

Personal hygiene health education improves knowledge and behavior of scabies prevention in adolescents at the Blitar Juvenile Detention Center.

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ABSTRACT

Background: The prevalence of scabies in all community health centers in Indonesia is 5.6-12.9%, making it the third most common skin disease. Transmission is easier in crowded environments and with high social interaction, making Islamic boarding schools one of the vulnerable locations. Additional risk factors include the habit of sharing personal equipment, low awareness of hygiene, and limited sanitation facilities. Low awareness of hygiene is influenced by low knowledge of clean and healthy living behaviors. **Objective:** To identify improvements in knowledge and behavior in preventing scabies in adolescents. **Method:** This study uses a quasi-experimental pre-post test design without control, by taking the entire population as a sample. The respondents of this study were 172 adolescents living in the Blitar juvenile correctional institution dormitory. The instrument in this study was a questionnaire on knowledge and behavior in preventing scabies. Data were collected before and after Health Education using the lecture method. **Results:** Before health education, 124 respondents (72.5%) had poor knowledge, while 47 respondents (27.5%) had sufficient knowledge. After treatment, 157 respondents (91.8%) had good knowledge, while 14 respondents (8.2%) had sufficient knowledge and 154 respondents (90.1%). Before treatment, 7.0% of respondents had sufficient behavior and 2.9% had good behavior. After treatment, 88.9% of respondents had good behavior and 11.1% had sufficient behavior. **Conclusion:** Regular health education is important to provide to prevent scabies at the Blitar Children's Correctional Institution

Keywords: Personal Hygiene, Knowledge, behavior, Health Education, Scabies, adolescents

Background

Scabies is a skin disease caused by infestation and sensitization to *Sarcoptes scabiei* var. *hominis* and its mites. Scabies is transmitted through direct (skin-to-skin) and indirect (object-to-object) contact. The most dominant factors in the spread of scabies are low socioeconomic status and poor hygiene (1). This disease is more common in developing countries, particularly in endemic areas with tropical and subtropical climates, such as Africa, South America, and Indonesia. In Indonesia, scabies is one of the most common skin diseases seen in community health centers. In 2008, the prevalence of scabies in all community health centers in Indonesia was 5.6-12.9%, making it the third most common skin disease (2). Teenagers living in dormitories with poor hygiene are at high risk of contracting scabies. Of the teenage students living in the dormitory at the Darussalam Bergas Islamic Boarding School in Semarang Regency, 30.8% had scabies (3). The results of the literature review say that scabies is closely related to personal hygiene (4).

The incidence of scabies often occurs in rural areas due to a lack of knowledge and awareness among the community (5). Transmission is more likely in crowded environments with high levels of social interaction, making Islamic boarding schools particularly vulnerable. Additional risk factors include the habit of sharing personal items, low hygiene awareness, and limited sanitation facilities (6). Dormitories are densely populated, leading to high levels of social interaction. Similar to dormitories in Islamic boarding schools, dormitories in juvenile correctional institutions also have dense populations. The results of this study indicate a relationship between knowledge about scabies and the incidence of scabies among adolescents at the Darussalam Bergas Islamic Boarding School in Semarang Regency, with a p-value of $0.001 < \alpha (0.05)$ (3). Knowledge can influence a person's health behavior, so to improve health behavior, health education is needed to increase a person's knowledge (7). This is proven by the results of research which shows that health education about personal hygiene and environmental sanitation can reduce the

number of scabies sufferers in the boarding school for students of the Nurul Huda Islamic Boarding School, Aceh Besar (8).

In addition to residents' knowledge, limited diagnostic testing and underreporting of outbreaks pose significant challenges in understanding the prevalence of scabies among children in juvenile detention centers. Residents often rely on over-the-counter medications during rehabilitation (9). The Blitar Special Needs Children's Development Institution has 171 inmates. Based on data from an assessment conducted with partners using interviews and questionnaires from 10 inmates, three respondents showed scabies. Furthermore, residents have a habit of sharing personal items such as towels, sarongs, and blankets.

Based on the description above, many partners still lack an understanding of the importance of personal hygiene or clean and healthy living practices, including skin hygiene, hand and nail hygiene, clothing hygiene, and towel hygiene. Therefore, health education on personal hygiene and scabies is highly appropriate for adolescents in the juvenile correctional institution dormitory.

Methods

This research method is a quasi-experimental with a pre-post test approach without control. It was conducted on adolescents living in a juvenile correctional facility dormitory, with a sample size of 171 people by taking the entire population as a sample. Adolescents living in the dormitory are aged 12-19 years. The research process was carried out with a pre-test of respondents' knowledge and personal hygiene behavior, followed by health education on the importance of personal hygiene and scabies disease, after which a post-test of knowledge was conducted and after 2 weeks a behavioral assessment was conducted. The research instrument used was a knowledge and behavior questionnaire. The results of this study were analyzed by comparing the values before and after being given health education.

Results

Table 1. Respondent Characteristics

Characteristics	N	%
Gender		
Male	167	97.7
Female	4	2.3
Respondent Age Category		
Early adolescence (10-13 years)	1	1
Middle adolescences (14-16 years)	54	31
Late adolescences (17-18 years)	116	68
Total	171	100

Based on Table 1, the results of the study indicate that 97.7% of respondents were male. In accordance with the regulations of the Indonesian Ministry of Immigration and Corrections, the Blitar Juvenile Correctional Institution accommodates adolescents aged 10-18 years who require guidance. In this study, 68% of the respondents were aged 17-18 years or late adolescents.

Table 2: Pre-test and Post-test Results of the Knowledge

Knowledge Level	PreTest		PostTest	
	N	%	N	%
Good knowledge	0	0	157	91.8
Sufficient knowledge	47	27.5	14	8.2
Poor knowledge	124	72.5	0	0
Total	171	100	171	100

Based on Table 2, the level of knowledge of pre- and post-respondents, before the counseling (pre-test), most respondents had a poor level of knowledge, namely 124 people (72.5%), while

respondents with a sufficient level of knowledge numbered 47 people (27.5%), and there were no respondents with a good level of knowledge. After the counseling (post-test), there was a significant increase in the level of knowledge of respondents. The majority of respondents were in the good category, namely 157 people (91.8%), while respondents with a Sufficient of knowledge numbered 14 people (8.2%), and there were no respondents in the poor knowledge category.

Table 3. Pre-test and Post-test Results of the Behavior

Behavior Level	PreTest		PostTest	
	N	%	N	%
Good behavior	5	2.9	152	88.9
Adequate behavior	12	7	19	11.1
Poor behavior	154	90.1	0	0
Total	171	100	171	100

Based on the table 3 of respondents' behavioral levels, during the pre-test, the majority of respondents were in the poor category, namely 154 people (90.1%). Respondents with a adequate level of behavior numbered 12 people (7.0%), while respondents with a good level of behavior were only 5 people (2.9%). After the counseling (post-test), there was a very clear increase in the level of respondent behavior. The majority of respondents were in the good category, namely 152 people (88.9%), while respondents with a adequate level of behavior numbered 19 people (11.1%), and there were no more respondents with a poor level of behavior.

Discussion

Based on the research results, health education delivered using the lecture method at the Blitar juvenile correctional facility demonstrated positive results in improving participants' knowledge and behavior related to the counseling material provided. Evaluation was conducted through pre- and post-tests to measure changes in knowledge, as well as follow-up evaluations of attitudes and behaviors one week after counseling to assess the sustainability of the educational impact (10). The knowledge post test in this study was carried out after health education, while the healthy hygiene behavior post test was carried out after 2 weeks of Health Education.

Based on the characteristics of the respondents, the majority of participants were male (97.7%) and aged 17-18 years in their late teens. In late adolescence, this is a time when a person can control himself, he even has the courage to live his life, has a direction in which he will walk in carrying his life through a dream, and has self-awareness that begins to be clear about what goals he must achieve. A critical attitude has begun to emerge which has begun to be active and the object of taking a step that involves oneself in an activity in the outside world. A person has begun to be able to organize and educate himself through the experiences he has received (11). So that health education helps improve the ability of adolescents to choose a healthy lifestyle and increases adolescents' confidence in carrying it out consistently (12). So that Health Education with the lecture method given to respondents is considered to be able to develop active behavior in a clean and healthy life, especially in preventing scabies.

According to the study, 2.3% of women and all did not suffer from scabies. Previous research has shown a correlation between gender and scabies incidence ($p=0.000$) (13). The results of other studies show that there is a significant difference in clean and healthy living behavior between male and female students with a p value = 0.021 ($p \leq 0.05$) (14). Qualitative research on the Social and Cultural Reality of Clean and Healthy Living Behavior shows that more people have an important role in improving clean and healthy living behavior in Bhuana Jaya Village, Tenggara Seberang District, Kutai Kartanegara Regency (15). Women tend to use feelings to evaluate an object, resulting in feelings of pleasure and displeasure that indicate negative and positive tendencies. Scabies disrupts daily life and appearance, so women respond to the risk of scabies transmission with displeasure, leading to positive behavioral efforts to prevent it.

Table 2 shows a significant improvement after the lecture-based health education. In the pre-test, the majority of respondents were in the low knowledge category (72.5%). However, after health education, the proportion of respondents with good knowledge increased to 91.8%, while the proportion

of other categories decreased. This finding is consistent with other studies showing that direct health education interventions through educational media can improve public understanding of specific health topics, including scabies and clean and healthy living behaviors (for example, knowledge about scabies increased from 40% to 93% after counseling in another study) (16).

In addition to increased knowledge, the evaluation of respondents' behavior also showed significant positive changes. In the pre-test, the majority of respondents were in the bad behavior category (90.1%), but after further counseling and evaluation, the majority were in the good behavior category (88.9%). This change indicates that the education provided not only increased understanding but also encouraged appropriate clean and healthy living behaviors. In general, public health literature shows that health education implemented with appropriate methods can influence individual behavior, especially when learning strategies incorporate visual media and interactive communication in the education process (17). In accordance with the results of this study, which showed an improvement in behavior, the majority of respondents were in the good category (152 people (88.9%)), while respondents with an adequate level of behavior numbered 19 people (11.1%), and there were no more respondents with a poor level of behavior.

This positive behavioral change had a direct impact on scabies incidence in the community, resulting in a decrease in cases after the outreach activities. This aligns with the concept that increased knowledge and behavioral change are two key interrelated factors in disease prevention infectious (18). Other studies have also shown that knowledge of personal hygiene is closely related to the incidence of scabies; the better a person's knowledge and hygiene practices, the lower the risk of scabies infection in the community (19).

The outreach method used, a PowerPoint presentation enriched with systematic explanations and engaging visuals, has proven effective in achieving these objectives. The clear and structured presentation of the material helps participants understand the concepts of scabies, disease transmission, and preventive measures, thus not only increasing knowledge but also motivating positive behavioral changes. This aligns with the social psychology principle that information presented interactively and contextually tends to be more easily internalized and applied in everyday life (20).

Overall, the results of this activity demonstrate that well-designed and consistently implemented health education can significantly increase public knowledge, motivate healthier behavior changes, and contribute to reducing scabies cases in the target community. Therefore, health education is a promotive and preventive effort to improve respondents' health quality.

The evaluation results two weeks after the counseling session showed clear evidence that respondents' behavior had changed in line with expectations. The majority of respondents had implemented better personal hygiene practices, such as bathing regularly, not sharing towels or clothes, and maintaining a clean environment. This behavioral change was reflected in the increase in respondents with good behavior (88.9%), indicating that the material presented was not only understood but also applied in their daily lives. With improved hygiene practices, particularly regarding scabies prevention, it is hoped that the number of scabies cases in juvenile correctional institutions will decrease.

Conclusions and Recommendations

The health education activities implemented were able to improve respondents' knowledge about scabies. Evaluation results showed that 91.8% of respondents had good knowledge after the intervention and an increase in healthy hygiene behaviors in scabies prevention efforts by 88.9%. To maintain and improve knowledge about scabies, it is recommended that health education activities be carried out regularly and continuously, by health workers at the Blitar Juvenile Correctional Institution polyclinic. In addition, it is necessary to improve facilities and infrastructure for adequate hygiene and monitor the personal hygiene habits of adolescents living in the Juvenile Correctional Institution dormitory.

Ethical Consideration and Competing Interest

Ethical Considerations and Conflict of Interest Research have been taken into account in the implementation of this research, as the welfare and rights of juvenile detainees must be prioritized. The researcher maintained the confidentiality of respondents. Before the research began, respondents listened to the researcher's explanation and signed an informed consent form. There was no conflict of interest between the researcher and the research site during the research.

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