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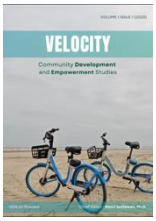

The Effectiveness of Health Counseling in Improving Knowledge and Preventive Behavior Toward Scabies Among Students at Al-Huda Islamic Boarding School, Sadananya

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Abstract

Introduction: Islamic boarding schools (pesantren) are educational environments that promote close living among students, increasing the risk of communicable diseases such as scabies. Scabies, caused by *Sarcoptes scabiei*, spreads rapidly through direct or indirect contact and is a common issue in densely populated dormitories with limited hygiene facilities. **Objective:** This study aimed to evaluate the effectiveness of health counseling in improving knowledge and preventive behavior against scabies among students at Al-Huda Islamic Boarding School, Sadananya. **Method:** A quantitative pre-experimental study with a one-group pretest-posttest design was conducted involving 35 students selected through purposive sampling. Structured questionnaires assessing knowledge and behavior related to scabies prevention were administered before and after a health education intervention. Data were analyzed using the Wilcoxon signed-rank test and Chi-square test with a significance level of $p < 0.05$. **Result:** After the intervention, the percentage of students with good knowledge increased from 2.9% to 51.4%, and those with good behavior rose from 0% to 45.7%. The Wilcoxon test confirmed significant improvements in both knowledge and behavior ($p < 0.001$). A significant association between knowledge and behavior was also found before and after the intervention ($p < 0.05$). **Conclusion:** Health counseling effectively improved students' knowledge and preventive behavior regarding scabies. This intervention serves as a practical strategy for infection prevention in boarding school environments. **Community Implication:** The findings support the integration of routine health education into school programs to reduce the spread of infectious diseases. Implementing such interventions in pesantren and similar settings can promote better hygiene practices and contribute to broader public health outcomes.

Keyword: health counseling, preventive behavior, scabies prevention

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Introduction

Islamic boarding schools, or *pesantren*, are residential-based educational institutions that foster spiritual, academic, and moral development among students. While the communal and immersive environment of *pesantren* supports character formation and religious education, it also poses significant public health challenges, particularly concerning the transmission of communicable diseases (Kusumawati et al., 2020). One such prevalent condition is scabies.

Scabies is a highly contagious skin infection caused by the infestation of the mite *Sarcoptes scabiei*. The disease manifests as intense itching—especially at night—and is often accompanied by rashes, papules, and excoriations resulting from persistent scratching (Kaur & Narang, 2020). The primary mode of transmission is direct skin-to-skin contact with an infected individual, although indirect transmission via shared clothing, bedding, or towels is also possible. Due to the densely populated living conditions, limited access to hygiene facilities, and low health literacy among residents, scabies frequently emerges as an endemic problem in boarding schools (Sulaeman & Herlina, 2019).

In these high-risk environments, health education emerges as a crucial preventive strategy. Health education programs, particularly through targeted counseling sessions, aim to enhance individuals' knowledge and foster behavioral change necessary for infection control (WHO, 2019). Increasing awareness of scabies' symptoms, transmission mechanisms, and preventive practices empowers students to take proactive steps in reducing the spread of infection. Educational interventions not only promote personal hygiene but also instill a collective sense of responsibility towards maintaining a clean and healthy environment (Fitriani et al., 2020).

Objective

This study aims to evaluate the effectiveness of health counseling interventions in improving knowledge and preventive behaviors against scabies among students at the Al-Huda Islamic Boarding School, Sadananya. By assessing pre- and post-intervention knowledge and behavior, the study seeks to provide evidence-based insights into the role of educational strategies in mitigating scabies transmission within communal living settings.

Method

Design and setting

This study employed a quantitative pre-experimental design with a one-group pretest-posttest approach. The research was conducted at Al-Huda Islamic Boarding School, Sadananya, which is characterized by a communal living environment with high potential for scabies transmission due to dense student populations and shared facilities.

Population and sampling

The population consisted of all students residing in the pesantren who were at risk of scabies infection. Inclusion criteria included students who were willing to participate and attend the full health education session, while exclusion criteria were not specified.
A total of 35 students were selected using purposive sampling, targeting those who met the inclusion criteria and were available during the intervention period.
Participants were chosen regardless of class level, and their demographic distribution included

variations in age and gender. The sample size was considered adequate to assess the intervention's impact within the school context.

Instrument and measurement

Data were collected using structured questionnaires divided into two main sections: knowledge and behavior related to scabies prevention. The knowledge section included items assessing understanding of definition, symptoms, transmission, and preventive measures of scabies. The behavior section evaluated personal hygiene habits, use of personal items, and adherence to health recommendations. The instruments were administered before and after the intervention to assess changes attributable to the health counseling program.

Data collection and analysis

Data collection involved administering pretest questionnaires, delivering the health education intervention, and then administering posttest questionnaires. All responses were coded and analyzed using SPSS. Normality was assessed using the Shapiro-Wilk test. As the data were not normally distributed, the Wilcoxon signed-rank test was used to compare pretest and posttest scores. Additionally, the Chi-square test was applied to examine the relationship between knowledge and behavior before and after the intervention, with significance set at $p < 0.05$.

Result

A total of 35 students from Al-Huda Islamic Boarding School participated in this study. The participants consisted of 18 females (51.4%) and 17 males (48.6%), with ages ranging from 13 to 15 years. The majority of students were aged 14 years (45.7%) and enrolled in Grade 8 (42.9%).

The results showed a significant improvement in both knowledge and preventive behavior regarding scabies after the health counseling intervention. Before the intervention, 25.7% of students had poor knowledge, 71.4% had moderate knowledge, and only 2.9% had good knowledge. After the intervention, no students remained in the poor category, while 48.6% showed moderate knowledge and 51.4% demonstrated good knowledge.

In terms of behavior, 11.4% of students exhibited poor preventive behavior before the intervention, and 88.6% showed moderate behavior. After the intervention, 54.3% showed moderate behavior and 45.7% improved to the good category.

The following table summarizes the changes in knowledge and behavior scores, along with the statistical tests used and their significance values:

Table 1. Pretest and Posttest Results of Knowledge and Behavior

Variable	Category	Pretest n (%)	Posttest n (%)	Statistical Test	p-value
Knowledge	Poor	9 (25.7%)	0 (0.0%)	Wilcoxon Signed-Rank	< 0.001
	Moderate	25 (71.4%)	17 (48.6%)		
	Good	1 (2.9%)	18 (51.4%)		
Behavior	Poor	4 (11.4%)	0 (0.0%)	Wilcoxon Signed-Rank	< 0.001
	Moderate	31 (88.6%)	19 (54.3%)		

Variable	Category	Pretest n (%)	Posttest n (%)	Statistical Test	p-value
	Good	0 (0.0%)	16 (45.7%)		

Statistically significant at p < 0.05

The table presents the distribution of students' knowledge and preventive behavior regarding scabies before and after a health counseling intervention, along with the corresponding statistical tests and significance values. Prior to the intervention, 25.7% of students demonstrated poor knowledge, 71.4% had moderate knowledge, and only 2.9% exhibited good knowledge. After the intervention, all students improved, with 51.4% achieving good knowledge and none remaining in the poor category. Similarly, preventive behavior showed marked improvement, where initially 11.4% of students had poor behavior and none demonstrated good behavior. Following the intervention, 45.7% of students attained good behavior and none remained in the poor category. The Wilcoxon signed-rank test confirmed that the improvements in both knowledge and behavior were statistically significant, with p-values < 0.001, indicating the effectiveness of the health counseling in enhancing students' understanding and actions toward scabies prevention.

Discussion

This study demonstrates that health counseling has a significant impact on improving both knowledge and preventive behavior regarding scabies among students at Al-Huda Islamic Boarding School. The Wilcoxon signed-rank test showed a statistically significant increase in knowledge and behavior scores after the intervention ($p < 0.001$), indicating that the health education program was effective. These findings are consistent with previous research showing that educational interventions play a crucial role in enhancing disease awareness and encouraging healthier practices among adolescents in communal living settings (Fitriani et al., 2020; Lestari & Putra, 2019).

The improvement in knowledge suggests that the health counseling effectively conveyed essential information about scabies, including its causes, symptoms, transmission, and prevention methods (Kaur & Narang, 2020). Before the intervention, a considerable portion of students had limited understanding of the disease, with 25.7% categorized as having poor knowledge. After receiving targeted health education, more than half (51.4%) achieved good knowledge levels, suggesting the intervention succeeded in bridging information gaps.

Behavioral changes also mirrored this improvement in knowledge. Initially, none of the students demonstrated good preventive behavior, and a small group (11.4%) exhibited poor hygiene practices. Post-intervention results showed that 45.7% had adopted good preventive behaviors, and none remained in the poor category. This finding aligns with health behavior theories, such as the Health Belief Model, which posit that improved knowledge positively influences health-related actions when individuals perceive a disease as serious and preventable (Glanz et al., 2015).

Furthermore, the Chi-square analysis revealed a significant association between knowledge and behavior both before and after the intervention, reinforcing the notion that knowledge enhancement is directly linked to behavioral change (Handayani et al., 2018). These results support the integration of regular and structured health education within school-based health

programs, particularly in high-risk environments like boarding schools, where the spread of infectious diseases is facilitated by close living quarters and shared facilities (Sulaeman & Herlina, 2019).

Restate the Key Findings

This study found that health counseling significantly improved both knowledge and preventive behavior regarding scabies among students at Al-Huda Islamic Boarding School. Following the intervention, the proportion of students with good knowledge increased from 2.9% to 51.4%, while those with good preventive behavior rose from 0% to 45.7%. The statistical analysis using the Wilcoxon signed-rank test showed that these improvements were significant ($p < 0.001$). Furthermore, the Chi-square test revealed a significant association between students' knowledge and their behavior both before and after the intervention, indicating that enhanced knowledge contributed to better preventive practices.

Interpret the Results

These results indicate that health counseling is an effective strategy for improving knowledge and preventive behavior against scabies among students in a boarding school setting. The findings highlight the practical value of education in reducing the risk of disease transmission through improved personal hygiene and awareness. This supports the idea that health education can serve as a simple yet impactful preventive measure in environments where close contact is common.

Compare with Previous Studies

The findings of this study align with research by Fitriani et al. (2020), which showed that health education significantly increased students' knowledge and hygiene practices related to scabies prevention in a boarding school setting. Similarly, Lestari and Putra (2019) reported a notable decrease in scabies cases following structured educational sessions in Islamic boarding schools. However, Handayani et al. (2018) found only slight improvements in behavior, possibly due to the brief duration of the intervention and lack of follow-up. These findings suggest that the success of health education depends not only on content but also on the delivery method, frequency, and student engagement.

Highlight the Implications

The results of this study highlight the practical importance of incorporating regular health education programs in boarding schools to prevent scabies outbreaks. Clinically, it emphasizes that non-pharmacological interventions such as health counseling can effectively support disease control through behavior change. These findings suggest that policymakers and school administrators should consider integrating structured health education into routine student activities. Future research could explore the long-term effects of repeated interventions and assess scalability in different institutional settings.

Discuss the Limitations

This study has several limitations that should be acknowledged. First, the use of a one-group pretest-posttest design without a control group limits the ability to establish causality, as changes may have been influenced by external factors. Second, the sample size was relatively small (n=35) and limited to a single pesantren, which restricts the generalizability of the findings to other settings or populations. Additionally, the short-term nature of the study did not allow for evaluation of long-term behavior change or knowledge retention. Future studies should consider larger, randomized samples and follow-up assessments to strengthen the validity and applicability of the results.

Suggest Future Research

Based on the findings and limitations of this study, future research should aim to include a control group and employ randomized controlled trial designs to strengthen causal inferences. Longitudinal studies are also recommended to evaluate the sustainability of knowledge and behavior changes over time. In addition, exploring the effectiveness of different education delivery methods—such as digital media, peer-led sessions, or repeated interventions—could provide insight into the most impactful strategies. Expanding the research to include multiple pesantren or other institutional settings would enhance generalizability and inform broader public health initiatives.

Conclusion

In conclusion, the results highlight the critical role of health education in improving knowledge and behavior toward scabies prevention. Sustained educational efforts, supported by institutional hygiene policies, are recommended to maintain and enhance these positive outcomes in boarding school environments.

Community Implication

The results of this study demonstrate that health education interventions can significantly improve knowledge and preventive behavior related to scabies among students in Islamic boarding schools. This finding has important implications for the broader community, especially in similar densely populated environments. By implementing regular health counseling sessions, schools and local health authorities can reduce the spread of infectious skin diseases, promote better hygiene habits, and improve overall student well-being. These efforts can be integrated into community health programs and school health policies, contributing to stronger public health outcomes and empowering communities to take proactive steps in disease prevention.

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Author Contribution

Dika Rhousnaka contributed to the conceptualization, data collection, and initial draft writing. Nindhi Yasha Putri was responsible for data analysis, interpretation of results, and manuscript revision. Oxsitalia Sinta Maharani contributed to the literature review, development of research instruments, and final editing. Ikrima Putri Pratama supported statistical analysis and helped in organizing the data presentation. Risman Barkah contributed to the supervision of field activities and provided critical feedback during manuscript preparation. All authors have reviewed and approved the final version of the manuscript.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this research.

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