

The Effect of Education Through Booklet and Demonstration Toward Knowledge and Attitude of Elementary School Students About Menstruation in Bengkulu City

Rina Delfina¹ Tuti Anggriani Utama² Nurmukaromatis Saleha³
Nursing D3 Study Program FMIPA Bengkulu University

Abstract

Menarche is the arrival of the first menstruation in a woman. The age of the first menstrual menstruation occurs at the age of 12 to 14 years, the earlier the age of menstruation will affect the readiness of a woman in the face of menarche. Lack of knowledge about menarche will have an impact on the attitude of students in the face of the arrival of the first menstruation, so students who experience menarche earlier will show negative feelings towards the first menstruation. The purpose of this study was to see the effect of education through booklets and demonstrations on students' knowledge and attitudes about menstruation. This type of research is a quasi-experimental with a pretest-posttest with a control group. The samples in this study were students aged 10-12 years who had not experienced menstruation, a simple random sampling technique. The number of respondents 60 people consisted of 30 intervention groups who were given booklets and 30 control groups who were given demonstrations. The results showed there was an influence of education with the booklet in increasing students' knowledge and attitudes about menstruation with p -value < 0.05 . Suggestions for increasing students' knowledge and attitudes towards health information can be used by the booklet method because it is more interesting to learn and can be read over and over again.

Keywords: Booklet, Demonstration, Knowledge, Attitude, Student

DOI: 10.7176/RHSS/10-6-02

Publication date: March 31st 2020

1. Introduction

Adolescence is a transition from childhood to adulthood, which is characterized by rapid growth including reproductive function so that it affects the developmental changes, both from physical, mental and social roles. Adolescence starts from the age of 10 to 19 years.

Adolescent girls are part of adolescents who have different characteristics and growth from young men. Since a woman enters puberty, it is normal if every month she will experience menstruation (Meri M, 2008).

Health problems are more common in adolescent girls, especially reproductive health problems because adolescents do not have sufficient knowledge about the development and physical changes in their bodies (BKKBN, 2011). One of the reproductive health problems at puberty, which is characterized by physical changes such as the growth of fine hair on the genitals, changes in body weight, and breast enlargement and menstruation for the first time (Nuryaningsih, 2013).

The first menstruation (menarche) is a natural process that occurs in every woman as a sign that the reproductive organs are mature (Kusmiran, 2014). Menstruation is characterized by the occurrence of periodic bleeding from the uterus that starts around 14 days after ovulation periodically due to the release of the endometrial lining of the uterus that occurs every month within 3-5 days each month (Winkjosastro, 2009).

A teenage girl needs information about herself, so she is not surprised or scared when her first period arrives. The information provided must also be considered in stages and depth in advance, to appease, make them comfortable and following the level of maturity (Sinaga, 2017).

Epidemiological studies reveal that the age of menarche adolescent girls in various countries is not the same. In developed countries such as the United States in 2009, 95% of young women experience puberty with menarche at 12 years of age and an average age of 12.5 years accompanied by physical growth at menarche (Fidrin, 2014). The average age of menarche in Indonesia occurs at the age of 12 to 14 years by 76%, consisting of 22.7% occurring at the age of 12 years, 29.3% at the age of 13 years and 24.1% at the age of 14 years (IDHS, 2012).

Adolescent girls who experience menarche faster than their peers have a more negative reaction compared to adolescent girls who experience menarche slower than their peers (Humaira, 2011).

Feelings of confusion, anxiety, discomfort always envelop the feelings of a woman who experiences menstruation for the first time. First menstruation is a natural thing, which is certainly experienced by every normal woman and should not be feared. But this will get worse if the knowledge of adolescents about menstruation is very lacking.

The first menstruation that is not accompanied by providing clear and correct information will result in the emergence of pathological symptoms such as fear, anxiety, inner conflicts, dizziness, nausea, dysmenorrhea in the first menstruation, irregular menstruation and various other disorders in when the first menarche occurs, while for

physical problems that may arise from lack of knowledge that is the lack of personal hygiene so that it can be at risk for urinary tract infections (UTI) and cervical cancer (Proverawati, 2009). Menstruation requires strong adjustment, both positive and negative, namely the attitude of biological acceptance of undergoing female functions (Manuaba, 2009).

The use of booklet media with pictures and demonstrations is needed to clarify and broaden understanding to students. This media can be implemented by learning while playing. It is expected that by using media images in learning can attract and direct students' attention to concentrate on the content of the lesson. (Setiawati, 2015).

2. Research Methods

The design of this study was a quasi-experimental (pre-post test design with a control group). The design of this study used two groups of subjects namely the intervention group and the control group before pretest and posttest were conducted to measure the knowledge and attitudes of pre-menstrual students in the intervention group (O1) and the control group (O2). The results of the questionnaire were then compared.

The population and sample in this study were 60, grade 6 and 6 Elementary School students in Bengkulu City.

3. Research Result

Table 1
 Distribution of Respondents by Age

Characteristics	Intervention (n=30)	Control (n=30)	P Value
Age			
Mean	10,46	10,69	
Median	10	11	
SD	0,507	0,535	0,000
Min-Max	10 - 11	10 - 12	
CI for Mean 95%	10,28 – 10,66	10,50 – 10,90	

Table 1. shows that the average age of respondents in the intervention group was 10.46 years and the control group was 10.69 years.

Table 2
 Average Level of Knowledge before and after Education in the Intervention and Control Groups

Group	Variable	Mean	Median	SD	Min – max	95% CI for Mean	P Value
Intervention (n=31)	Before being given a booklet	31.50	33,00	15.699	4,00 10,00	25.64 – 37.36	
Control (n=31)	Before being given a demonstration	30.33	29.50	15.593	5,00 10,00	24.51 – 36.16	
							0,003
Intervention (n=31)	After being given a booklet	86.27	86.50	10.929	60,00 66,00	82.19 – 90.35	
Control (n=31)	After giving a demonstration	67.53	73.00	17.081	33,00 93,00	61.16 – 73.91	
							0,000

Table 2 shows that the average analysis of respondent's values before being given education for the intervention group was 31.50 with a standard deviation of 15.699 with 95% CI in the range of 25.64 to 37.36 and for the control group the results of an analysis of respondents' values were given before being given education is 30.33 with a standard deviation of 15,593 with 95% CI in the range of 24.51 to 36.16. Meanwhile, the results of the average analysis of respondent values after being given education to the intervention group were 86.27 with a standard deviation of 10.929 with 95% CI in the range of 82.19 to 90.35 and the results of the average analysis of the respondents' values after being given education in the control group were 67.53 with a standard deviation of 17.081 with 95 % CI is in the range 61.16 to 73.91.

Based on the equality test for the knowledge variable before being given treatment in the intervention and control groups which is equivalent to $p \text{ value} > 0.05$ and based on the two groups different tests for the knowledge variable in the intervention and control group after giving education it is obtained $p\text{-value} = 0,000$. From the results of this analysis, it can be concluded that there are significant differences in the level of knowledge in the intervention group (booklet) and the control group (demonstration) between before and after education about menstruation.

Table 3
 Differences in the Average Respondents' Knowledge Value About Menstruation After Providing Education
 Between Intervention And Control Groups

Group (n=60)	Knowledge				
	Mean	SD	SE	95% CI	P value
Intervention	38.70	1,802	0,453	1,802-	0,000
Control	22.30	1,767	0,453	3,616	

Table 3 shows the mean values between the intervention groups are higher than the control group. Statistical test results show the value of $p = 0.000 < 0.05$ then H_0 is rejected so it can be concluded that there is an effect of providing education through booklets on teenage knowledge about menstruation.

Table 4
 Differences in the Average Value of Respondents' Attitudes about Menstruation after Providing Education
 between Intervention and Control Groups

Group (n=60)	Attitude		
	Mean Rank	Sum of Ranks	P value
Intervention	36.37	1091.00	0,009
Control	24.63	739.00	

Table 4 shows the mean value between the intervention group is higher than the control group. The results of the analysis show the value of $p = 0.009 < 0.05$ then H_0 is rejected so it can be concluded that there is an effect of providing education through booklets on adolescent attitudes about menstruation.

The results showed differences in the average knowledge about menstruation between the intervention group (booklet) and the control group (demonstration) after being given education with a p -value < 0.05 , meaning that there was a significant difference between the intervention group (booklet) and the control group (demonstration) after being given education about menstruation to the knowledge of elementary school students in the city of Bengkulu.

4. Discussion

The results showed that the highest distribution of respondents was at the age of 11 years belonging to the group of early adolescents, where in theory the arrival of menarche at the age of 11-12 years. The results of this study are in line with the results of Indonesia's health demographic survey (IDHS, 2017) which says that the average age of menarche that occurs in Indonesia is 11-12 years. The results of this study are also in line with the opinion of Kartono (2007) which states that adolescent girls who reach the age of 11 to 16 years are adolescents who have entered puberty, namely changes in adolescent bodies, especially physical changes in adolescents, including menarche (first menstruation).

The knowledge that can be given to adolescents about menarche to reduce fears and fears about menarche is in the form of knowledge about the process of menstruation biologically, recognize the signs of menstruation, how to use sanitary napkins and how to maintain hygiene during menstruation, emotional support and psychological support (Aboyeji, 2005).

Based on the results of research (Syed Emdadul Haque, Mosiur Rahman, Kawashima Itsuko, Mahmuda Mutahara, Kayako Sakisaka, 2013) where the education program produced a significant increase in knowledge (51% to 82.4%), trust and practice (28.8% to 88.9%).

The results showed a greater understanding of the students who were given a booklet compared to students who were only given education by demonstration. This more understanding is because the booklet method is more effective and easier to convey information, according to the theory according to Kemm and Close in Aini (2010) booklets have several advantages namely; a. It can be learned at any time because the design is in the form of a book, b. Loads more relative information than posters. Meanwhile, according to Ewles in Aini (2010), media booklets have the following advantages; a. Clients can adjust from independent learning, b. Users can see the contents when relaxed, c. Information can be shared with family and friends, d. Easy to make, reproduce and repair and easy to adjust, e. Reducing the need to record, f. It can be made simpler with a relatively inexpensive cost, g. Durable, h. Broader tamping power, i. It can be directed to certain segments. The results of the study (Parastoo Abbasi et al., 2013) on the effects of e-learning and educational booklets on labor self-efficacy showed a significant difference.

Factors affecting the increase in student knowledge are influenced by the distance between the time of the intervention and the post-test because it is related to memory in storing information. The results of Keeley's research in Sprenger showed that the length of the interval would affect the strength of retention. Keeley states 54% of the material is remembered after 1 day, 35% of the material is remembered after 7 days, 21% of the material is remembered after 14 days, and 8% of the material is remembered after 21 days. This means that after 14 days, students forget almost 90% of the information that has been obtained. By using print media students tend to be

easier to understand about the information content because the information contained in the booklet is lightweight and can be re-studied.

The results also showed that there were significant differences in attitude levels in the intervention group (booklet) and control group (demonstration) between before and after menstruation education was given. This is because the media is one of the factors that influence one's attitude. Media is useful to generate interest in the target, stimulate the target to forward the message to others and facilitate the delivery of information. Media functions to facilitate someone in understanding information that is considered complicated. Besides, an increase in attitude is also caused by increased knowledge. This increase in knowledge and attitude is obtained from the learning process by utilizing all the senses, where 13% of the knowledge is obtained through the sense of hearing and 35-55% through the sense of hearing and sight. This is in line to provide a media booklet which is to produce increased knowledge that will affect attitudes change.

Knowledge or cognitive is a very important domain in shaping one's actions (overt behavior). Knowledge will help explain important aspects of life and be able to account for things that will happen (Notoadmojo, 2003) Knowledge derived from the reading process that can be received in the human brain is 10% of what is read, 20% of what seen, 30% of what was heard and from what process was seen and 50% of what was seen and heard. Therefore, if someone is given knowledge with the right media guidelines according to their age and mindset, it can arouse the interest in focusing on important objects, which in the end can quickly understand the knowledge they get (Budioro, 2007).

The results of this study indicate that student knowledge using booklets is higher than a demonstration because it is more understanding by re-reading the booklets that have been given.

The results also showed a change in the attitude of students towards menstruation after being given an intervention through a booklet, where students already have a positive attitude towards the arrival of menstruation for the first time in their lives; students begin to understand the changes that occur in him, becoming a productive woman. And have a supportive attitude towards the arrival of the first menstruation to themselves.

The results of this study are following the research of Syed Emdadul Haque, Mosiur Rahman, Kawashima Itsuko, Mahmuda Mutahara, Kayako Sakisaka (2013) about the effects of school-based education on menstrual health which showed a significant increase ($p < 0.001$) in knowledge scores compared to scores early. Also in line with Gumilar's research (2014) on the effect of health education on changes in the level of knowledge and attitudes of young women about handling dysmenorrhea which found that there are differences in the level of knowledge of adolescent girls after being given health education and also there are differences in attitudes of adolescent girls after being given health education where knowledge and attitude improved after being given health education. The results of the data analysis also show that with increasing knowledge of students, the attitude of students increasingly becomes positive.

The change in attitude by giving a booklet is higher because of a strong stimulus. By providing information about menstruation through media that is easily understood will increase student knowledge about it, then with that knowledge will raise their awareness, and ultimately will cause students to behave following the knowledge they have (Notoatmodjo, 2007).

5. Conclusion

- a. The average age of respondents in the intervention group was 10.46 years and the control group was 10.69 years.
- b. There is a significant difference in the level of knowledge in the intervention group (booklet) and control group (demonstration) between before and after the menstrual education is given.
- c. There is a significant difference in the attitude of the intervention group (booklet) and the control group (demonstration) between before and after being given education about menstruation.
- d. There is an influence of the booklet education method on student knowledge about menstruation
- e. There is an influence of the booklet method on students' attitudes about menstruation.

References

- Aboyeji. 2015. Jurnal Penelitian Peran Ibu Dalam Perubahan Psikologi Remaja Saat Mengalami Menarche. Universitas Diponegoro. Semarang.
- Syed Emdadul Haque, Mosiur Rahman, Kawashima Itsuko, Mahmuda Mutahara, Kayako Sakisaka (2014) : The effect of a school-based educational intervention on menstrual health: an intervention study among adolescent girls in Bangladesh. <https://bmjopen.bmj.com/content/4/7/e004607>
- Azwar, S. 2010. *Sikap Manusia Teori Dan Pengukurannya*. Yogyakarta: Pustaka Pelajar
- Badan Pusat Statistik. 2013. Survei Demografi dan Kesehatan Indonesia (SDKI) 2012. Jakarta
- Bharthi, H. P., BNYS, Murthy, S. N., ND, Babina, N., BNYS, Kadam, A., M.Sc, & Rao, M. R. (2012). Management of pelvic pain in primary dysmenorrhea using a hot hip-bath: A pilot study. *Alternative Therapies in Health and Medicine*, 18(1), 24-25. Retrieved from

- <https://search.proquest.com/docview/1030143993?accountid=25704>.
- Dawood. 2006. "Primary Dysmenorrhea : Advances in Pathogenesis and Management". Obstetrics and Gynaecology.
- Fajri,A., Khairani, M. 2011. Hubungan Antara Komunikasi Ibu-Anak dengan Kesiapan Menghadapi Menstruasi Pertama (menarche) pada Siswi SMP Muhammadiyah Banda Aceh.*Skripsi*. Program Studi Psikologi, Fakultas Kedokteran Universitas Syiah Kuala Banda Aceh.
- Fakhri, M., Hamzehgardeshi, Z., Hajikkhani Golchin, N.A., & Komili, A. (2012). Promoting menstrual health among Persian adolescent girls from low socioeconomic backgrounds: A quasi-eksperimental study. *BMC Public Health*, 12, 193. Doi: <https://bmcpublihealth.biomedcentral.com/articles/10.1186/1471-2458-12-193>.
- Manuaba, I. 2009. *Ilmu kebidanan, Penyakit Kandungan & Keluarga Berencana Untuk Pendidikan Bidan*. Jakarta, EGC.
- Munda, S.S., Wagey, F.W., Wantania, J. 2013. Hubungan antara imt dengan usia menarche pada siswi sd dan smp di kota manado. *Jurnal ilmiah kedokteran klinik*.
- Notoatmodjo, S. 2007. *Promosi Kesehatan dan Ilmu Perilaku*. Jakarta : Rineka Cipta
- Nursalam. 2010. Konsep dan penerapan metodologi penelitian ilmu keperawatan. Jakarta: Salemba medika.
- Parastoo Abbasi, Sakineh Mohammad-Alizadeh, 2018. *Comparing the effect of e-learning and educational booklet on the childbirth self-efficacy: a randomized controlled clinical trial*, Tabriz University of Medical Sciences, Tabriz Iran. The Journal of Maternal-Fetal & Neonatal Medicine. ORCID Icon<http://orcid.org/0000-0003-4785-9333>.
- Proverawati, Asfuah S., 2009. Buku Ajar Gizi untuk Kebidanan. Yogyakarta: Nuha Medika.
- Setiawati, S. E., 2015. Pengaruh Stres Terhadap Siklus Menstruasi. *J Majority*,4(1) : 94-98
- WHO. World Health Statistics 2015: World Health Organization.
- Wiknjosastro, H. 2009. *Ilmu Kebidanan*. Jakarta: Yayasan Bina Pustaka Sarwono Prawirohardjo
- Yang, M., Chen, X., Bo, L., Lao, L., Chen, J., Yu, S., . . . Liang, F. (2017). Moxibustion for pain relief in patients with primary dysmenorrhea: A randomized controlled trial. *PLoS One*, 12(2) doi:<http://dx.doi.org/10.1371/journal.pone.0170952>