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**| RESEARCH ARTICLE**

**The Effect of Health Education on Menstrual Hygiene Behavior in Adolescent Women in Modern Al-Izzah As'adiyah and SMAN 1 Tolai Regency in Parigi Moutong**

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**| ABSTRACT**

Personal hygiene during menstruation is an action to maintain health and cleanliness in the female area. Poor personal hygiene, especially in the genital area, is also a predisposing factor for cervical cancer. This study aims to analyze the effect of health education using audiovisual media on improving behaviour (knowledge, attitudes and actions) about menstrual hygiene in adolescent girls at Al-Izzah As'adiyah Islamic Boarding School and SMA Negeri 1 Tolai. Based on the results of the analysis showed that there were significant differences in knowledge (0.000), attitudes (0.000) and actions (0.000) before and after being given counselling in the intervention group. It is recommended to routinely and continue to do personal hygiene both during menstruation and not menstruating in order to provide information about reproductive health in class X, namely in biology (IPA) lessons.

**| KEYWORDS**

Audiovisual Media, PPT Slide, Knowledge, Attitude, Action

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**1. Introduction**

Adolescence is, often called the transition period, is a period of transition from children to adults which is marked by physical and psychological changes. One of the physical changes that occur is the maturation of the reproductive organs, which is marked by menstruation (Widyastuti, 2009)

Menstruation is the most important change that occurs in women during adolescence (Santina et al., 2013). Menstruation is a natural process, but if not managed properly, it can cause health problems (Shah et al., 2013). During menstruation, the reproductive organs become moist, and germs can easily enter the reproductive tract, making them very susceptible to infectious diseases (Kusmiran, 2012).

Reproductive health is a physical, mental and social condition that is not only free from disease or disability but all aspects related to the reproductive system itself, both in terms of function and process (Rejeki, 2009).

Based on WHO data in 2013, the prevalence of bacterial vaginosis in the world reaches 20% – 40%. The highest incidence of ISR in the world is in adolescents, namely 35% - 42%, while in adults, it is around 27% - 33%. The prevalence of reproductive tract infections in Indonesia in 2013 in adolescent girls and adult women was caused by bacterial vaginosis by 46%, and candida albicans 29% (WHO, 2013).

According to the WHO (World Health Organization), in 2016, it was estimated that 15 out of 20 young women had experienced vaginal discharge every year. The infection is caused by a lack of personal hygiene, especially vulvar hygiene during menstruation (Agra, 2016). A study on menstrual hygiene in women and girls in Egypt found that among ever-married women, 15.3% used

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disposable sanitary napkins, 42.1% used cotton, and 39.4% used sanitary cloth napkins as absorbent after washing them. In contrast, 25.2% of unmarried women used sanitary napkins by 50.5%, and 21% reused washable absorbent cloths. Only 3.2% of the two groups of women used pieces of cloth and discarded them after use (Ramaiah, 2016).

Efforts towards healthy reproduction must begin at least at the age of teenagers. Adolescents must be prepared with knowledge, attitudes, and actions to achieve healthy reproduction. Adolescent groups are a concern because their numbers are large and vulnerable and have a risk of disruption to reproductive health (Supatmi & Asta, 2015).

Personal hygiene during menstruation is an action to maintain health and cleanliness in the female area during menstruation. The impact that occurs if the personal hygiene behaviour is not carried out, among others, young women will not be able to fulfil the cleanliness of their reproductive organs, appearance and health during menstruation are not maintained, resulting in itching, and if not treated as a whole it will have an impact on infection with candidiasis, bacterial vagionis and trichomoniasis. If the infection is left untreated and is not completely treated, it will cause an infection that spreads to the internal reproductive organs (Prawirohardjo, 2005).

Based on the 2016 Indonesian Adolescent Reproductive Health Survey (SKRRI), nationally, adolescents who behave properly in hygiene are 21.3%. Meanwhile, according to the Indonesian Demographic Health Survey, adolescent girls' behaviour in maintaining menstrual hygiene is still poor, at 66.6%. The reason is the lack of knowledge and information about personal hygiene during menstruation. The prevalence of reproductive tract infections due to lack of hygiene in the genital organs is still quite high; the number of patients with reproductive tract infections in Indonesia caused by this candida fungus is 90-100 cases per 100,000 population per year. The incidence of candida infections that occur in the reproductive tract in adolescents (10–18 years) is 35%–42%, and young adults (18–22 years) are 27%–33% (Yanti et al., 2020).

Data compiled from the Central Statistics Agency (BPS) and the National Development Planning Agency (IBRA) in 2015 states that 63 million youth in Indonesia are at risk of engaging in unhealthy behaviour. For example, the lack of action to take care of the cleanliness of the reproductive organs when menstruating. Raise the incidence of infectious diseases that occur in the reproductive tract in adolescents (10-18 years), which is 35 to 42%, and young adults (18-22 years) by 27 to 33% (Pythagoras, 2017). Improper handwashing behaviour can trigger vaginal discharge in adolescents as much as 63% (Yanti et al., 2020).

The factor that can facilitate the occurrence of health behaviour in a person is knowledge such as personal hygiene behaviour in adolescent girls will be implemented if the teenager knows what the benefits of personal hygiene are (Notoadmojo, 2010)

This is in accordance with the research conducted (Pemiliana, 2019). SMA Etidlandia Medan has poor personal hygiene, where more respondents have less knowledge, namely 46.7%, good knowledge 13.3% and sufficient knowledge as much as 40%. The same research was conducted (Yusiana & Saputri, 2016) at SMAK St. Augustinus Kediri which respondents who have poor personal hygiene are 41.7%, and respondents who have sufficient behaviour are 58.3%. This shows that many young women do not understand how to keep their reproductive organs clean, especially during menstruation.

Based on initial observations, the researchers conducted brief interviews with several young women at the Al-Izzah As'adiyah Islamic Boarding School and SMA Negeri 1 Tolai; it was found that respondents said they did not know about Personal Hygiene during menstruation and also had never received health education about Personal Hygiene. During menstruation both at school and in the environment where they live due to the lack of health counselling related to Personal Hygiene during menstruation so that in the future, it is very risky to be exposed to various kinds of diseases in the reproductive organs and the lack of information they get from both parents and from the school and researchers take the location in both schools because the curriculum used is no different, namely using the 2013 curriculum.

Based on the description above, the researcher wants to conduct a study entitled "The Effect of Health Counseling on Menstrual Hygiene Behavior in Young Women at Al-Izzah As'adiyah Islamic Boarding School and Sman 1 Tolai In Parigi Moutong Regency". To find out the increase in knowledge, attitudes and actions of young women about Menstrual Hygiene before being given audiovisual and PowerPoint slides and after being given audiovisual media and PowerPoint slides.

## **2. Materials and Methods**

### **2.1 Research Location and Design**

This research was conducted at Al-Izzah As'adiyah Modern Islamic Boarding School and SMA Negeri 1 Tolai in Parigi Moutong Regency. The type of research used is quasi-experimental with The Nonrandomized Pre-test Post-test Control Group Design.

## 2.2 Population and Sample

The population is all young women at Al-Izzah As'adiyah Islamic Boarding School and SMA Negeri 1 Tolai who are already menstruating. The sampling technique in this study used non-probability sampling, namely consecutive sampling, so that the treatment group was obtained as many as 30 students of class X at Al-Izzah As'adiyah Islamic Boarding School Tolai, while in the control group, there were 30 students of class X in high school. Negeri 1 Tolai so that the total sample is 60 people.

## 2.3 Data Analysis

The counselling intervention was carried out only once a month, and then a post-test was given after the counselling. The data is processed using SPSS to determine the difference between the two variables. In this case, the bivariate test was conducted to determine the difference in the level of knowledge in the treatment group and the control group. The type of statistic used is a two-mean independent difference test.

## 3. Results

### 3.1 Sample Characteristics

**Table 1. Characteristics of Respondents in The Intervention and Control Groups During the Pre-Test in Parigi Moutong Regency In 2021**

Characteristics	Intervention		Control		Total	
	N	%	n	%	N	%
<b>Age</b>						
12-16 Years	30	100,0	30	100,0	60	100,0
<b>Total</b>	<b>30</b>	<b>100,0</b>	<b>30</b>	<b>100,0</b>	<b>60</b>	<b>100,0</b>
<b>Parental Education</b>						
SD	4	13,3	2	6,7	6	10,0
SMP	12	40,0	12	40,0	24	40,0
SMA	8	26,7	10	33,3	18	30,0
D3	0	0,0	1	3,3	1	1,7
Bachelor	6	20,0	5	16,7	11	18,3
<b>Total</b>	<b>30</b>	<b>100,0</b>	<b>30</b>	<b>100,0</b>	<b>60</b>	<b>100,0</b>

Source: Primary Data 2021

Table 1. The intervention group and the control group were 30 (100%). Based on the percentage of parental education, in the intervention and control groups, 14 (40.0%) mothers had education at the junior high school level.

**Table 2. Distribution of Differences in Average Knowledge of Respondents Before and After Intervention (Pre Test and Post Test 1) on audiovisual media and PowerPoint slides in Parigi Moutong Regency in 2021**

Variable	Group	Measurement	Mean	SD	N	p-value
Audiovisual Media	Intervention	Pre Test	5,83	1,341	30	0.000
		Post Test 1	8,70	1,643	30	
PPT Slide	Control	Pre Test	6,50	1,306	30	0.000
		Post Test 1	9,33	1,269	30	

Source: Primary Data 2021

The average knowledge in the intervention group before being given counselling using audiovisual media was 5.83 (SD = 1.341), and after being given counseling, it was 8.70 (SD = 1.643). While the average knowledge in the control group before being given counseling using Slide PowerPoint was 6.50 (SD = 1.306), and after counseling, it was 9.33 (SD = 1.269). The Wilcoxon test results showed a significant difference between the average knowledge before and after counseling in the intervention and control groups ( $p = 0.000 < 0.05$ ). So it can be concluded that the provision of audiovisual media counseling and PowerPoint slides can significantly increase young women's knowledge about menstrual hygiene.

**Table 3. Distribution of Average Differences in Respondents' Attitudes Before and After Intervention (Pre Test and Post Test 1) on audiovisual media and PowerPoint slides in Parigi Moutong Regency in 2021**

Variable	Group	Measurement	Mean	SD	N	p-value
Audiovisual Media	Intervention	Pre Test	5,83	1,341	30	0,000
		Post Test 1	8,67	2,057	30	
PPT Slide	Control	Pre Test	6,50	1,306	30	0,000
		Post Test 1	9,67	1,988	30	

Source: Primary Data 2021

The average attitude in the intervention group before being given counseling using audiovisual media was 5.83 (SD = 1.341), and after being given counseling, it was 8.67 (SD = 2.057). While the average attitude in the control group before being given counseling using Slide PowerPoint was 6.50 (SD = 1.306), and after counseling, it was 9.67 (SD = 1.988). The Wilcoxon test results showed a significant difference between the average attitudes before and after counseling in the intervention group and the control group ( $p = 0.000 < 0.05$ ). So it can be concluded that the provision of audiovisual media counseling and PowerPoint slides can significantly improve young women's attitudes regarding menstrual hygiene.

**Table 4. Distribution of Differences in Average Respondents' Actions Before and After Intervention (Pre Test and Post Test 1) on audiovisual media and PowerPoint slides in Parigi Moutong Regency in 2021**

Variable	Group	Measurement	Mean	SD	N	p-value
Audiovisual Media	Intervention	Pre Test	8,70	1,643	30	0,000
		Post Test 1	8,67	2,057	30	
PPT Slide	Control	Pre Test	9,33	1,269	30	0,000
		Post Test 1	9,67	1,988	30	

Source: Primary Data 2021

The average action in the intervention group before being given counseling using audiovisual media was 8.70 (SD = 1.643), and after being given counseling, it was 8.67 (SD = 2.057). Meanwhile, the average action in the control group before being given counseling using Slide PowerPoint was 9.33 (SD = 1.269), and after counseling, it was 9.67 (SD = 1.988). The Wilcoxon test results showed a significant difference between the average before and after counseling in the intervention group and the control group ( $p = 0.000 < 0.05$ ). So it can be concluded that the provision of audiovisual media counseling and PowerPoint slides can significantly improve the actions of young women regarding menstrual hygiene.

#### 4. Discussion

This study uses a quasi-experimental design (quasi-experimental) with the Nonrandomized Pre-test Post-test Control Group Design design, which was conducted on 60 respondents from two schools, namely Pondok Pesantren Modern Al-Izzah As'adiyah and SMA Negeri 1 Tolai. Determination of the groups and types of intervention received was done by non-probability sampling, namely consecutive sampling.

Hygiene during menstruation is a component of personal hygiene (personal hygiene which plays an important role in the status of a person's health behaviour, including avoiding disturbances in the function of the reproductive organs. Health education is the same as public health education), which is an activity or effort to convey health messages to the community, groups, or individuals. One of the health counseling is about personal hygiene during menstruation, with the hope that with this message, individuals can gain knowledge about better health.

This research is in line with the results of research conducted by (Izzati, Wisnatul, Agustina, 2014) in her thesis entitled "The Relationship of Knowledge with the Implementation of Personal Hygiene Genitalia During Menstruation in Class IX Teenage Girls at SMP Negeri 4 Bukit Tinggi in 2014". The results showed that less than half (42.9%) of class VIII students of SMP Negeri 4 Bukit Tinggi had less knowledge of the implementation of personal hygiene during menstruation, less than half (46.0%) of respondents who were not good at implementing personal hygiene. genitalia during menstruation.

Knowledge is the result of knowing and occurs after someone senses a certain object. This sensing occurs through the five human senses, namely the senses of sight, hearing, smell, taste and touch. Most of the human knowledge is obtained through eyes and ears (Notoadmojo, 2010).

Research conducted by Mohtar, 2014 (Dedi 2017) concluded that 56.4% of people have good knowledge, which is influenced by people's age, namely the average age of 28 years high school graduate.

Attitude is a reaction or response that is still closed from a person to a stimulus or object. One social psychologist stated that attitude is a readiness or willingness to act and not an implementation of certain motives (Notoatmodjo, 2014). Attitude measurement can be done directly or indirectly. You can directly ask how the opinion/statement of the respondent on an object. Indirectly, it can be done by asking hypothetical questions and then asking the respondents' opinions through a questionnaire (Dewi, 2017).

This research is in line with (Novianti & Putu, 2016) in her thesis entitled "The Relationship of Knowledge, Attitudes, and Actions with Personal Hygiene in Young Women at SMP Negeri Satap Bukit Asri, Buton Regency in 2016". The results showed that there was a significant relationship between knowledge (Value = 0.030), attitudes (Value = 0.009), and actions (Value = 0.003) of female students with menstrual personal hygiene. This means that knowledge and attitudes greatly affect a person's actions.

This is in accordance with the opinion (Azwar, 2013) that the formation of attitudes mainly occurs because of knowledge, education/training, personal experience, influence, culture, mass media, and emotions. The factor that plays an important role in changing the attitude of the respondents in this study is probably the reaction/response to the knowledge and information received by adolescents.

Action is an individual's response to a stimulus that has a specific frequency, duration and purpose, whether consciously or not (Dewi, 2017). An attitude is automatically manifested in action (overt behaviour). A supporting factor or an enabling condition is needed to realize an attitude into real action, including facilities (Notoatmodjo, 2014). Research conducted by (Zahra 2014) aims to determine the relationship between counseling about personal hygiene and the actions of young women during menstruation at Cut Nyak Dhien Langsa High School in 2014. The results showed that there was an average increase in knowledge, attitudes and actions before and after counseling. There was a difference in knowledge ( $p=0.0001$ ) and actions ( $p=0.0001$ ) of young women about personal hygiene before and after counseling. This shows that the counseling provided is quite effective in increasing students' knowledge.

According to (Kissanti 2009), the behaviour of maintaining the health of the reproductive organs in women begins with maintaining the cleanliness of the female organs. To maintain vaginal hygiene, we need to regularly wash the vulva (vaginal lips) carefully using clean water or a mild soap. The most important thing is to clean the sweat and bacteria around the lips of the vagina. And to accommodate menstrual blood, pads need to be changed about 4-5 times a day to avoid the entry of these bacteria into the vagina. If the cleanliness of the female reproductive organs is not maintained properly during menstruation, it can cause the growth of fungi or the rapid development of bacteria which can cause several problems such as vaginal discharge, itching, and other skin diseases

## 5. Conclusions and Suggestions

The results showed that there were significant differences in knowledge, attitudes and actions before and after counseling in both groups (pre-test and post-test). So it is recommended for students to routinely and continue to do personal hygiene both during menstruation and not menstruating in order to provide information about reproductive health in class X, namely in biology (IPA).

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