

The Correlation of Reproductive Knowledge with Personal Hygiene Behavior During Menstrual Period Among Fajar Hidayah Students Aceh Besar

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Abstract

Female students should have sufficient knowledge about maintaining the cleanliness of the reproductive system because it is closely related to reproductive health. This study aimed to determine the relationship between reproductive knowledge and personal hygiene behavior during menstrual period among female students at the Fajar Hidayah Integrated Boarding School, Blang Bintang, Aceh Besar Regency. A quantitative approach with correlational research was used in this research with a sample of 30 female students from the Middle School and High School at Fajar Hidayah Integrated Boarding School. Data collection techniques used were questionnaires and interviews. The results showed that the average value of reproductive knowledge was 49.97 (good enough) and the average value of personal hygiene behavior during this period was 54.42 (good enough). The results of the calculation of the correlation test obtained a correlation value of 0.90144 (very strong). The results of hypothesis testing showed that $t_{count} > t_{table}$ ($11.2 > 1.69$). Thus, H_a was accepted and H_0 was rejected, meaning that there is a relationship between reproductive knowledge and personal hygiene behavior during menstrual period among female students of Fajar Hidayah Integrated Boarding School, Blang Bintang, Aceh Besar Regency.

Keywords: Reproductive knowledge, hygiene behavior, period time.

Problem Statement

Based on an initial survey that has been conducted by the authors, female students at Fajar Hidayah Integrated Boarding School often feel uncomfortable in their feminine area during menstruation. In general, female students do not really understand how to take care of their reproductive organs. Commonly, female students at this boarding school have had menstruation for the first time. They are just aware that a girl has menstruation, so that they are still a bit confused about how to maintain personal hygiene during this period. Therefore, it is necessary to conduct research on the correlation of reproductive knowledge with personal hygiene behavior during the menstrual period among female students of Fajar Hidayah Integrated Boarding School in Aceh Besar. Through this research, it is expected that Fajar Hidayah female students will have sufficient knowledge about the importance of maintaining personal hygiene and reproductive organs, especially during menstrual period.

Research Objective

Based on the research background study above, the aim of this study is to determine the relationship between reproductive knowledge and personal hygiene behavior during menstrual period among female students at the Fajar Hidayah Integrated Boarding School, Blang Bintang, Aceh

Besar Regency.

Research Question

The following is the research question:
 Is there a relationship between reproductive knowledge and personal hygiene behavior among female students of Fajar Hidayah integrated boarding school during menstrual period?

Literature Review

Knowledge is what an individual gets after he or she is able to sense or understand a certain object. The sense develops through observation using five human senses, although most human knowledge is obtained from the eyes and ears (Notoatmojo, 2018, p. 139). According to Nurhayati (2014), reproductive health education is really needed for future development to strengthen reproductive health education in personal and social lives; at the same time, religious values should be taught as the most important foundation for Indonesian teenagers to understand applicable norms and prevent them from negative behavior (Kemenkes RI, 2017).

In line with this, Proverawati & Maisaroh (2019) stated that lack of maintaining the cleanliness of the feminine area during menstrual period is one of the causes of cervical cancer. It is estimated that 630 million women worldwide suffer from cervical cancer. At least 600 women die all over the world because of cervical cancer. Meanwhile, in Indonesia, around 40 to 45 new cases of cervical cancer and 20 women die every day due to cervical cancer.

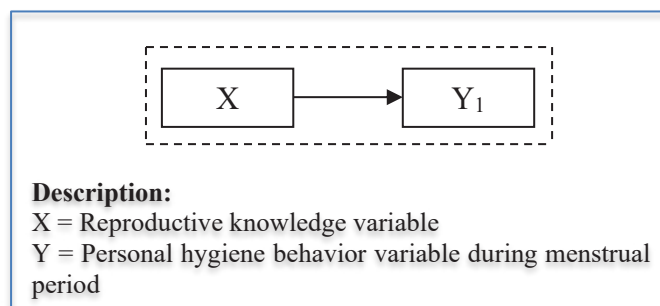
Furthermore, Hasanah (2016) argued that reproductive health in Indonesia is still a quite big problem if seen from data on reproductive health components; one of which is adolescent reproductive health. Reproductive problems in adolescents will affect the problems of malnutrition, delayed growth, diseases and stress.

Methodology

Research Design

The approach used in this study was a quantitative with type of correlational test. The researchers intended to examine the relationship between reproductive knowledge and personal hygiene behavior during the menstrual period among female students of Fajar Hidayah Integrated Boarding School. This research included 2 variables, namely reproductive knowledge (X) and personal hygiene behavior during period time (Y). The basic assumption of this research is that variable X is related to variable Y. The form of the variable in question can be described as follows:

Diagram 1



Sample

In this study, the sample was selected using a total sampling technique, consisting of female students

at Fajar Hidayah Integrated Boarding School, Blang Bintang District, Aceh Besar Regency, totalling 30 female students from the middle and high school. The reason that the researchers used the total sampling technique was because the population is small or less than 100 people. According to Sugiyono (2018), total sampling technique is the technique in which the total sample is the same as the total population. Thus, the total sample in this research was 30 female students at Fajar Hidayah Integrated Boarding School from the Middle and High School.

Data Collection and Data Analysis

Two instruments used to collect data were questionnaires and interviews. Questionnaires were given to 30 female students containing the questions about reproductive knowledge and hygiene behavior during period time. The questionnaires regarding reproductive knowledge contained 20 closed-type questions through assessment provisions that if they are correct, they will be given a score of (3); if approximately correct, they will be given a score of (2); and if the answer is incorrect, they will be given a score of (1). Furthermore, the personal hygiene behavior questionnaire during period time is also provided in a close form, with 20 statement items arranged in Likert scale model. The meaning of close form or close questionnaire is that respondents only had to choose the alternative answers provided. The alternative answers are as follows: strongly agree with a score of 4, agree with a score of 3, disagree with a score of 2 and finally strongly disagree with a score of 1. Meanwhile, the interviews were developed by the researchers to obtain information from the sample/participants related to personal hygiene behavior during period time. Interviews were conducted for 2 teachers and 5 female students from Fajar Hidayah Integrated Boarding School Middle School and High School who were taken at random.

The data analysis used product moment correlation test and hypothesis testing. Product moment correlation test formulate as follow:

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N \sum X^2 - (\sum X)^2\} \{N \sum Y^2 - (\sum Y)^2\}}}$$

Description:

X = Reproductive knowledge questionnaire

Y = Female students' hygiene behavior questionnaire

N = Number of samples

Rxy = Product Moment Correlation Coefficient

Hypothesis testing was used to assess whether the hypothesis proposed in this research would be accepted or not. This hypothesis testing was calculated using the t-test formula, namely:

$$t = r \sqrt{\frac{n - 2}{1 - r^2}}$$

Results

The following are the results of data distribution between reproductive knowledge instruments with personal hygiene behavior during menstrual period among female students at Fajar Hidayah boarding school. The results were presented in Table 1.

Table 1
Results of Reproductive Knowledge with Personal Hygiene Behavior

Respondent	X (Knowledge)	Y (Behavior)	X ²	Y ²	X.Y
Respondent 1	48	50	2304	2500	2400
Respondent 2	51	53	2601	2809	2703
Respondent 3	44	46	1936	2116	2024
Respondent 4	46	50	2116	2500	2300
Respondent 5	46	47	2116	2209	2162
Respondent 6	46	48	2116	2304	2208
Respondent 7	48	50	2304	2500	2400
Respondent 8	50	52	2500	2704	2600
Respondent 9	48	53	2304	2809	2544
Respondent 10	47	50	2209	2500	2350
Respondent 11	50	54	2500	2916	2700
Respondent 12	52	56	2704	3136	2912
Respondent 13	55	60	3025	3600	3300
Respondent 14	55	62	3025	3844	3410
Respondent 15	48	52	2304	2704	2496
Respondent 16	46	48	2116	2304	2208
Respondent 17	47	51	2209	2601	2397
Respondent 18	53	61	2809	3721	3233
Respondent 19	51	59	2601	3481	3009
Respondent 20	51	60	2601	3600	3060
Respondent 21	52	56	2704	3136	2912
Respondent 22	55	61	3025	3721	3355
Respondent 23	51	54	2601	2916	2754
Respondent 24	50	60	2500	3600	3000
Respondent 25	49	53	2401	2809	2597
Respondent 26	51	59	2601	3481	3009
Respondent 27	50	55	2500	3025	2750
Respondent 28	51	55	2601	3025	2805
Respondent 29	54	59	2916	3481	3186
Respondent 30	51	53	2601	2809	2703
Respondent 31	53	60	2809	3600	3180
Total	1549	1687	77659	92461	84667
Average	49.97	54.42			

Source: Data research of 2021

From the table, it can be seen the highest value for reproductive knowledge is 55 and the lowest value is 44 with a total of 1549 while the average value is 49.97 (quite good). Meanwhile, the highest score for personal hygiene behavior during period time is 62 and the lowest score is 46 with a total of 1687 and the average score of 54.42 (quite good). This is in accordance with the opinion expressed by Ridwan (2016) that the category assessment measurements between 41%-60% can be categorized as "fairly good". Furthermore, to find out the correlation or relationship between reproductive knowledge and personal hygiene behavior during period time in female students, also provided in Table 1, that is the X², Y², and X.Y scores. In Table 1, Y² scores are higher than X² scores for all participants. Therefore, the averages between X² and Y² reached different scores. There are a total X² as much as 77659 and a total Y² as much as 92461.

After data tabulation process on the Table 1 and then the averages of all scores processing by the correlation product moment that formulate in the following:

Figure 1. Data processing by the Correlation product moment formulation

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N \sum X^2 - (\sum X)^2\} \{N \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{xy} = \frac{31 \times 84667 - (1549) \times (1687)}{\sqrt{\{(31 \times 77659) - (1549)^2\} \{(31 \times 92461) - (1687)^2\}}}$$

$$r_{xy} = \frac{2624677 - 2613163}{\sqrt{\{2407429 - 2399401\} \{2866291 - 2845969\}}}$$

$$r_{xy} = \frac{11514}{\sqrt{(8028)(20322)}}$$

$$r_{xy} = \frac{11514}{\sqrt{163145016}}$$

$$r_{xy} = \frac{11514}{12772,82}$$

$$r = 0,90144$$

Based on the results that have been calculated, the relationship between the large and small correlation coefficients between reproductive knowledge and personal hygiene behavior of female students Fajar Hidayah determined by the correlation assessment criteria in the following table:

Table 2
Assesment Criteria

Coefficient Interval	Level of Correlation
0.00 – 0.199	Very low
0.20 – 0.399	Low
0.40 – 0.599	Medium
0.60 – 0.799	Strong
0.80 – 1.000	Very strong

The number of results in correlation formulation above show that correlation coefficient (r) value equal to 0.90144. It means that the coefficient interval value is between 0.80 – 1,000, indicating a "Very Strong" criteria between reproductive knowledge of reproduction and personal hygiene behavior. Thus, the t-test distribution is using to proven the hypothesis, which describe as follows:

$$t = r \sqrt{\frac{n - 2}{1 - r^2}}$$

$$t = 0,90144 \sqrt{\frac{31 - 2}{1 - 0,8126}}$$

$$t = 0,90144 \sqrt{\frac{29}{0,1874}}$$

$$t = 11,21375$$

Table 3
The number of results

Degrees of freedom	T count	T table α (0,05)	Description
Db = n-1 = 31-1 = 30	11,21375	1.69726	H _a : is accepted

Discussion, Suggestion, and Solution

The result of the t-test for the relationship between reproductive knowledge and personal hygiene behavior during the menstrual period of female students at Fajar Hidayah Integrated Boarding School was 11.21375. Compared to the score of t-table, the score of t-test at $n = 30$ and a significance level of 0.05 was 1.69726. In other words, $t\text{-count} > t\text{-table}$ ($11.21375 > 1.69726$). Therefore, H_a is accepted and H_0 is rejected. This indicates that there is a relationship between reproductive knowledge and personal hygiene behavior during the menstrual period among female students at Fajar Hidayah Integrated Boarding School. In other words, many of the female students at Fajar Hidayah Integrated Boarding School have good knowledge of reproductive health, which has a positive impact on their personal hygiene behaviors.

Further research is needed at the same school or the other school to figure out the correlation between the health of the reproductive system and personal hygiene, and the results can be used as a reference to provide health education for students. Female students, in particular, must have an awareness of their reproductive system to reduce the risks of cervical cancer for women. This awareness can help them develop personal hygiene behaviors. Future researchers can also add the other variables, such as cultural, health facilities, resources, and social support to encourage personal hygiene behavior during menstrual period among young women.

Conclusion

The average value of between reproductive knowledge and personal hygiene behavior during menstrual period indicates that the score of personal hygiene behavior is higher than reproductive knowledge. This shows that there is a correlation between two variables in this study. The assessment measurement falls between 41%-60%, which can be categorized as "fairly good".

The results of hypothesis testing shows that $t\text{-count} > t\text{-table}$ ($11.21375 > 2.04227$). It means that reproductive knowledge and personal hygiene behavior during menstrual period has a positive relationship, whereas the results of the correlation test calculation shows a correlation value of 0.90144 (very strong). As a result, H_a is accepted and H_0 is rejected, suggesting that there is a relationship between reproductive knowledge and personal hygiene behavior during period time among female students at Fajar Hidayah Integrated Boarding School, Blang Bintang, Aceh Besar Regency.

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