

Research Article

## Improvement Knowledge and Attitude about Adolescent's Reproductive Health through Education Intervention in Junior and Senior High

### *Peningkatan Pengetahuan dan Sikap tentang Kesehatan Reproduksi Remaja melalui Intervensi Penyuluhan pada Siswa Sekolah Menengah Pertama dan Sekolah Menengah Atas Negeri*

Amiruddin<sup>1</sup>, Sriyana Herman<sup>2</sup>, Hermanto T Joewono<sup>3</sup>, Asrul Sani<sup>4</sup>, Junaid<sup>5</sup>,  
Ali Imran<sup>6</sup>, Jafriati<sup>7</sup>

<sup>1,4,5,6,7</sup>Department of Public Health,  
Faculty of Public Health Universitas Halu Oleo, Kendari

<sup>2,3</sup>Department of Reproductive Health  
Faculty of Medicine Universitas Airlangga, Surabaya

#### Abstract

**Objective :** To determine the changes in point of view and positive attitudes towards adolescent reproductive health in junior and senior high school students in Southeast Sulawesi after counselling interventions.

**Methods :** Experimental Research with The One Group Pretest-Posttest Design. The population in the study were all adolescents aged between 12-19 years as students in Southeast Sulawesi. The sampling was performed by Simple stratified random sampling technique with a sample of 300 people for middle and high school students. The instrument used was a questionnaire with data analysis by using the t-test.

**Results :** Showed that the level of knowledge and attitudes of students about adolescent reproductive health was differed between pretest & posttest in junior and senior high school students ( $p < 0.05$ ), because the students who were given counselling interventions with lecture methods, powerpoint, and discussion, will add to the broader understanding and insight and tend to generate positive responses from students so that they have good basic knowledge and attitudes about adolescent reproductive health.

**Conclusions :** The study was the increase in knowledge and positive attitudes about adolescent reproductive health after counselling interventions.

**Keywords :** adolescent, counselling, knowledge and attitude, reproductive health.

#### Abstrak

**Tujuan :** Untuk mengetahui perubahan pengetahuan dan sikap yang positif tentang kesehatan reproduksi remaja pada siswa SMP dan SMA Negeri di Sulawesi Tenggara setelah dilakukan intervensi penyuluhan.

**Metode :** Penelitian Eksperimen (pre-experiment) dengan rancangan The One Group Pretest-Posttest Design. Populasi dalam penelitian adalah keseluruhan remaja yang berusia antara 12-19 tahun yang sementara berstatus sebagai siswa SMP dan SMA Negeri di Sulawesi Tenggara. Pengambilan sampel dilakukan dengan teknik Simple stratified random sampling dengan jumlah sampel 300 orang untuk siswa SMP dan SMA. Instrumen yang dipakai adalah angket dengan analisis data menggunakan uji-t.

**Hasil :** Menunjukkan tingkat pengetahuan dan sikap siswa tentang kesehatan reproduksi remaja berbeda antara pretest dan posttest pada siswa SMP dan SMA Negeri di Provinsi Sulawesi Tenggara ( $p \text{ value} < 0,05$ ). Hal ini disebabkan karena pada siswa SMP dan SMA Negeri di Provinsi Sulawesi Tenggara yang diberikan intervensi penyuluhan dengan metode ceramah, visualisasi (power point), dan tanya jawab, akan menambah pemahaman dan wawasan yang lebih luas dan cenderung menimbulkan respon yang positif dari siswa sehingga memiliki pengetahuan dan sikap yang baik tentang kesehatan reproduksi remaja.

**Kesimpulan :** Terjadi peningkatan pengetahuan dan sikap yang positif tentang kesehatan reproduksi remaja setelah intervensi penyuluhan.

**Kata kunci :** kesehatan reproduksi, pengetahuan dan sikap, remaja, penyuluhan.

Correspondence author : Amiruddin; amir15018@yahoo.com

## INTRODUCTION

Adolescent problems are social realities that exist in society. Currently, there has been a shift in sexual behaviour among adolescents whose causes are not merely due to cultural shifts or social influences, but also the progress in improving nutrition in Indonesia has triggered a shift in sexual behaviour among adolescents<sup>1-3</sup>. The problem of sexual relations among teenagers is actually a global problem because almost all countries in the world show similar trends<sup>4,5</sup>. Reproductive health in adolescents includes sexually transmitted diseases (STDs), including increased HIV/AIDS infections, sexual violence, early pregnancy and childbirth at risk of maternal and infant death, and unwanted pregnancies that often lead to unsafe abortions<sup>2,3</sup>.

Negative factors such as the spread of pornographic themed information in the mass media, lack of cultivation of moral and religious values, the influence of promiscuity, and the lack of parental attitudes toward children, as well as the strength of hormonal influences, are a series of causes of teenagers having free sex<sup>6,7</sup>. Based on information from the cumulative number of HIV/AIDS cases currently in Indonesia reported up to September 2008, the number of people with HIV was 6.277 patients, and the number of AIDS cases was 15.136 patients with 3.197 deaths. Based on data from the Directorate General of PPM and Ministry of Health of Indonesia with HIV/AIDS aged 15-19 years in 2007, there were 279 patients and increase of 484 patients in 2008<sup>8</sup>.

Cases of HIV/AIDS in Southeast Sulawesi Province cumulatively from 2004 to 2010 have found 127 cases, which 73 people have HIV and 54 have AIDS with details of Kendari City 58 cases, Muna 24 cases, Wakatobi Regency 13 case, Buton Regency 8 cases, Kolaka Regency 8 cases, Bau-Bau City 6 cases, Bombana Regency 5 cases, South Konawe Regency 4 cases, Konawe District 3 cases and North Konawe District 2 cases. Based on data from the public health office in Southeast Sulawesi it shows a significant increase of HIV/AIDS cases in the 2010-2012 by 15 cases (2010), 69 cases (2011) and 125 cases (2012). While in 2013 was 103 people and January-October 2014 was 158 people. If one patient detected was equivalent to one hundred people who were not detected, then HIV/AIDS sufferers in

Southeast Sulawesi during 2014 were estimated at 158.000<sup>9</sup>.

Based on a survey of adolescent sexual behavior in Kendari (2007) by KPA(HIV/AIDS Commission), it was found that there were variations in sexual trends among adolescents, namely 2% having sex, 1% having oral sex, 2% only attaching genitals and 10 % just holding a sensitive areas and the highest sex trends of 85% were other sexual behaviour. Adolescent sexual behaviour has the potential to pose a risk for them to be infected with HIV/AIDS and other sexually transmitted diseases due to their ignorance of knowledge and attitudes about reproductive health. It was found that the level of knowledge in senior and vocational high school students in Kendari city about reproductive health was very low and tends to do the negative sexual behavior. This was supported by the increasing number of nightlife facilities that provide exclusive entertainment services for customers, including sexual services. Based on the results of observations, it was found that many nightclubs employed teenagers as a special attraction for visitors<sup>10</sup>.

Information about adolescent reproductive health, especially in junior and senior high school students in the current era of globalization is very easy to obtain. It could through print-out and electronic media or the internet<sup>11</sup>, but due to the limited curriculum content in schools related to reproductive health problems make the students find out for themselves and get inappropriate information from their friends who are basically lack of knowledge too<sup>12</sup>. In connection with the above facts and linked to the 2013-2018 Southeast Sulawesi by Regional Medium-Term Development Plan with the vision of Realizing Prosperous, Independent and Competitive, one of its missions is to improve the quality of human resources in the health sector to improve community health. The goal is to reduce morbidity, so the problem of adolescents, especially those related to reproductive health problems of junior and senior high school students in Southeast Sulawesi Province, could get serious attention from the government. The purpose of this study was to determine the increase in knowledge and changes in positive attitudes about adolescent reproductive health in junior and senior high school students in Southeast Sulawesi after counselling interventions.



**Table 2.** T-test Analysis of Knowledge about Adolescent Reproductive Health in School Students in Southeast Sulawesi Province

School	The Influence of Counseling on Knowledge of Adolescent Reproductive Health	Mean	SD	t-hit	df	P-value
Public Middle School Students	Pretest	19.740	2.815	-7.880	149	0.000
	Posttest	21.473	2.689			
	Difference	1.733	126			
High School Students	Pretest	21.633	3.478	-4.661	0.000	149
	Posttest	23.207	4.060			
	Differences	1.574	582			

Based on table 2, the results of public middle school students was  $t = -7.880$  and  $p = 0.000$  were obtained with  $\alpha = 0.05$  and  $df = 149$ , then  $t \text{ table} = 1.960$  was obtained. This shows  $t \text{ count} > t \text{ table}$  ( $p < 0.05$ ), so that  $H_0$  was rejected and  $H_1$  was accepted, it means that there was a significant influence of counselling interventions on increasing knowledge about adolescent reproductive health in students of Public Middle Schools in Southeast Sulawesi Province. The

results of high school students was  $t = -4.661$  and  $p = 0.000$  were obtained with  $\alpha = 0.05$  and  $df = 149$ , then  $t \text{ table} = 1.960$  was obtained. This shows  $t \text{ count} > t \text{ table}$  ( $p < 0.05$ ), so that  $H_0$  was rejected and  $H_1$  was accepted, it means that there was a significant influence of counselling interventions on increasing knowledge about adolescent reproductive health in students of High Schools in Southeast Sulawesi Province.

### Attitude of Adolescent Reproductive Health

**Table 3.** Attitude of Adolescent Reproductive Health in Junior and Senior High School Students

Distric	Category	Attitudes about adolescent reproductive health							
		Junior high school 1 and 9				Senior high school 1 and 4			
		Pretest (n=30)		Posttest		Pretest (n=30)		Posttest	
		n	%	n	%	n	%	n	%
North Kolaka Regency	Good	11	36.7	21	70	25	83.3	25	83.3
	Medium	16	53.3	9	30	5	16.7	5	16.7
	Less	3	10	-	-	-	-	-	-
Kolaka Regency	Good	13	43.3	17	56.7	28	93.3	28	93.3
	Medium	13	43.3	13	43.3	2	6.7	2	6.7
	Less	4	13.4	-	-	-	-	-	-
Konawe District	Good	21	70	20	66.7	22	73.3	22	73.3
	Medium	9	30	10	33.3	7	23.3	8	26.7
	Less	-	-	-	-	1	3.3	-	-
Kendari City	Good	19	63.3	17	56.7	28	93.3	29	96.7
	Medium	11	36.7	12	40	2	6.7	1	3.3
	Less	-	-	1	3.3	-	-	-	-
Bau-Bau City	Good	26	86.7	25	83.4	26	86.7	29	96.7
	Medium	4	13.3	4	13.3	4	13.3	1	3.3
	Less	-	-	1	3.3	-	-	-	-

**Table 4.** T-test Analysis of Attitudes about Adolescent Reproductive Health in Junior and High School Students in Southeast Sulawesi Province

School students	Effect of Counseling on Attitudes About Adolescent Reproductive Health	Mean	SD	t-hit	P-value	df
Junior high school students	Pretest	14.240	4.679	-2.301	0.023	149
	Posttest	15.093	3.161			
	Differences	853	1.518			
High school students	Pretest	16.647	3.308	-2.174	149	0.034
	Posttest	16.867	2.806			
	Differences	220	502			

Based on table 4, the results of junior high school students was  $t = -2.301$  and  $p = 0.023$  were obtained with  $\alpha = 0.05$  and  $df = 149$ , then  $t$  table = 1.960 was obtained. This shows  $t$  count >  $t$  table ( $p < 0.05$ ), so that  $H_0$  was rejected and  $H_1$  was accepted, it means that there was a significant influence of counselling interventions on attitudes about adolescent reproductive health in students of State Junior High Schools in Southeast Sulawesi Province. The results of high school students was  $t = -2.174$  and  $p = 0.034$  were obtained with  $\alpha = 0.05$  and  $df = 149$ , then  $t$  table = 1.960 was obtained. This shows  $t$  count >  $t$  table ( $p < 0.05$ ), so that  $H_0$  was rejected and  $H_1$  was accepted, it means that there was a significant influence of counselling interventions on attitudes about adolescent reproductive health in high school students in Southeast Sulawesi Province.

## DISCUSSION

### Overview Knowledge of Adolescent Reproductive Health

Adolescent reproductive health knowledge is information that explains the impacts and problems often faced by adolescents due to the lack of knowledge about reproductive health and ways to prevent from also occurring the number of adolescents who obtained reproductive health knowledge from print/media electronics, even though most of the information was unfiltered<sup>1,14</sup>.

Knowledge about adolescent reproductive health is critical so that adolescents have responsible for their attitudes and behaviors<sup>5,11</sup>. Debriefing knowledge about changes that occur physically, psychologically and sexually will make it easier for teenagers to understand and overcome various confusing conditions that will appearing later. Knowledge is influenced by several factors, including education level. Health education brings changes to knowledge<sup>6</sup>. Varied knowledge can be caused by different learning abilities of each person<sup>11</sup>.

The results of the analysis data regarding knowledge about adolescent reproductive health with  $t$ -test ( $p < 0.05$ ) has significant differences in the level of knowledge between pretest and posttest. Posttest tend to have high knowledge about adolescent reproductive health, while at

pretest generally have intermediate knowledge. Based on the results of this study, it indicate that counselling on adolescent reproductive health was needed to increase knowledge about adolescent reproductive health in both junior and senior high schools, especially in Southeast Sulawesi Province. This where there was a significant influence between the provision of health education to increase adolescent knowledge<sup>5,14</sup>.

### Overview Attitudes about Adolescent Reproductive Health

Attitude is a readiness to react to objects in a particular environment as an appreciation of the object<sup>15</sup>. Based on data analysis with  $t$ -test ( $p < 0.05$ ), there is a difference between pretest and posttest. At the pretest, respondents had sufficient attitudes about adolescent reproductive health. While at posttest, respondents tend to have a good attitude about adolescent reproductive health. This was evident from the results of research data that at the pretest only has a small portion of sufficient attitudes towards reproductive health, whereas at the posttest most of them had a good basic attitude. This is due to attaining an attitude that supports not only knowledge but also influenced by emotional factors, personal experience, mass media, educational institutions, religious institutions, influences of others, and culture<sup>16</sup>.

### The Effect of Intervention on Counseling on Increasing Knowledge of Adolescent Reproductive Health

Knowledge is the result of knowing after sensing a particular object. Sensing occurs through the five senses of human; the sense of sight (the eye), the sense of hearing (the ear), the sense of smell (nose), the sense of taste (tongue) and the sense of touch (hand). Much of the knowledge is obtained from the eyes and ears<sup>15</sup>. Knowledge is influenced by several factors including education level. Health education could changes the knowledge<sup>6</sup>. Varied knowledge can be caused by different learning abilities of everyone<sup>17</sup>.

The results of the study on junior and senior high school students in Southeast Sulawesi (pretest & posttest) had significant differences in knowledge after given a counseling interventions.

This means that there was a significant influence between counselling with students in level of knowledge about adolescent reproductive health. It could be said counselling with lecture and slide methods is a combination of methods and media of counselling that more effective because it uses more than five senses and more leads to attractiveness and interest of respondents so the information delivered is more easily accepted. According to previous research, the senses that turn the most knowledge into the brain are the eyes. Approximately 75% - 87% of human knowledge is obtained or channelled through the eyes. While 13% - 25% is channelled through other senses. From this, it was concluded that visual tools made it easier to convey and receive information or educational material<sup>10</sup>.

The results of this study were relevant to the results of research by Socony in America which shows that by telling 70% can be remembered three hours later, and only 10% was remembered three days later. Then, by Showing 72% can be remembered three hours later, and only 20% was remembered three days later. By telling and showing at once it can be remembered three hours later 85%, and 65% can be remembered three days later. Based on data analysis by using t-test with a significance level  $\alpha = 5\%$  (0.05) obtained  $t\text{-count} > t\text{-table}$  and  $p < 0.05$ . This means that the extension intervention (treatment) has a significant effect on increasing knowledge about adolescent reproductive health.

### **The Effect of Intervention on Counseling on Attitudes about Adolescent Reproductive Health**

Attitude is a readiness to react to objects in a particular environment as an appreciation of the object<sup>17</sup>. The results showed that there were significant differences between the pretest and posttest attitudes of adolescents about reproductive health after being given counselling interventions. This is due to attaining an attitude that supports not only knowledge but also influenced by emotional factors, personal experience, mass media, education, religious, influences of others who are considered important, and culture<sup>16</sup>. The results of the t-test, with a significance level of  $\alpha = 5\%$  (0.05) obtained the results of  $t\text{-count} > t\text{-table}$  and  $p < 0.05$ . This means that there was a significant influence

between counselling interventions and changes in positive student attitudes toward adolescent reproductive health.

### **CONCLUSION**

The level of students knowledge about adolescent reproductive health was different (pretest & posttest) between junior and senior high school students ( $p < 0.05$ ) or there was an increase in knowledge about adolescent reproductive health after counselling interventions. This was because the students of junior and senior high schools in Southeast Sulawesi who were given counselling interventions by lecture method, powerpoint, and discussion will increase understanding and broader insight about adolescent reproductive health. Based on the results of the study, it is recommended for all the educator of Junior and Senior High Schools in Southeast Sulawesi Province to always provide counselling on adolescent reproductive health through biology teachers as local content, so that adolescents do not fall into knowledge and attitudes about reproductive health, wrong and incorrect. In addition, collaboration with various stakeholders can be conducted to provide counselling to students at least once a month, and also provide adequate facilities and time for health counselling at school.

### **REFERENCES**

1. Baso A, Zohra, Judi Raharjo. Kesehatan Reproduksi. Jakarta: Pustaka Pelajar Offset. 1999:2-27.
2. Sarwono SW. Psikologi Remaja. Jakarta: Rajawali Pers. 2012:8-12.
3. Soehadi K. Seksualitas dan Fertilitas Sebagai Konsep Dasar Kesehatan Reproduksi. Surabaya: Universitas Airlangga; 1994:5
4. Gilly A. Buku Ajar kesehatan Reproduksi Wanita. Edisi Kedua. Jakarta: Buku Kedokteran EGC; 2010:151-5.
5. Obi and Ozumbia. The Impact Of Health Education On Reproductive Health Knowledge Among Adolescent In A Rural Nigerian Community. J Obstet Gynecol. 2007; 27(5): 513-7.
6. Rao R., Lena A., Nair S., Kamath V. Effectiveness Of Reproductive Health Among Rural Adolescent Girls A School Based Intervention Study In Udupi Taluk Karnataka. Ind J Med Scien. 2008; 62(11):439-43.
7. Wawan A and Dewi M. Teori dan Pengukuran Pengetahuan, Sikap dan Perilaku Manusia. Yogyakarta: Nuha Medika. 2010:16-37.
8. Dinas Kesehatan Kota Kendari. Laporan P2 PMS, HIV/AIDS Tahun 2006 s.d. 2008 di Kota Kendari. Kendari: Bidang Pencegahan & Pemberantasan Penyakit Menular; 2008.

9. Dinas Kesehatan Kota Kendari. Laporan P2 PMS, HIV/ AIDS Tahun 2010 s.d. 2014 di Kota Kendari. Kendari: Bidang Pencegahan & Pemberantasan Penyakit Menular; 2015.
10. Betty F. Studi Perilaku Seksual Remaja Pada Siswa SMUN 4, SMKN 2, dan SMKN 3 Kota Kendari. Kendari: Universitas Haluoleo. 2008;71-2.
11. Widyastuti. Kesehatan Reproduksi Remaja. Yogyakarta. Fitramaya. 2009:79-80.
12. Imron A. Pendidikan Kesehatan Reproduksi Remaja: Peer Educator & Efektivitas Program PIK-KRR di Sekolah. Yogyakarta: Ar-Ruzz Media. 2012:7-22.
13. Sugiyono. Metode Penelitian Kuantitatif dan Kualitatif. Bandung:Alfabeta. 2012:76-149.
14. Nisma H. Pengaruh penyampaian Pendidikan Kesehatan Reproduksi Oleh Kelompok Sebaya (Peer Group) Terhadap Pengetahuan Kesehatan Reproduksi Remaja di SMP Negeri 2 Kasihan Bantul Yogyakarta. Yogyakarta: Universitas Muhammadiyah. 2008:28-70.
15. Notoatmodjo S. Promosi Kesehatan dan Ilmu Perilaku. Jakarta: Rineka Cipta. 2007:124-56.
16. Azwar S. Sikap Manusia Teori dan Pengukurannya Edisi ke-2.
17. Badan Pusat Statistik Propinsi Sulawesi Tenggara. Sulawesi Tenggara Dalam Angka. Kendari: Pritama Kendari. 2008:65-6.