orientation.

The questionnaire used in the study consists of two parts. The first part aims to obtain student demographic information, such as name, gender, grade and school. The second part consists of two closed questions on reproductive health information sources and one open question about information on reproductive health of adolescents. The data obtained

was processed by Anates ver 4.0.5 then analyzed descriptively.

TABLE I. STUDENT DEMOGRAPHIC INFORMATION

Demographic Information	Frequency (f)	Percentage (%)
Gender		
Boys	48	31.17
Girls	106	68.83
Grade		
VII	50	32.47
VIII	52	33.77
IX	52	33.77
School		
SMPN 6 Makassar	77	50.00
SMPN 1 Bontonompo	77	50.00

## III. RESULT AND DISCUSSION

### A. Student Knowledge about Adolescent Reproduction Health

The results of the adolescent reproductive health knowledge test in Table 2 indicate that the students' knowledge at SMPN 6 Makassar and SMPN 1 Bontonompo on adolescent reproductive health is categorized as very poor ( $\bar{x} = 36.58$ ). The results of this study are in line with the results of a survey conducted by the Ministry of Health of the Republic of Indonesia which shows that adolescent knowledge about reproductive health is inadequate. This result is also in line with research conducted at SMPN 149 Jakarta where the level of adolescent knowledge about reproductive health was still not good [7]. The students' knowledge of adolescent reproductive health in Table 3 shows that students' knowledge is very poor in terms of structure and function of reproductive organs ( $\bar{x} = 30.84$ ), aspects of adolescent growth and development ( $\bar{x} = 32.93$ ), pregnancy and contraception aspects ( $\bar{x} = 38.31$ ), as well as aspects of reproductive organ disorders, sexually transmitted diseases, behavior and distorted sexually orientation ( $\bar{x} = 30.93$ ), while students' knowledge on intercommunication among adolescents is moderate ( $\bar{x} = 56.23$ ).

TABLE II. ADOLESCENT REPRODUCTIVE HEALTH KNOWLEDGE BY GENDER, GRADE, AND SCHOOL

	$\bar{x}$
All respondents	36.58
Gender	
Boys	29.65
Girls	39.72
Grade	
VII	32.07
VIII	34.94
IX	42.56
School	
SMPN 6 Makassar	40.61
SMPN 1 Bontonompo	32.55

Knowledge of girls and boys students about adolescent reproductive health is very poor. The knowledge of girls ( $\bar{x} = 39.72$ ) is higher than that of boys ( $\bar{x} = 36.58$ ). This may be due to that girls are more interested in topic about human biology and related to human health and wellbeing, while boys are more interested in zoology or basic biological processes [8]. Based on informal sources of information, more women are getting reproductive health information from their family members, while men are getting reproductive health information through pornography and peers [9].

The students' knowledge about adolescent reproductive health in ninth grade is poor, while the students' knowledge in seventh and eighth grades are still very poor. Ninth grade students ( $\bar{x} = 42.56$ ) have higher adolescent reproductive health knowledge than seventh grade ( $\bar{x} = 32.07$ ) and eighth grade students ( $\bar{x} = 34.94$ ). This may be due to ninth grade students received more knowledge about the human reproductive system so that knowledge about adolescent reproductive health is higher than the students of seventh and eighth grades.

The students' knowledge about adolescent reproductive health in SMPN 6 Makassar is poor, while the students' knowledge at SMPN 1 Bontonompo is very poor. Students' knowledge about adolescent reproductive health in SMPN 6 Makassar ( $\bar{x} = 40.61$ ) located in the urban is higher than students in SMPN 1 Bontonompo ( $\bar{x} = 32.55$ ) located in the suburban. This result is in line with research on women's reproductive health knowledge in Bangladesh which shows that women's reproductive health knowledge in urban areas is higher than in suburban women [10]. This may be caused students in urban areas find it easier to get information about adolescent reproductive health than students in suburban areas.

**TABLE III. ADOLESCENT REPRODUCTIVE HEALTH KNOWLEDGE BASED ON THE KNOWLEDGE ASPECTS OF ADOLESCENT REPRODUCTIVE HEALTH**

Aspects of Adolescent Reproductive Health Knowledge	Question number	$\bar{x}$
Structure and function of reproductive organs	1-6	30.84
Growth and development of adolescents	7-13	32.93
Pregnancy and contraception	14-17	38.31
Intercommunication among adolescent	18-22	56.23
Reproductive organ disorders, sexually transmitted diseases, behavior and distorted sexually orientation	23-30	30.93

#### B. Information on Adolescent Reproductive Health

The questionnaire data in table 4 on adolescent reproductive health information shows that all students have received information about adolescent reproduction health. About 139 out of 154 students (90.26%) got reproductive health information from teachers and textbooks. Although students have been getting adolescent reproductive health information

from teachers and textbooks in schools, the students' knowledge about adolescent reproductive health is still very poor. This shows the need for improved learning activities and books used in schools. This result is in line with the study of integrated IPA books used by middle school students in Padang that indicates that textbooks commonly used as teaching materials are still lacking in presenting adolescent reproductive health preventive measures, both from knowledge aspects of reproductive organs, knowledge of processes and diseases of the reproductive system, knowledge of the physical changes of adolescents at puberty, aspects of knowledge about the psychological changes of adolescents at puberty, and aspects of providing protection to the reproductive organs [11]. In addition to teachers and textbooks, students also get a lot of information about reproductive health from the internet (83.12%). This is very risky, because the internet can provide information that is not necessarily scientific about adolescent reproductive health.

The data of questionnaires in Table 4 shows that students mostly want to know information about reproductive health (51.30%). In addition to reproductive health information, students also want to know information about diseases of reproductive organs, structure and function of reproductive organs, pregnancy, menstruation, sexual intercourse, and puberty. These results indicate that the information provided to students should not only focus on the structure and function of reproductive organs, menstruation, pregnancy, and diseases of the reproductive organs but also to discuss the health of reproductive organs, sexual intercourse, and puberty.

The poor knowledge of students about adolescent reproductive health needs to get attention because knowledge can have an impact on students' attitudes and activities in maintaining reproductive health. The results of research on the attitude of Indonesian adolescent to reproductive health showed a relationship between reproductive knowledge with attitudes toward reproductive health. Adolescents with high reproductive health knowledge exhibit lower negative attitudes toward reproductive health. High knowledge of reproductive health reduces negative attitudes toward reproductive health in both boys and girls [12]. A good attitude will be followed by a positive activity in maintaining reproductive health [13]. Other research results also indicate a relationship between knowledge and age when first having sex. Participants who had first sexual intercourse at a younger age generally had a lower knowledge of reproductive health [14].

**TABLE IV. ADOLESCENT REPRODUCTIVE HEALTH INFORMATION**

	Frequency (f)	Percentage (%)
Ever get information about adolescent reproductive health		
Yes	154	100.00
No	0	0
Sources of adolescent reproductive information		

Television	107	69.48
VCD/film	32	20.78
Radio	29	18.83
Internet	128	83.12
Textbooks	139	90.26
Books other than textbooks	87	56.49
Magazine/newspaper	48	31.17
Counseling/health workers	102	66.23
Parents	109	70.78
Teacher	139	90.26
Friends	79	51.30
Information on adolescent reproductive health that you want to know	23	14.94
Structure and function of reproductive organs	48	31.17
Diseases of the reproductive organs	79	51.30
Reproductive organ health	7	4.55
Pregnancy	6	3.90
Menstruation	18	11.69
Sexual intercourse	22	14.29
Puberty		

#### IV. CONCLUSION AND IMPLICATION

This study aims to determine the description of students' knowledge about adolescent reproductive health, reproductive health information sources and types of adolescent reproductive health information. Overall, the students' knowledge about adolescent reproductive health is very poor, although the students' knowledge varies in gender (girls > boys), grade (ninth grade > seventh and eighth grade) and location (urban > suburban). All students admitted to having received information about adolescent reproductive health from teachers and textbooks. Nevertheless their knowledge of reproductive health is still very poor. This shows the need for improvement in the learning activities and textbooks used in schools. Students are interested in information about the health of reproductive organs, puberty, and sexual relations so that this topic needs to be added in the learning of the human reproductive system.

The poor knowledge of students about adolescent reproductive health needs to get attention because knowledge can have an impact on students' attitudes and activities in maintaining reproductive health. It is important to provide a source of information on adolescent reproductive health that can be used as a learning resource for students. The results of this study can be a reference to design a supplementary book that suits the needs of students about adolescent reproductive health. The developed supplementary book is intended for middle school students who are early adolescents. In the early phase of adolescence, they experience puberty, characterized by significant physical changes, in addition, they also begin to have an interest in the opposite sex and begin experimenting with their bodies [15] so that a true source of information on adolescent reproductive health is needed.

#### ACKNOWLEDGMENT

Many thanks to the principals and teachers of SMPN 6 Makassar and SMPN 1 Bontonompo for their assistance and cooperation and all the students who participated in this research.

#### REFERENCES

- [1] Nurhayati, T. (2016). The development of psychosocial behavior in the puberty period. *Edueksos: Jurnal Pendidikan Sosial & Ekonomi*, 4(1), 1-15.
- [2] Kusumaryani, M. (2017). Summary of Study: Prioritize Adolescent Reproductive Health to Enjoy Demographic Bonuses. Depok: Universitas Indonesia.
- [3] Kementerian Kesehatan RI. (2015). *Adolescent Reproductive Health Situation*. Jakarta: Kementerian Kesehatan RI.
- [4] Heywood, W., Patrick, K., Smith, A. M., & Pitts, M. K. (2015). Associations between early first sexual intercourse and later sexual and reproductive outcomes: a systematic review of population-based data. *Archives of sexual behavior*, 44(3), 531-569.
- [5] Sedgh, G., Finer, L. B., Bankole, A., Eilers, M. A., & Singh, S. (2015). Adolescent pregnancy, birth, and abortion rates across countries: levels and recent trends. *The Journal of adolescent health: official publication of the Society for Adolescent Medicine*, 56(2), 223.
- [6] Santhya, K. G., & Jejeebhoy, S. J. (2015). Sexual and reproductive health and rights of adolescent girls: Evidence from low-and middle-income countries. *Global Public Health*, 10(2), 189-221.
- [7] Purbono, I.A., Prabawati, M, & Tarma. (2017). Level of adolescent knowledge of reproductive health. *FamilyEdu: Jurnal Pendidikan Kesejahteraan Keluarga*, 1(2), 135-149.
- [8] Uitto, A., Juuti, K., Lavonen, J., & Meisalo, V. (2006). Students' interest in biology and their out-of-school experiences. *Journal of Biological Education*, 40(3), 124-129.
- [9] Stern, E., Cooper, D., & Gibbs, A. (2015). Gender differences in South African men and women's access to and evaluation of informal sources of sexual and reproductive health (SRH) information. *Sex education*, 15(1), 48-63.
- [10] Haque, M., Hossain, S., Ahmed, K. R., Sultana, T., Chowdhury, H. A., & Akter, J. (2015). A comparative study on knowledge about reproductive health among urban and rural women of Bangladesh. *Journal of family & reproductive health*, 9(1), 35-40.
- [11] Yuniarti, E., Fadilah, M., Darussyamsu, R., & Azmi, N. (2017). Analysis of adolescent reproductive health preventive effort in reproduction material on junior high school science book. *Bioeducation Journal*, 1(2), 18-27.
- [12] Susanto, T., Saito, R., Kimura, R., Tsuda, A., Tabuchi, N., & Sugama, J. (2016). Immaturity in puberty and negative attitudes toward reproductive health among Indonesian adolescents. *International journal of adolescent medicine and health*, 1-11.
- [13] Wijaya, I. M. K., Agustini, N. N. M., & Tisna, G. D. (2014). Knowledge, attitudes and activity of high school teens in reproductive health in buleleng district. *Jurnal Kesehatan Masyarakat*, 10(1), 33-42.
- [14] Shu, C., Fu, A., Lu, J., Yin, M., Chen, Y., Qin, T., & Yin, P. (2016). Association between age at first sexual intercourse and knowledge, attitudes and practices regarding reproductive health and unplanned pregnancy: a cross-sectional study. *Public health*, 135, 104-113.
- [15] Batubara, J. R. (2016). Adolescent development. *Sari Pediatri*, 12(1), 21-9.