

THE EFFECTIVENESS OF HEALTH EDUCATION POCKETBOOKS IN INCREASING KNOWLEDGE TEENAGERS ABOUT SCABIES IN DAYAH MADRASATUL QURAN

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Abstract:

Scabies is an infectious skin disease that is still a public health problem, especially in the pesantren or ayah environment, where the prevalence of cases is quite high due to residential density and low knowledge about disease prevention. Rapid transmission and psychosocial impact on adolescents demand effective educational efforts. The health education pocket book was chosen as an alternative learning medium that is practical and easily accessible for students in Dayah Madrasatul Quran. This study aims to determine the effectiveness of the use of health education pocket books in increasing adolescents' knowledge about skabies in Dayah Madrasatul Quran. The study used a pre-experimental design with a one-group pretest-posttest. The respondents were teenagers at Dayah Madrasatul Quran who were selected using a total sampling technique with a total of 45 respondents. Data were collected through a knowledge questionnaire before and after the intervention using health education pocketbooks on scabies. The results of the study using the Wilcoxon test showed a significance value of p-value of 0.000 ($p < 0.05$), then H_0 was rejected and H_a was accepted, which means that there was a significant increase in the level of adolescent knowledge about scabies after being given an intervention in the form of a health education pocket book. Pocket books have proven to be effective as an educational medium that is able to increase students' understanding of the prevention, symptoms, and transmission of scabies. The use of health education pocket books is effective in increasing adolescents' knowledge about skabies in the pesantren environment. This media can be an alternative to health education that is easy to apply in dormitory-based educational institutions to support efforts to prevent infectious diseases.

Keywords: Effectiveness, Health Education Pocketbook, Adolescent Knowledge, Skabies

1. Introduction

Scabies or often called scabies is one of many diseases that are still a problem in the world and including in Indonesia, the development of scabies disease develops rapidly in children living in Islamic boarding schools (1). Some developing countries have a prevalence of scabies of around 6%-27% of the general population, affecting all races and age groups and tends to be high in children and adolescents (2). According to the World Health Organization (WHO) in 2020, scabies sufferers are estimated to reach 200 million every year with 10% of scabies sufferers, namely children who live in resource-poor and poor areas, the prevalence is estimated at 0.2-71%(3)

According to *International Alliance for the Control of Scabies* (IACS) in 2020 scabies are estimated to occur in 150-200 million people worldwide, with an estimated 455 million cases annually (4), with the highest prevalence of scabies found in the Pacific region and Latin America, geographically, the disease is more common in developing countries, especially in tropical climates and areas with lack of access to water. Based on data from various regions of the world, the largest prevalence of scabies is recorded in East Asia, Southeast Asia, Oceania,

Tropical Latin America, and South Asia. In Southeast Asia, Indonesia is included as the country with the highest incidence of scabies besides Timor Leste, Cambodia, Laos, Myanmar, and Vietnam (5)

The prevalence of scabies in Indonesia continues to decline from year to year. Based on data from the Ministry of Health, the prevalence of scabies in 2018 was 5.60%-12.96%, while in 2019 scabies was recorded at 4.9-12.95% (6). and the latest data from Ministry of Health of the Republic of Indonesia (2020) The prevalence of scabies in Indonesia in 2020 was 2.9% of the total population of 238 million people, although the prevalence of scabies has decreased, Indonesia has not been completely free from scabies and is still one of the infectious disease problems in Indonesia (7). One of them is in Aceh province, based on the latest data recorded by the Aceh Health Office in 2020, scabies is included in the top 10 most diseases in Puskesmas in Aceh Province with a total of 58,618 cases (8).

Scabies sufferers in Indonesia involve many teenagers who are studying, both in formal and non-formal education such as pesantren or dayah. Life in dayah has a special characteristic, namely living together, therefore there are still many infectious skin diseases, especially scabies in dayah (9). Scabies is more easily transmitted through direct contact from person to person living in dense and adjacent environments such as nursing homes, orphanages, Islamic boarding schools and other institutions where residents live for a long period of time (10)

Scabies disease is the first of the cases of infectious diseases in Islamic boarding schools that are most suffered by students (11) The risk of the incidence of infectious diseases in dormitories based on research that has been conducted shows a relatively high number, plus low personal hygiene (12). The lack of knowledge of students who live in Islamic boarding schools will have a big impact on the sufferer and the people around him, because if the patient experiences scabies disease, the patient will feel bothered by the symptoms such as itchy itching, especially at night, the itching caused at night by scabies can cause insomnia which has an impact on fatigue, difficulty concentrating, In addition, people with scabies are prone to stigma from those around them, feeling embarrassed, and even depressed Other symptoms are the appearance of rashes, lumps, or sores. and also causes thin and irregular skin excavations, skin rashes in the form of hard red bumps, thick crusts on the skin, reddish skin, scaly or crusty skin and abrasions due to scratching, Therefore, the eradication of scabies in Islamic boarding schools must be carried out because otherwise scabies will quickly spread (1). Transmission of scabies that occurs in dayah can occur indirectly through bedding, clothing, towels, and other personal tools. Cleanliness of the equipment used (13) . where Students like/like to exchange personal belongings such as towels, clothes, sarongs, pillows and mattresses with fellow students, this is the main cause of the spread of scabies from one student to another. An environment that is not maintained and densely populated will facilitate the transmission and transmission of scabies mites (14).

A follow-up that can be done in overcoming the transmission of scabies is to increase the knowledge of students during the learning process. In the learning process, learning media can be used, although basically not only learning media determines the success of a learning process. Learning media is a means used to support the learning process. In addition, learning media can also be interpreted as anything that is able to stimulate students' thoughts, emotions, attention, and abilities or skills to increase learning effectiveness. (8). This effort to increase knowledge requires a tool that can be used to meet information needs (15).

One of the information media that can be used is a health education pocket book, which is a small book that is easy to carry and fit to be stored in a pocket. Pocket books are one of the practical and interesting learning media and also pocket books are packed with various interesting writings and pictures so as to foster readers' motivation to learn the material in pocket books (1) The researcher wants to use pocket books as a medium for the prevention of scabies in Islamic boarding schools. Although the students have free time in the midst of the busyness and routine of the Islamic boarding school, they are not allowed to bring electronic devices. Therefore, pocket books are a very appropriate alternative medium because of their advantages in being able to create a pleasant learning atmosphere, presenting material in a concise, clear, and easy-to-understand manner. In addition, the small size of the book makes it efficient, practical to carry, and easy to store in a pocket. Thus, pocket books can also motivate students to study independently. (16)

This study is only focused on Dayah Madarasatul Quran Aceh Besar. This is based on the results of initial observations through *screening* Scabies disease carried out on 30 respondents was obtained as much as 30% were found to have mites *Sarcoptes scabiei* from the results of microscopic examination. *Screening* It was carried out on students who were willing to be respondents, who experienced severe itching at night, lesions, rashes, or skin crusts on the surface area of the skin (12)

In contrast to Previous research focused on improving public knowledge in general, while this research aimed to improve adolescents' knowledge(17). The previous study used healthy student books with variables in the form of knowledge and attitudes, while this study used educational pocket books by only looking at knowledge variables (18). Previous research also used digital pocket books and their effect on Anemia prevention knowledge (19). Meanwhile, this study uses health education pocket books for skabies knowledge.

Based on the background description above, the researcher is interested in using pocket books as an educational medium to increase adolescents' knowledge about the importance of scabies prevention. Therefore, the researcher wanted to research the effectiveness of health education pocket books in increasing adolescents' knowledge about scabies in Dayah Madrasatul Quran.

2. Literature Review

2.1 Skabies

Skabies comes from the Latin word "scabere" which means to scratch. This disease, also called scabies, is an infectious skin infection caused by the attack of the *Sarcoptes scabiei* mite (20) The disease causes itching that usually worsens at night. The location of itching caused by scabies mites is most often found and felt between the fingers, back, wrists, neck, elbows, armpits, around the female nipples, male genitalia (penis and penis sac), along the belt line, and buttocks. (21)

Indirect transmission of scabies can occur through prolonged contact with items such as bedding (such as bed sheets, pillowcases, mattresses, pillows, and blankets), clothing, and towels contaminated with scabies mites(21). Direct transmission of scabies (skin to skin) such as shaking hands with people with scabies, sleeping together and having sex (22). Risk factors for scabies include poor personal hygiene, lack of knowledge about scabies, housing density, low economic status and low environmental sanitation (23). Prevention of scabies can be done by always maintaining the cleanliness of the environment and maintaining personal hygiene, washing clothes, towels, and bed sheets. Scabies sufferers are even better off if they are washed with hot water and then dried

dry, avoiding using clothes, towels, and bed sheets together. And more importantly, to break the chain of transmission of scabies disease by treating the patient completely (24).

2.2 The Effectiveness of Pocket Book Learning Media

Pocket books are small books that can be put in pockets and are easy to carry around, through pocket books you can get information without wasting much time to find out the essence of the information. Pocket books are used as a tool that conveys information about a material that is one-way, so that it can develop the potential target to become independent learners (25) and it is also beneficial for its users because it can be designed comprehensively and attractively according to learning targets. Pocket books can also be read repeatedly, which can increase knowledge and shape the attitude and behavior of its readers. (18) Pocket books have proven to be effective in improving learning outcomes and expanding knowledge. This is because pocket books are easier to understand, able to motivate students to study independently, and often read in their free time. In addition, this book is practical and easy to carry, with concise, concise, and clear explanations, so that it can effectively stimulate students' enthusiasm for learning."(16).

2.3 Scabies Pocket Book Design

The preparation of the pocket book in this study uses a 4-D (Four-D Model) development model which includes Define, Design, Develop, and also Disseminate. This development model has sequential stages and is equipped with validation and trial test stages to produce books that are proven to be feasible. The material compiled in this pocket book includes definition, causes, symptoms, impacts, risk factors, and prevention methods. The design is designed to be as attractive as possible by including more than one image and color variation, so it can increase the appeal to increase the reader's interest. This book contains information that has been filtered so that it only presents the main points of the material and is arranged systematically, and has an attractive design in terms of layout and color selection, this can arouse enthusiasm for readers. (26)

3. Method

This research is a quantitative research, which uses the Pre Experiment method. The research design using a *one-group pretest-posttest design* is an experimental design that uses the same group of subjects to be tested twice, first taking measurements before being given treatment (pretest), then given treatment or intervention, and after that a second measurement (posttest) is carried out. The population in this study is all Dayah Madrasatul Quran students totaling 45 people consisting of 22 males and 23 females. The sample size was taken using *the total sampling technique*, which is sampling the entire population because the population is not more than 100, so the researcher made a total of 45 people as a sample. The instruments in this study use sheets, the instruments in this study use 3, the data collection instruments use 3 instruments, namely validation sheets, questionnaire sheets and pocket books. The data analysis technique in the study used the normality test with the Shapiro-Wilk statistical test, this test was used for a relatively small sample (< 50). If the data is normally distributed, then it is followed by a statistical test paired with a t-test sample, if the data is not normally distributed, the test used is the wilcoxon test, with decision making if the p-value is $>$

0.05, then there is no effectiveness of knowledge before and after being given pocket book media.

4. Findings and Discussion

4.1 Results

The characteristics of the research respondents including gender, age and education can be seen in table 1 below:

Table 1 Overview of Respondent Characteristics

Respondent Characteristics	Frequency	%
Gender		
Male- Male	22	48.9 %
Woman	23	51.1 %
Total	45	100 %
Age		
Early Teens (12- 16)	32	71.1 %
Late Youth (17 - 25)	13	28.9 %
Total	45	100 %
Education		
SMP	26	57.8
SMA	19	42.2
Total	45	100 %

Based on the data in Table 4.1, the majority of respondents consisted of 22 males (48.9%) and 23 females (51.1%). In terms of age, respondents were divided into two groups, namely early adolescents (12-16 years) as many as 32 people (71.1%) and late adolescents (17-25 years) as many as 13 people (28.9%). Furthermore, respondents were also grouped based on education level, namely junior high and high school with 26 respondents at the junior high school level (57.8%) and 19 people at the high school level (42.2%).

Table 2 Pocket Book Assessment Results Data by Adolescents

Pocket Book Assessment	Frequency (n)	Presentase (n)
Effective	45	100 %
Ineffective	0	0 %
Total	45	100

Based on the data in Table 4.2, all adolescents, totaling 45 people (100%), assessed that the pocket book was effective. None of the teenagers considered this pocket book to be ineffective. This shows that the pocket book is very well received and is considered to be able to provide optimal benefits for the students.

Table 3 Adolescents' level of knowledge before and after being given a pocket book

<i>Pretest</i>	<i>Posttest</i>
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Category	<i>F</i>	%	<i>F</i>	%
Good	20	44.4%	45	100 %
Enough	21	46.7%	0	0 %
Less	4	8.9%	0	0 %
Total	45	100 %	45	100 %

Based on table 4.3, it can be stated that knowledge before being given pocket book media was stated by 20 respondents (44.4%), sufficient knowledge by 21 respondents (46.7%) and lack by 4 respondents (8.9%). Based on the table above, knowledge can be stated after being given pocket book media which was stated by 45 respondents (100%). This shows that the use of pocket books is very effective in increasing adolescents' knowledge of the material provided. Thus, pocket books can be used as an effective educational medium to increase knowledge.

Table 4 Comparison of pretest and posttest results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Hours of deviation
Pre-test	45	35	90	74.11	11.545
Post-test	45	80	100	97.00	5.878

Based on the descriptive statistical table above, the number of participants in this study is 45 people for pre-test and post-test. The lowest score (Minimum) in the pre-test is 35 then increases to 80 in the post-test. The highest score (Maximum) was also increased from 90 in the pre-test to 100 in the post-test. The average (Mean) score of adolescents in the pre-test was 74.11 and increased to 97.00 in the post-test. The standard deviation of the pre-test is 11,545 while in the post-test it decreases to 5,878. This shows that after the intervention there was a significant improvement in post-test results. Thus, it can be concluded that the interventions provided succeeded in improving adolescents' knowledge.

Before determining the type of statistical test to be used, the researcher first conducted a normality test on the data obtained using the Shapiro-Wilk test because the sample < 50, this test aims to find out whether the data is normal or not with a value of sig ($p > 0.05$) the data can be said to be normally distributed if the data is normally distributed, then the test in this hypothesis uses a parametric test. Conversely, if the data is not normally distributed, hypothesis testing uses non-parametric tests.

Table 5 Data Normality Test

Tests of Normality			
Shapiro-Wilk			
Knowledge	Statistic	df	Itself.
Pre test	.859	45	.000
Post test	.574	45	.000

Based on the table above, it can be seen that the results of the normality test of the knowledge variable have a significant value of < 0.05 which means that the data is not normally distributed, so the hypothesis test carried out is a non-parametric test, namely the Wilcoxon Rank Test.

The hypothesis test used in this study uses a non-parametric test, namely the Wilcoxon Rank Test to determine the effectiveness of health education pocketbooks in increasing adolescents' knowledge about scabies

Table 6 Wilcoxon Rank Test Test Results of knowledge variables

Knowledge of students	N	Mean rank	P-Value
Negative Ranks	0	0.00	0.000
Positive Ranks	45	23.00	
Ties	0		
Total	45		

Based on the results of the Wilcoxon Rank Test test, after being educated using the media of the Adolescent Knowledge Pocket Book, from 45 respondents, all of the respondents experienced an increase in scores in the post-test compared to the pre-test scores. With the results obtained, no participants were found who experienced a decrease in scores or who had the same score between the pre-test and post-test. This is shown by the existence of 0 participants in the *negative ranks* and *ties* categories, and 45 participants in the *positive ranks* category with a mean rank value of 23.00. This shows that the increase in respondents who experienced an increase in knowledge was much higher than that of those who experienced a decrease or no change. The results of the Wilcoxon test showed a significance value of p-value of 0.000 ($p < 0.05$), then H_0 was rejected and H_a was accepted, which means that there was a significant difference between the level of knowledge before and after being given a pocketbook. Thus, it can be concluded that the use of pocket books is effective in increasing adolescents' knowledge in the Dayah Madrasatul Quran about skabies.

4.2 Discussion

The results of this study found that before the intervention there were 20 respondents (44.4%) who were included in the category of good knowledge, 21 people (46.7%) with sufficient knowledge and 4 people (8.9%) with poor knowledge. However, after being given a pocket book and post-tested, all 45 respondents (100%) showed a good level of knowledge, with an average score on pretest knowledge of 74.11 and increased to 97.00 on the posttest. Based on the analysis of the wilcoxon rank test, a p-value of 0.000 ($p < 0.05$) was obtained, then H_0 was rejected by H_a , which means that there is an effectiveness of the pocket book with adolescent knowledge before and after being given a pocket book.

Knowledge can be interpreted as the result of curiosity that starts from sensory processes, especially through the sense of sight and hearing of a certain object. (7). This research is supported by research Dewanti Saputri & Sofia (2025) Explaining about knowledge about scabies can change behaviors and attitudes in practicing personal hygiene, which ultimately contributes to a decrease in the incidence of scabies. In addition, the educational

process undergone also affects a person's level of knowledge and behavior. The findings are in line with the research Wulandari, (2022) who used the Wilcoxon test with a significance level of $\alpha = 0.05$ and obtained a P-value of 0.000 where $0.000 < 0.05$, then H_0 was rejected and H_a was accepted, which means that there is an influence of health education using pocket book media on the knowledge of mothers under five about stunting.

Pocket books are developed based on needs analysis and are designed with a combination of text, illustrations and attractive images. These illustrations and pictures make the appearance of the book more interesting to read and make it easier to understand without burdening the reader. The use of images serves to help interpret and clarify the material presented. (28) Research shows that pocket books are effective in significantly increasing knowledge and received positive responses from 5 expert lecturer validators before being tested in the field first in the test of the validity level of pocket books by expert lecturers. In addition, pocket books have also been proven to be able to improve learning achievement because they are able to encourage interest in reading.

The provision of health education pocket books has been proven to be effective in increasing adolescents' knowledge of scabies. This is evidenced by a significant increase in knowledge scores after the intervention, where all adolescents achieved the knowledge category both after receiving and studying the pocket book. The results of this study are in line with the research (17) The results of the Wilcoxon test showed a value of $p < 0.001$ Thus, it can be concluded that there is a significant difference in the level of respondents' knowledge about scabies before and after being given the GEMAS Pocket Book. Therefore, the provision of the GEMAS Pocket Book has proven to be effective in increasing respondents' knowledge of scabies.

Simple educational media such as pocket books can be a very relevant and targeted learning tool, especially in Islamic boarding schools that have limited access to technology. The advantage of pocket books lies in their practical and easy-to-understand design, as well as their ability to be used independently by students whenever they need. Illustrations and colloquial language used in pocket books also play a role in increasing reading interest and understanding of material about scabies, so that the health information conveyed can be absorbed optimally (16).

Based on the results of this study, the researcher assumes that the use of pocket books that are designed in an attractive, practical way, and equipped with illustrations and simple language, is an effective solution to increase adolescents' knowledge and interest in reading. This pocket book has gone through a validation process by expert lecturers, both in terms of content, discussion and display, so that the quality is guaranteed before being tested in the field. The main advantage of this pocket book lies in the delivery of health information clearly, easily understandable, and can be accessed independently anytime and anywhere. An attractive design with an attractive combination of illustrations and colors also supports the appeal of this pocket book. In addition, with a compact and practical size, pocket books are easy to carry anywhere, making them very suitable as alternative educational media, especially in pesantren or dorm environments that limit access to electronic devices.

This pocket book not only serves as a new source of knowledge for adolescents but also has the potential to encourage positive behavior change in efforts to prevent scabies in the pesantren environment. Thus, this pocket book is expected to be an effective health education innovation for adolescents in facing health challenges, especially related to scabies.

5. Conclusions and Recommendations

The conclusion in this study is that Before being given educational media using pocket books, the level of adolescent knowledge about scabies varied with some adolescents being in the good, adequate, and poor categories, After being given educational media using pocket books, all students reached the category of good knowledge (100%). With the average value of knowledge increased significantly, based on the results of a non-parametric hypothesis test, namely the Wilcoxon test which showed a difference in values between the p value of 0.000 ($p < 0.05$), then H_0 is rejected and H_a is accepted, Health education pocket books have proven to be effective in increasing adolescents' knowledge about scabies in Dayah Madrasatul Quran and can be used as an alternative educational media in a similar environment to increase awareness in preventing scabies.

Suggestions that researchers can convey in this study are expected to increase knowledge by using scabies pocket books so as to increase adolescents' awareness of the importance of maintaining environmental cleanliness to avoid scabies, For Islamic boarding school managers, it is recommended to use health education pocket books as a mandatory medium in the prevention of infectious diseases, especially scabies, for future researchers It is necessary to conduct further research with control experimental methods or in different Islamic boarding school environments to strengthen the findings.

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