

The Effectiveness of Using the Learning Module on Knowledge and Attitudes about *Dysmenorrhea* in Adolescents

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Abstract: Menstruation is periodic bleeding that occurs periodically due to the decay of the endometrial lining in the uterine wall. One of the menstrual disorders is dysmenorrhea, which is a sensation of cramping pain in the lower abdomen. Knowledge influences a person's behavior in the process of changing health behavior. This research was conducted at Junior high school 4 Pongtiku Makassar, which aims to determine the effectiveness of the use of learning modules on knowledge and attitudes about dysmenorrhea in adolescents. This type of research is a quasi-experimental design with a sample of 65 students. The results of this study indicate that there are differences in knowledge of adolescent girls before treatment (pre-test) with a percentage of 35.4%, after treatment (post-test) a percentage of 75.4%, Wilcoxon test results obtained p value 0,000 and there are differences in attitudes of young women before treatment (pre-test) with a percentage of 75.38%, after treatment (post-test) 92.31%, Wilcoxon test results obtained p value of 0.001 in subjects who were given health education through learning modules related to adolescent dysmenorrhea. It is hoped that the results of this study can serve as benchmarks for more information on dysmenorrhea and how to overcome them in order to increase early knowledge about adolescent menstrual health so that adolescents are ready to face and become reference material for further researchers who discuss similar themes.

Keywords: Knowledge, attitude, dysmenorrhea

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I. Introduction

Adolescence is a transitional period between childhood and adulthood. Teenagers at this stage have not reached mental and social maturity so adolescents have to face many conflicting emotional and social pressures. Adolescence consists of early adolescence (10-14 years), middle adolescence (14-17 years), and late adolescence (17-19 years). Teenagers are often expected to behave like adults, even though they are not ready in psychology. During this period conflicts often occur, because adolescents want to be free to follow their peers who are closely related to the period of searching for identity, while on the other hand, they are still dependent on parents (N Pawestri et al. 2013).

Susenas data in 2014 revealed that around 8.77% of adolescents complained about their health being disrupted in the past month, the proportion was higher in adolescent girls, the duration was around 63.76% 1-3 days, 26.85% 4-7 days, 9.38% more than 7 days so that the daily activities of adolescents are disrupted (Central Statistics Agency, 2015).

Reproductive health according to WHO is an intact physical, mental and social condition not only free from disease or disability in all aspects of the reproductive system, its functions, and processes (Purbono et al. 2015). Healthy reproductive health is a state in which humans can enjoy their sexual lives and able to carry out the functions and processes of reproduction in a healthy and safe manner (Mario et al. 2015).

Adolescent reproductive health problems namely when girls experience menstruation that can be at risk of anemia, sexual harassment if lack of knowledge can occur pregnancy outside marriage, unsafe abortion, infected with PMS including HIV/AIDS (Priyatni I, Sri Rahayu. 2016).

Menstruation is periodic bleeding that occurs periodically due to the decay of the endometrial lining in the uterine wall (Felicia et al. 2015). *Dysmenorrhea* is pain accompanied by cramps in the lower abdomen, complaints of pain felt by women usually during the menstrual period (Lowdermilk et al. 2013), Chudnoff et al. 2005).

Knowledge influences a person's behavior in the process of changing health behavior (Notoadmojo, S. 2012). The results of the research by Lestari et al, 2014 states that knowledge influences adolescent attitudes in the implementation of self-care during menstruation (Lestari et al. 2014, Sanjiwani IA. 2017).

The results of research conducted by Mario et al 2015 showed that adolescents with reproductive health problems were 68%. There was a significant relationship between adolescent reproductive health and knowledge ($p=0.022$), attitude ($p=0.002$) and peer communication ($p<0.001$), but there was no significant relationship to adolescent reproductive health in parental communication ($p=0.655$), teacher communication ($p = 0.833$), and sources of information ($p=0.532$). The factor most related to the reproductive health of young women in boarding schools is peer communication ($p=0.001$) (Mario et al. 2015).

This background, the authors are interested in conducting research on the effectiveness of the use of learning modules on knowledge and attitudes about dysmenorrhea in adolescents.

II. Methods

This type of research is a quasi-experimental design. This research method is used to look for the effect of certain treatments on others under controlled conditions (Sugiyono. 2016, Salina et al. 2019).

This research was conducted at SMPN 4 Pongtiku Makassar in February-March 2020. The research objective was to determine the effectiveness of the use of learning modules on knowledge and attitudes about *dysmenorrhea* in adolescents. The population in this study was all class III students of SMPN 4 Pongtiku Makassar as many as 200 students. Samples in this study amounted to 65 with sampling techniques using positive sampling, with observation instruments checklists and questionnaires. The research instrument used checklists and questionnaires.

III. Results

Table 1. Frequency Distribution of Student Knowledge Categories before Giving Learning Module about *Dysmenorrhoea* SMPN 4 Pongtiku Makassar

Knowledge Category	Before	
	Frequency	Percentage (%)
Less	14	21.5
Enough	28	43.1
Good	23	35.4
Total	65	100

Source: The results of the analysis, 2020

Based on Table 1, before the module giving activities, out of 65 respondents, there were 23 respondents (35.4%) had good knowledge, 28 respondents (43.1%) had sufficient knowledge and 14 respondents (21.5%) lacked knowledge related to *dysmenorrhoeal*.

Table 2. Frequency distribution of student knowledge categories after giving learning modules about *Dysmenorrhoea* in SMPN 4 Pongtiku Makassar

Knowledge Category	After	
	Frequency	Percentage (%)
Less	4	6.2
Enough	12	18.5
Good	49	75.4
Total	65	100

Source: The results of the analysis, 2020

Based on table 2 shows that after giving *Dysmenorrhoea* module there are 49 respondents (75.4%) who have good knowledge, 12 respondents (18.5%) have enough knowledge, 4 respondents (6.2%) have less knowledge about *Dysmenorrhoea*.

Table 3. Frequency distribution of student attitude categories before giving learning module about *dysmenorrhea* in SMPN 4 Pongtiku Makassar

Attitude Category	Before	
	Frequency	Percentage (%)
Negative	16	24.6
Positive	49	75.4
Total	65	100

Source: The results of the analysis, 2020

Table 3 shows that before the module giving activities, out of 65 respondents, there were 49 respondents (75.4%) had positive attitudes, and 16 respondents (24.6%) had negative attitudes related to *Dysmenorrhoea*.

Table 4. Frequency distribution of student attitude categories after the learning giving module on *dysmenorrhea* at SMPN 4 Pongtiku Makassar

Attitude Category	After	
	Frequency	Percentage (%)
Negative	5	7.7
Positive	60	92.3
Total	65	100

Source: The results of the analysis, 2020

Table 4 shows that after the module giving activities, out of 65 respondents, there were 60 respondents (92.3%) had a positive attitude, and 5 respondents (7.7%) had a negative attitude related to *dysmenorrhoea*.

Table 5. Effects of giving the *dysmenorrhoea* module on student knowledge at SMPN 4 Pongtiku Makassar

		After giving modules			Total	ρ value
		Less	Enough	Good		
Before giving the module	Less	4 (0,0%)	9 (75,0%)	1 (2,0%)	14 (21,5%)	0,000
	Enough	0 (0,0%)	3 (25,0%)	25 (51,0%)	28 (43,1%)	
	Good	0 (0,0%)	0 (0,0%)	23 (46,9%)	23 (35,4%)	
	Total	4 (100%)	12 (100%)	49 (100%)	65 (100%)	

Source: The results of the analysis, 2020

Table 5 shows that the *Wilcoxon* test results obtained the ρ value of 0,000. Because of the value of ρ value <0.05, it can be concluded that there are differences in student knowledge before and after the administration of the *dysmenorrhoea* module. That is, the giving of the *dysmenorrhoea* module has an effect on the knowledge of students related to *dysmenorrhoea*. Of the 49 respondents who had good knowledge after giving the module, there were 1 (one) respondent (2.0%) who previously had less knowledge. A total of 25 respondents (51.0%) who had sufficient knowledge before giving the module turned out well after giving the module. Overall, the number of female students with good knowledge increased from 23 respondents to 49 respondents after giving the module. This shows that the knowledge of students has increased after the administration of the *dysmenorrhoea* module.

Table 6. Effect of *dysmenorrhoea* module giving on student attitudes at SMPN 4 Pongtiku Makassar

		After giving the module		Total	ρ value
		Negative	Positive		
Before giving the module	Negative	5 (100,0%)	11 (18,3%)	16 (24,16%)	0,001
	Positive	0 (0,0%)	49 (81,7%)	49 (75,4%)	
	Total	5 (100%)	60 (100%)	65 (100%)	

Source: The results of the analysis, 2020

Based on the results of the statistical analysis in table 6 above, it is obtained that the Wilcoxon test results obtained p value of 0.001. Therefore, the value of the p value <0.05 , it can be concluded that there are differences in student attitudes before and after the administration of the *dysmenorrhoea* module. That is, the giving of the *dysmenorrhoea* module has an effect on the attitude of students related to *dysmenorrhoea*. Of the 60 respondents who had a positive attitude after giving the module, there were 11 respondents (18.3%) who previously had a negative attitude. Overall the number of students who have a positive attitude increased from 49 respondents to 60 respondents after the module. This shows that the attitude of students has increased after giving the *dysmenorrhoea* module.

IV. Discussion

Based on the results of the presentation of data that has been done above can be obtained some information that will discuss the differences in knowledge of teenage girls between before treatment 'pre-test' and after treatment 'post-test' given health education through learning modules related to adolescent *dysmenorrhoea*.

Teenagers are a period of individual life where psychological development occurs to find identity or self-identity. The most important event during puberty in adolescent girls is menstrual symptoms or menstruation which is a sign of biology of sexual maturity. This led to various events, namely hormonal, biological, and psychological reactions.

Menstruation can cause significant disturbances for women. Menstrual disorders that most often occur in most women are *dysmenorrhoea*. *Dysmenorrhoea* occurs due to excessive release of prostaglandins resulting in increased uterine contractions resulting in pain during menstruation.

The knowledge of young women about *dysmenorrhoea* is sometimes a little strange among them; so many young women do not know how to properly handle dysmenorrhoea. However, based on research that has been done by the writer on grade III students of SMP 4 Pontiku Makassar, it shows that before giving the learning module about *dysmenorrhoea* to students, the students' knowledge about *dysmenorrhoea* is quite good. From some students who already have good enough knowledge, it is possible because students have given knowledge or lessons about reproductive health from an early age and in this digital era also makes it easier for students to get information about *dysmenorrhoea*.

One of the *dysmenorrhoea* arising from teenage girls is due to their lack of knowledge about *dysmenorrhoea*. They will consider the situation difficult so they are not prepared for the situation. This causes anxiety and anxiety which results in a decrease in the pain threshold and ultimately makes *dysmenorrhoea* become more severe.

The lack of knowledge about *dysmenorrhoea* can be due to the lack of information sources. Knowledge of *dysmenorrhoea* given in schools is only obtained through biology subjects. The material taught is general in nature not discussing more deeply the problems that accompany the reproductive system.

Knowledge is very much related to education, whereas education is one of the basic human needs needed to develop oneself, the higher the education the easier it is to accept and develop knowledge and technology.

Respondents in this study were taken from third grade students of SMPN 4 Pongtiku Makassar, so the information obtained was the same. Sources of information can stimulate knowledge but in receiving information respondents have different perceptions so that it will affect the level of knowledge that only merely knows, understands or has a wrong perception. Mardiah Ainal, et al. 2015 research entitled Health Education in Enhancing Knowledge, Attitudes and Skills Families with hypertension state that there is an influence of education on knowledge with $p = 0.001 < \alpha 0.05$ (Mardiah Ainal, Asnawi, Hermansyah. 2015).

Health education about *dysmenorrhoea* is a learning effort for adolescents so that adolescents want to take action to maintain or overcome problems and improve their health. Changes or actions to maintain and improve health by the teacher are based on their knowledge and awareness through the learning process.

The differences in attitudes of teenage girl between before treatment 'pre-test' and after treatment 'post-test' are given health education through learning modules related to adolescent *dysmenorrhoea*.

Adolescents begin to experience changes in their reproductive organs. Like in adult women, adolescent girls begin to experience things related to the development of their reproductive organs. In this case, they begin to experience menstruation, namely the discharge of blood from the uterus through the vagina as a result of decay the inner lining of the uterus which contains blood vessels and unfertilized eggs.

Every woman has a menstrual experience that is different. Some women get menstruation without complaints, but not a few of those who get menstruation accompanied by complaints that cause discomfort in the form of *dysmenorrhoea* (Unsal A et al. 2010).

In general, women feel complaints in the form of pain or abdominal cramps before menstruation which can last up to 2-3 days, starting the day before starting menstruation. Abdominal pain during menstruation (dysmenorrhoea) felt by each woman is different, some are slightly disturbed but some are disturbed very disturbed to not be able to carry out daily activities and make him have to take a break even forced to be absent

from school/work. It requires responsive handling to overcome it. Handling is the behaviour or attitude of a human being towards the conditions they experience. According to Notoatmodjo behaviour is a response or reaction that arises in a person due to a stimulus or stimulation. Respond to a stimulus is influenced by several factors, namely from experience, environmental conditions, and socio-cultural factors. Then these conditions are known, perceived, believed so as to bring up a motivation to respond. This motivation will bring up the handling of a condition that is experienced by him (Notoadmojo S. 2007).

Adolescents in their position as the beginning of the human life cycle in preparing the reproductive processes that function well and health, which is related to the physical aspects of mental and social. Usually, adolescents who experience *dysmenorrhea* during menstruation, they tend to consume menstrual pain medications and reduce routine activities. These attitudes are sometimes obtained from the culture or the environment.

Menstrual pain or dysmenorrhoea is a characteristic of pain that occurs in the lower abdomen during menstruation, the pain spreads from the waist to the thighs. Dysmenorrhoea occurs due to unbalanced hormone progesterone in the blood and causes pain. *Dysmenorrhea* is also influenced by psychological factors in women. Pain during menstruation is the most common reproductive problem experienced by women or adolescents of all ages (Kusmiran E. 2011).

Usually, the behaviour of adolescents to reduce *dysmenorrhea* is to consume soft drinks that have a negative impact on health. The attitude is influenced by knowledge factors where knowledge has a major influence on behavioural development.

Teenagers who experience pain during menstruation are very disturbing, especially in the learning process at school that requires concentration so that teens usually rest in the UKS room, difficulties in daily activities, or even many who are permitted to go home. An understanding of the behaviour performed during menstruation is very necessary to encourage teenagers who experience menstrual disorders to know and take good behaviour about their reproductive problems such as cramps and pain.

The solution to this problem is to provide health promotion and also the provision of learning modules as a process to increase knowledge and behaviour change for young women in dealing with dysmenorrhoea. Behaviour taken to prevent, overcome and cure dysmenorrhoea is with regular exercise, adequate rest, balanced nutrition, and consumption of traditional drinks including acidic turmeric, saffron-colored rice, and ginger that function as pain relievers and facilitate menstruation (Leli, Rahmawati, and Atik, 2011).

That way it can be shown that attitude is the result of knowing someone in the face of a problem in order to get the right action. A good attitude is the result of good knowledge in dealing with a problem and vice versa.

V. Conclusion and Recommendation

Based on the results of research and analysis of data that has been done, the conclusion is that there is a significant difference in the knowledge and attitudes of girls before treatment 'pre-test' with a percentage of 35.4%, after treatment 'post-test' a percentage of 75.4%, test results Wilcoxon obtained p value 0,000 and there were differences in attitudes of young women before treatment 'pre-test' with a percentage of 75.38%, after treatment (post-test) 92.31%, *Wilcoxon* test results obtained p value 0.001 on subjects given health education through learning modules related to adolescent *dysmenorrhea*. Based on the conclusions that have been obtained, the suggestions in this study are expected to be the results of this study can be a benchmark for more information about disorders in menstruation, specifically in *dysmenorrhea* and how to overcome them, it is hoped that schools can improve all aspects of learning as a forum for health education in adolescents for the sake of enhancement n early knowledge about adolescent menstrual health so that adolescents are ready to face and it is hoped that the results of this study can be a reference material for future researchers who discuss similar themes.

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