



The Influence of Pocket Book Media ("Know & Glow") on Menstrual Hygiene Knowledge of Female Students at Al-Munawaroh Islamic Boarding School, Batang Regency

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ABSTRACT

However, female students at Islamic boarding schools still face limited information and access to education about menstrual health. This study aimed to determine the effect of the "Know & Glow" pocket book on menstrual hygiene knowledge among female students at Al-Munawaroh Islamic Boarding School in Batang Regency. The results showed an increase in the students' knowledge scores after the intervention, which included the "Know & Glow" pocket book, with a p-value of 0.000 ($p < 0.05$). These results indicate that the pocket book can effectively improve female students' knowledge about menstrual hygiene. It can be concluded that the "Know & Glow" pocket book has a significant effect on improving menstrual hygiene knowledge.

INTRODUCTION

Menstrual hygiene is an important issue related to education, dignity, and privacy of adolescent girls and adult women in Indonesia. Women must be able to use clean sanitary pads, change them as frequently as necessary during menstruation, have access to proper disposal facilities, and be able to access toilets, soap, and water to clean themselves in comfortable conditions with adequate privacy. According to UNICEF, good menstrual hygiene management (MHM) is essential for maintaining women's reproductive health. Therefore, it is very important for adolescents to receive proper education so they can protect their reproductive health.

Menstruation is a natural physiological process experienced by every woman as part of the reproductive system. However, in many social and cultural contexts, menstruation is still considered a taboo subject that is not openly discussed. Based on the phenomenon that continues to persist, there is a need to start addressing menstruation and how to maintain hygiene during menstruation within adolescent education. In fact, good understanding of MHM is crucial to safeguarding reproductive health and preventing reproductive tract infections.

In Central Java Province, 4,300 cases of reproductive health problems—specifically cervical cancer—were reported in 2019, accounting for 5.7% of women of reproductive age between 30 and 50 years old. During menstruation, blood vessels in the uterus are particularly vulnerable to infection, making genital hygiene critically important since bacteria can easily enter and cause diseases of the female reproductive tract. Cervical cancer, commonly known as uterine cancer, refers to the abnormal growth of cells in the cervix. Several risk factors contribute to cervical cancer, including frequent changes of sexual partners, first sexual intercourse before the age of 18, smoking habits among women, being sexually active during productive age, oral contraceptive use, multiple pregnancies, and poor genital personal hygiene.

Findings also revealed that many female students (*santriwati*) still lack awareness of personal hygiene and knowledge regarding the importance of consuming nutritious foods, choosing the right sanitary pads during menstruation, how often to change pads, and the proper way to clean themselves. Therefore, it is important to conduct research that provides comprehensive insights into menstrual hygiene practices and understanding among *santriwati*. Adolescent girls, in particular, often report itching in the external genital area. Subconsciously, they may scratch excessively, which can cause wounds that sometimes bleed.

Studies have found that female students in Islamic boarding schools (*pesantren*) often face difficulties in obtaining accurate knowledge about menstruation and menstrual hygiene. This indicates the need for effective interventions to improve their knowledge and awareness. Thus, an appropriate educational approach is required to meet the needs of students in *pesantren*. Adolescence is a transitional stage toward adulthood, and menstruation is one of its earliest markers.

Pocket books do not require electronic devices or internet connections, making them particularly suitable for pesantren environments that may have limited technological infrastructure. In addition, pocket books can be designed with illustrations and language aligned with local and religious values, making them easier for santriwati to accept and understand.

LITERATURE REVIEW

Menstrual Hygiene

Menstrual hygiene refers to the practice of maintaining cleanliness and health of the body and reproductive organs during menstruation. These practices include using clean sanitary pads, changing them regularly, and keeping the genital area clean. Menstrual hygiene among adolescent girls is not only about physical cleanliness but also involves educational, psychological, social, and environmental aspects.

Health Education Media

According to Notoatmodjo, health education media are tools that support the delivery of health information so that it can be more easily received and understood by the intended audience. One effective print medium for adolescent girls is the pocket book, a small-sized printed booklet containing concise and engaging information. Arsyad argues that educational media such as pocket books can improve the effectiveness of material delivery because they are easy to carry, can be reread, and are suitable for both individual and group learning. Designed with simple language and attractive illustrations, pocket books facilitate comprehension. They can be used as alternative educational media in health promotion efforts due to their portability, appeal, innovation, and informative nature – making them highly relevant for adolescents.

Adolescent Reproductive Health

Reproductive health is a condition in which adolescent girls are particularly vulnerable to reproductive health problems due to limited access to accurate information—especially in pesantren environments where menstruation is still considered a taboo topic. According to the National Population and Family Planning Board (BKKBN), reproductive health is not merely the absence of medical conditions but refers to a state of complete physical, mental, and social well-being related to the reproductive system, its functions, and processes.

Theoretical Framework of the Research

The theoretical framework in this research refers to educational communication theory.

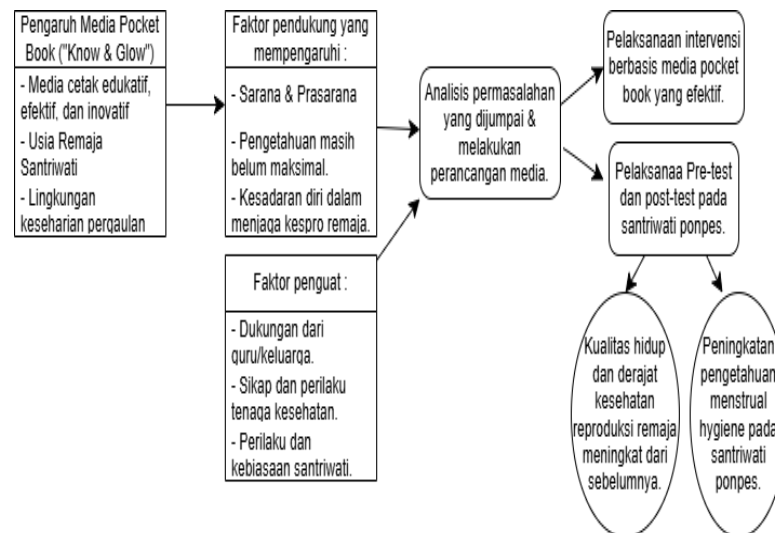


Figure. Research Theoretical Framework

Cognitive learning theory. Pocket books, as a form of printed media, serve as a learning aid that effectively conveys information about menstrual hygiene to adolescent girls.

Educational communication theory emphasizes the importance of media as a message conveyor that influences understanding. Meanwhile, cognitive theory (Piaget and Bruner) states that knowledge is acquired through the process of internalizing information tailored to an individual's stage of cognitive development.

The use of pocket books, which are attractive, simple, and age-appropriate for female students, is expected to enhance their understanding of the importance of maintaining hygiene during menstruation..

METHODOLOGY

This research approach employed a quasi-experimental approach, meaning it was not a pure experiment but instead used a knowledge-enhancing technique using a one-group pretest and posttest design, or a treatment design, where the same sample group receives the same treatment. This design lacked a control group, but instead used a one-group pretest and posttest design, which was a measurement experiment.

The female students' knowledge of reproductive health before and after treatment included information about the importance of maintaining reproductive health for adolescents, especially women.

RESEARCH RESULTS

Table: Distribution of Adolescent Knowledge Levels at Al-Munawaroh Islamic Boarding School, Batang Regency, 2025

Knowledge	F	%
Good	9	30,1
Fair	13	17,8
Poor	16	52,1
Amount	38	100

Source: Primary Data, 2025

The results of Table 4.3 show that the majority of respondents had good knowledge (9 respondents) (30.1%), poor knowledge (16 respondents) (52.1%), and a minority of respondents had sufficient knowledge (13 respondents) (17.8%).

Table: Respondent Characteristics

characteristics	Amount	%
Year		
14 Year	9	24,3%
16 Year	12	38,6%
17 Year	10	27,1%
18 Year	7	10,0%

Menarche Age		
12 Year	2	2,9%
13 Year	13	35,7%
14 Year	15	55,7%
15 Year	8	5,7%
Information		
Once	17	28,9%
Never	21	30,1%

The table above shows that the majority of respondents were 12 (38.6%) aged 1-6. Teenagers aged 1-4 (55.7%) were 15. Seventeen (28.9%) had received information about menstrual hygiene during menstruation, while 21 (30.1%) had never received information about menstrual hygiene during menstruation.

Knowled ge Level	<u>Before Action</u>		<u>After Action</u>	
	n	%	n	%
Not enough	16	44,3%	9	12,1%
Enough	13	42,9%	13	17,1%
Good	9	14,9%	16	71,9%
Amount	38	100%	38	100%

The table above shows that the knowledge of female students at the Al-Munawaroh Islamic Boarding School in Batang Regency regarding menstrual hygiene during menstruation before the intervention education with the Know & Glow pocket book was implemented included a level of knowledge that was lacking for 16 students (44.3%), a level of knowledge that was sufficient for 13 students (42%), and a level of knowledge that was good for 9 students (14.9%). Then, after the intervention using the pocket book media, there was an increase in the level of knowledge of female students who had menstrual hygiene knowledge. There were 9 students with indicators that were lacking (12.1%), sufficient for 13 students (17.1%), and good with an increase for 16 students (71.9%).

Table 4 Normality Test Results Test Statistics^a

		Knowledge	Media
	Absolute	,414	,414
Most Extreme Differences	Positive	,414	,414
	Negative	,000	,000
Kolmogorov-Smirnov Z		2,451	2,451
Asymp. Sig. (2-tailed)		,000	,000

a. Grouping Variable: Kriteria

Normality Test

The normality test was conducted to determine whether the distribution of the data was normal or not. The normality test is a fundamental requirement in regression model analysis that must be fulfilled, as normally distributed data are considered representative of a population. The results of the normality test on the knowledge and media variables using the Kolmogorov-Smirnov test showed an Asymp. Sig. value of 0.000, which is smaller than 0.05. This indicates that the data distribution is not normal.

The characteristics of female students (santriwati) at Pondok Pesantren Al-Munawaroh, Klidang Lor Village, Batang Regency, are as follows: 40% were aged 12–15 years, and 60% were aged 16–18 years. These data were obtained from the internal records of the Al-Munawaroh Islamic Boarding School in Klidang Lor Village, Batang Regency. In terms of educational background, 30% had elementary education, 50% junior high school education, and 20% senior high school education. The data also show that 70% of students came from Batang Regency, 20% from other regencies in Central Java, and 10% from outside Central Java. Regarding family economic status, 40% were from low-income households, 50% from middle-income, and 10% from high-income households. Initial knowledge about menstrual hygiene was categorized as high (25%), moderate

(50%), and low (25%). Interest in reproductive health education was reported as follows: 60% very interested, 30% interested, and 10% not interested.

Conclusions and Recommendations

The characteristics of respondents at Pondok Pesantren Al-Munawaroh, Klidang Lor Village, Batang Regency in 2025 showed that the majority were female students aged 14–18 years. Although Al-Munawaroh also has a special boarding school for male students, this study focused on female students aged 14–20 years.

The findings indicate that the knowledge of adolescent girls regarding reproductive health at Pondok Pesantren Al-Munawaroh, Klidang Lor Village, Batang Regency in 2025 was still limited. However, after the provision of educational media in the form of the pocket book "*Know & Glow*", many students demonstrated an improvement in their knowledge, even though some still had limited understanding. The use of pocket books as a health promotion intervention was effective in increasing awareness and knowledge of reproductive health among the students.

It is expected that this research will contribute to enhancing researchers' understanding of efforts to maintain adolescent reproductive health. Furthermore, the findings can serve as a reference for adolescents to increase their knowledge and awareness about reproductive health.

For schools and educational institutions, it is recommended to organize reproductive health counseling sessions at least once every two weeks, with more in-depth discussions tailored to the needs of adolescents.

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