

Menstrual hygiene: Knowledge and practice among adolescent school girls at Koawena, Ende district-Indonesia

Martina Bedho¹, Anatolia K. Doondori², Irwan Budiana³

^{1,2,3}Nursing Study Program Ende, Kupang Polytechnic of Health of The Ministry of Health, Indonesia,
Email: marthina.bedho@gmail.com

Abstract

Background: World Health Organization global database on women rarely pay attention to the cleanliness of their external genitalia, resulting in annual vaginal infections 10-15% by candida and 15% vaginal discharge. In Indonesia was a very few study on menstrual hygiene: knowledge and practice among adolescent

Purpose: Knowing the influence of counseling on menstrual hygiene: knowledge and practice among adolescent school girls at Koawena, Ende district-Indonesia

Methods: The quantitative research by quasi-experiment design of one-group pretest-posttest approach. The population was adolescent school girls at Koawena, Ende district-Indonesia by total sampling were 17 respondents. Conducted on August, 2018. The analysis used univariate and bivariate analysis using the paired T- test.

Results: The bivariate test analysis showed differences in the level of knowledge before and after counseling on menstrual hygiene: knowledge and practice p-value = 0.034, indicating by increasing of the level of knowledge, would be followed by in a good practice in menstrual hygiene among adolescent school girls at Koawena, Ende district-Indonesia.

Conclusion: The health practitioners need to come to adolescent school girls to give health education with the topic of menstrual hygiene: knowledge and practice.

Keywords: Adolescent girl; Menstrual hygiene; Knowledge; Practice.

INTRODUCTION

Young women in puberty, have menstruated, at that time the birth canal is open to menstruate blood and is the entrance to germs and bacteria because of the anatomical relationship between the internal genitalia and the outside world is only 3-4 cm. Germs and bacteria that are not easy to enter are maintained by external genital function, so special attention is needed. Internal genital infection is always characterized by vaginal discharge or fluor albus (Abid, Kumar, Ali, & Chandra, 2016).

In 2014, women in America rarely paid attention to the cleanliness of their external genital organs, resulting in annual vaginal infections 10-15% by candida and 15% vaginal discharge. The prevalence of vaginal discharge in 2013, in the world 75% and Europe 25%. While in Indonesia there are no specific data about vaginal discharge and cleanliness of the outer genitalia of young women. Governments' program adolescent caring

health services to increase adolescent knowledge and skills about reproductive health and healthy living practices, but have not focused on the practice of external genital hygiene. But it has been reported by other researchers that young women have a high risk of developing pathological vaginal discharge, due to bad practice in the treatment of external genitalia. Some studies report adolescent practice that is lacking in treatment of external genitalia, such as adolescents not draining the external genitalia after urinating or defecating using a dry tissue or towel, cleaning the external genitalia from back to front, often using tight underwear when doing activities, use underwear that is not cotton, and use underwear with friends. Some studies also reported a lack of adolescent knowledge about the treatment of vulva hygiene during menstruation (Valizadeh et al., 2017).

In Ende District, adolescent health promotion programs from public health centre (*Puskesmas*) always provide services to adolescents in some

Menstrual hygiene: Knowledge and practice among adolescent school girls at Koawena, Ende district-Indonesia

school such as elementary, junior and high school. At SATAP Junior High School in rural area Ende district Koawena has never received reproductive from local public health centre.

Based on the initial survey at Koawena Ende Middle School, out of 12 female students who were menstruating, three students had vaginal discharge with milky white color, while one female student had a yellowish vaginal discharge. The government seeks to overcome reproductive health problems by making preventative efforts by way of reproductive health counseling in adolescents. Reproductive health education involves all health workers, especially the maternal and child health section by midwives. Midwives are health workers who are in charge of helping, serving and providing health education to the community, especially hospital. Health education is one strategy to increase adolescent knowledge and the right method for providing information about the care of external genitalia. Health education is carried out to help clients improve their health status, prevent disease, and even practice changes are expected after being given health education (Ramathuba, 2015).

RESEARCH METHODS

This study used quasy-experiment research with time series design. By total sampling of 28 student girls who were in grade VII to IX students who had menstruated. Data collection of knowledge and practice by using questionnaires. Conducted before and after counseling 3 times (3 stages). Data analysis using a paired t-test. The independent variable of this study is the difference in knowledge before and after counseling and the dependent variable is vulva hygiene practice. The initial test is given before reproductive health counseling about vulva hygiene, after which is given a final test. Questions are arranged based on checklist in answer option.

RESEARCH RESULTS

Table 1. Evaluation Test of Knowledge and Practice (N=17)

The stages	Pre				Post			
	Knowledge		Practice		Knowledge		Practice	
	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)
The first stage								
Good	6	35,30	8	47	6	35,30	10	58,82
Poor	11	64,70	9	53	11	64,70	7	41,18
The second stage								
Good	10	58.82	6	35.30	10	58,82	9	53
Poor	7	41,18	11	64,70	7	41.18	8	47
The third stage								
Good	10	58.82	12	70,59	12	70,59	14	82,35
Poor	7	41,18	5	29,41	5	29.41	3	27,65

Table 2. Differences of Knowledge and Practice From First Stage to Third Stage (N=17)

Treatment	Pre-post Knowledge	Pre-post Practice
First Stage	0,005	0,000
Second Stage	0,000	0,000
Third Stage	0,005	0,000

Table 3. Respondents Response of The Female Reproductive System (N=17)

Respondents Response	Frequency (f)	Percentage (%)
Leucorrhoea yellow	4	23,53
Leucorrhoea yellow and vulvar itching	1	5,88
Leucorrhoea and 7 days has a menstrual period	1	5,88
Itchy vagina during period and 7 days has a menstrual period	2	11,77
Vulvar itching	3	17,65
Don't have any problem with of the female reproductive system	6	35,29
Total	17	100

DISCUSSION

The results of the p value from the bivariate statistical test on knowledge are 0.005 (first stage), 0,000 (second stage) and 0.005 (third stage). This means that there are significant differences in knowledge before and after counseling. This study is similar to previous research, in grade VIII Junior High School (SMP) 2 in Sedayu Bantul. The results of his research show that health education effectively increases student knowledge (Ade, Wahyuningsih, & Haryani, 2016). In line with previous research, regarding the influence of counseling on the level of reproductive health knowledge in Sawji Christian High School students that there is a significant difference in the level of knowledge after counseling (Nydia, 2012). This study shows that there is a significant increase in women's knowledge about vulva hygiene before and after reproductive health counseling. Knowledge is the result of knowing, and this happens after someone feels a certain object (counseling). Without someone's knowledge, there is no basis for making decisions and determining

actions against the problem at hand (Srivastava & Chandra, 2017).

This result states that there is a significant difference in the level of knowledge and an increase in practice before and after counseling. This means that counseling can increase knowledge followed by changes in practice towards vulva hygiene. This shows that knowledge is an important domain in changing or forming that practice. This statement has been stated by previous study that knowledge is the result of knowing, and this occurs after people do sensing through the five human senses namely vision, hearing, touch, smell, taste. Most knowledge or cognitive is a domain that is very important in shaping one's actions (Budhathoki et al., 2018).

Based on previous study, showed that almost half had good knowledge (39.75%), half had sufficient knowledge (50%), and a small proportion of respondents had less knowledge (11.25%). Most are well behaved (85%) and a small proportion of respondents behave badly (15%) (Maidartati, 2016).

Menstrual hygiene: Knowledge and practice among adolescent school girls at Koawena, Ende district-Indonesia

Good knowledge can change a person's practice or group but has stages or processes in learning. Knowledge has stages of learning, namely memorizing, understanding, applying, analyzing, evaluating, and creating. Likewise with practice can be given a limit as an individual response to stimuli that come from within and outside the individual self. There are two kinds of practices, namely internal response and external response. There is a significant relationship between vaginal hygiene and vaginitis. stated that there is a relationship between health education with an increase in knowledge and attitudes to the hygiene vulva (Siabani, Charehjew, & Babakhani, 2018).

In this case, it states that knowledge is the result of someone's information to other people who do not know and become know, to shape the practice of a person or group for example through health counseling. Health education is the delivery of information or messages about health to convince a person or community group to be able to understand, know and be aware so that they can and can do recommendations related to health. Counseling was carried out in this study aimed at informing vulva hygiene care to the Koawena Junior High School SATAP students, to increase the knowledge they had done every month during menstruation. Even though it is still in the stage of memorization, at least students will remember the knowledge of vulva hygiene that has been informed to them three times in a row every week once. It was proven by no significant difference in knowledge before and after conducting counseling (Valizadeh, Assdollahi, Mirghafourvand, & Afsari, 2017).

In the treatment of three consecutive times (time series) the results of fluctuating knowledge are obtained. Where the students were familiar with vulva hygiene treatment after getting the first treatment or counseling but declined again in the second treatment pre-test. It was concluded that female students were still memorizing to remember or guess what was given the previous week. The dimension of cognitive processes in the new knowledge taxonomy is memorizing the first. Attract or guess back information stored in long-term memory. Remembering or guessing is the lowest level of cognitive process. This category

includes two kinds of the cognitive processes, recognizing and recalling (Ameade & Garti, 2016).

P-value of the bivariate statistical test on the practice were 0,000 (treatment I), 0,000 (treatment II) and 0,000 (treatment III). This means that there are significant differences in knowledge before and after counseling. These results indicate that there are differences in practice between before and after the study in the first, second and third treatments. Similar to the results of the previous study entitled the influence of health education on the practice of adolescents in treating reproductive organs. This means that there is the influence of counseling about health towards caring for reproductive organs (Ade et al., 2016)

Health education is a process of change in a person who is associated with achieving individual health goals and society. Health education cannot be given to someone by someone else, not a set of procedures that must be carried out or a product that must be achieved, but is a dynamically changing development process, in which a person accepts or rejects new information, attitudes, and practices, which related to the purpose of healthy living. Health education aims at the formation of healthy practice in individuals, families, groups, and communities by the concept of healthy living both physically, mentally and socially to reduce morbidity and mortality (Van Eijk et al., 2016).

Counseling conducted in this study is the process of changing the practice of young women from the uninitiated to know the care or cleanliness of the external genital organs or vulva hygiene so that they can prevent reproductive disorders or diseases. This change is still dynamic and is a passive practice because the early age of puberty is still unstable in thinking and acting. This can be proven by the results before and after counseling, increasing fluctuating practice. The practice to change is quite difficult if stimuli to change are not given routinely and continuously. Then there must be stimulation so that it has a fixed mindset, meaning that there is a place of education and guidance that can stimulate to pay attention to the cleanliness of their external genitalia or to do vulva hygiene. The container or tool for example by giving a card or practical guide to observing reproductive health from time to time or every

month, and if necessary to get married (Houston, Abraham, Huang, & D'Angelo, 2006).

The research results of the knowledge possessed by the Koawena SATAP junior high school students were limited to memorizing and remembering to produce a level of knowledge both before and after counseling. This stage of learning is still very low, and easy to forget or not recall. Likewise, the form of student practice is still passive, namely, practice that is still closed occurs in the individual and cannot be observed directly. This form of practice is easily extinct and tends to imitate or imitate other practices (Eram, 2017). Extension of this research expects knowledge or information provided by researchers as well as by health workers in reproductive health promotion programs to maintain their knowledge so that adolescents can properly treat vulva hygiene to prevent disruption or malignancy of the reproductive organs. Nowadays, there is an intense - incessant government program to prevent cervical cancer by early detection, namely examination of inspection visual tests with acetic acid (IVA). But it is wiser if since adolescence they have monitored their reproductive organs. This is learning from his own experience, so he can recognize the problem of his reproductive organs (Sharma, Sharma, Sharma, & Wavare, 2013).

Healthy reproduction needs care from the start, namely from menarche, with a level of understanding of good, correct, orderly, and sustainable care. Thus need monitoring tools that are the same as monitoring the growth and development of children that are encouraged by the government, namely from the fetus to pre-school and school age. When children become adolescents child health monitoring seems to be interrupted where only a small proportion touch such as immunization injections, and iron tablets. In the case of the main causes of women dying is due to diseases or disorders of reproductive organs, especially cervical cancer. Most sufferers who experience disorders of reproductive organs, especially cervical cancer, only realized when the condition was severe. One of the drivers of the high incidence of disorders or diseases of reproductive organs, especially cancer of the cervix, is due to the absence of an early monitoring process. Currently early detection through IVA for

women who have had sexual relations. But will lose control of women who are not married, especially in adolescents with premarital sexual practice (Yadav, Joshi, Poudel, & Pandeya, 2017). So to conduct early monitoring should be from the beginning of menarche by having a card or reproductive health book that teens will monitor their reproductive health themselves so that they can be prevented from reproductive organs disease, or if a disorder has occurred can take the solution early (Kaur, Kaur, & Kaur, 2018).

The researcher tried to make a simple card or book based on the results of qualitative data manifestations of reproductive health disorders. These results indicate that the reproductive health conditions of Koawena SATAP junior high school students are still low, due to poor vulva hygiene practice due to lack of information, or information obtained cut up, inaccurate. The majority of vulva hygiene practices during menstruation were in a good category, concluded that knowledge, attitude, peer support, and family support to effect the practice of menstrual hygiene (Ayu, Ningrum, & Indriyanti, 2018).

The practice of not using underwear that is not cotton causes the vulva to remain moist because it does not absorb sweat. Likewise with not using tissue or towels after splashing. This humid place will be a fertile place for breeding fungi or other bacteria. The presence of fungi and bacteria can rise to the inner reproductive organs causing an infection which causes very intense itching in the vulva area and the presence of many fluor albus. If fluorous Albus continues infection it will change color from white to yellow to even greenish-yellow. Based on practice that is not caring for vulva hygiene and the results of this study, researchers are motivated to take solutions to create a very simple book, which contains information on reproductive health care by carrying out vulva hygiene and monitoring the reproductive health of adolescents since menarche (Pamudji, Saraswati, Gialini, & Purwoko, 2019).

CONCLUSION

The results of this study can be summarized as follows that there is a significant difference in knowledge before and after conducting counseling on the first treatment and second treatment, but

there is difference in knowledge before and after the third counseling. There are significant practical differences before and after reproductive health counseling. There is a significant difference in the level of knowledge followed by an increase in practice before and after counseling with the results of the bivariate analysis of differences in knowledge levels before and after counseling on vulva hygiene practice.

REFERENCES

- Abid, M., Kumar, K., Ali, S., & Chandra, P. (2016). Assessment of Leucorrhoea diseases in female students. *Journal of Scientific and Innovative Research*, 5(4), 116–118.
- Ade S, E., Wahyuningsih, W., & Haryani, K. (2016). Pendidikan Kesehatan dengan Media Slide Efektif dalam Meningkatkan Pengetahuan tentang Perawatan Vulva Hygiene pada Siswi Kelas VIII SMP 2 Sedayu Bantul. *Jurnal Ners Dan Kebidanan Indonesia*, 4(1), 6. [https://doi.org/10.21927/jnki.2016.4\(1\).6-10](https://doi.org/10.21927/jnki.2016.4(1).6-10)
- Ameade, E. P. K., & Garti, H. A. (2016). Relationship between Female University Students' Knowledge on Menstruation and Their Menstrual Hygiene Practices: A Study in Tamale, Ghana. *Advances in Preventive Medicine*, 2016, 1–10. <https://doi.org/10.1155/2016/1056235>
- Ayu, M., Ningrum, C., & Indriyanti, D. R. (2018). The Influence of Knowledge, Attitude, Family Support and Peer Support on The Practice of Female Menstrual Hygiene. *Public Health Perspective Journal*, 3(2), 99–107.
- Budhathoki, S. S., Bhattachan, M., Castro-Sánchez, E., Sagtani, R. A., Rayamajhi, R. B., Rai, P., & Sharma, G. (2018). Menstrual hygiene management among women and adolescent girls in the aftermath of the earthquake in Nepal. *BMC Women's Health*, 18(1), 1–8. <https://doi.org/10.1186/s12905-018-0527-y>
- Eram, U. (2017). Review Article on Hygiene practices In Adolescent girls. *International Journal of Science, Engineering and Technology Research*, 6(1), 151–159.
- Houston, A. M., Abraham, A., Huang, Z., & D'Angelo, L. J. (2006). Knowledge, Attitudes, and Consequences of Menstrual Health in Urban Adolescent Females. *Journal of Pediatric and Adolescent Gynecology*, 19(4), 271–275. <https://doi.org/10.1016/j.jpag.2006.05.002>
- Kaur, R., Kaur, K., & Kaur, R. (2018). Menstrual Hygiene, Management, and Waste Disposal: Practices and Challenges Faced by Girls/Women of Developing Countries. *Journal of Environmental and Public Health*, 2018. <https://doi.org/10.1155/2018/1730964>
- Maidartati, D. (2016). Hubungan Pengetahuan Dengan Perilaku Vulva Hygiene Pada Saat Menstruasi Remaja Putri. IV(1), 50–57. <https://doi.org/23387246>
- National Population and Family Planning Board (BKKBN), Statistics Indonesia (BPS), Ministry of Health (Kemenkes), and I. (2017). *Demographic and Health Survey*. Jakarta.
- Pamudji, R., Saraswati, N. A., Gialini, W. U., & Purwoko, M. (2019). Hubungan Antara Cara Mencuci Vagina Dengan Timbulnya Vaginitis Pada Pelajar Sma. *Syifa' MEDIKA: Jurnal Kedokteran Dan Kesehatan*, 10(1), 72. <https://doi.org/10.32502/sm.v10i1.1887>
- Ramathuba, D. U. (2015). Menstrual knowledge and practices of female adolescents in Vhembe district, Limpopo Province, South Africa. *Curationis*, 38(1), 1–6. <https://doi.org/10.4102/curationis.v38i1.1551>
- Sharma, N., Sharma, P., Sharma, N., & Wavare, R. R. (2013). A cross sectional study of knowledge , attitude and practices of menstrual hygiene among medical students in north India. *The Journal of Phytopharmacology*, 2(5), 28–37.

Menstrual hygiene: Knowledge and practice among adolescent school girls at Koawena, Ende district-Indonesia

- Siabani, S., Charehjew, H., & Babakhani, M. (2018). Knowledge, Attitudes and Practices (KAP) Regarding Menstruation among School Girls in West of Iran: A Population Based Cross-Sectional Study. *International Journal of Pediatrics-Mashhad*, 6(8), 8075–8085. <https://doi.org/10.22038/ijp.2018.28633.2495>
- Srivastava, S., & Chandra, M. (2017). Study on the knowledge of school girls regarding menstrual and reproductive health and their perceptions about family life education program. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 6(2), 688. <https://doi.org/10.18203/2320-1770.ijrcog20170406>
- Valizadeh, S., Assdollahi, M., Mirghafourvand, M., & Afsari, A. (2017). Educating mothers and girls about knowledge and practices toward puberty hygiene in tabriz, iran: A randomized controlled clinical trial. *Iranian Red Crescent Medical Journal*, 19(2). <https://doi.org/10.5812/ircmj.28593>
- Van Eijk, A. M., Sivakami, M., Thakkar, M. B., Bauman, A., Laserson, K. F., Coates, S., & Phillips-Howard, P. A. (2016). Menstrual hygiene management among adolescent girls in India: A Systematic review and meta-analysis. *BMJ Open*, 6(3). <https://doi.org/10.1136/bmjopen-2015-010290>
- Yadav, R. N., Joshi, S., Poudel, R., & Pandeya, P. (2017). Knowledge , Attitude , and Practice on Menstrual Hygiene Management among School Adol. *J Nepal Health Res Counc*, 15(3), 212–216.