Open Access Health Scientific Journal
https://oahsj.org/index.php/oahsj Vol. 6 No. 1 February 2025, pp. 27-33
Research article

Education On Clean and Healthy Living Behavior in Prevention Of Pediculosis Capitis Disease

Joko Sutrisno*, Elok Aqila Febriani

Universitas STRADA Indonesia, East Java, Indonesia
*Corresponden Author: Joko Sutrisno (joy@strada.ac.id)

ARTICLE INFO

Keywords:
Behavior Clean and Healthy Life,
Education,
Pediculosis Capitis.

ABSTRACT

Background: Factors from pediculosis capitis in the cottage environment are usually caused by a lot of teenager students who don't be able to look after themselves alone or a number of bad nature that doesn't reflect clean and healthy life behavior. So on this study conducted action gift education behavior clean and healthy life (PHBS) with counseling method. This study aimed to know the influence of gift education to prevent the disease pediculosis.

Method: This study was held at Pondok Al-Huda Village Islamic Boarding School Sragi Subdistrict Songgon Regency Banyuwangi. Study use type study experiment with design quantitative experiment quasi experimental pre and post design, with sample using simple random sampling as many as 51 respondents. Data analysis using Paired Sample T- Test with condition test normality normally distributed (0.05), however if normality data distribution is not fulfilled so will next with Wilcoxon Test..

Results: Results from Test Statistics obtained enhanced behavior life clean and healthy 27 respondents (53%) and enhanced behavior prevention disease pediculosis capitis there are 24 respondents (47%). seen that the value of 0.000 which can be interpreted that the score is not enough from 0.05, so that H1 is accepted means there is influence education behavior life clean and healthy in preventing disease pediculosis Capitis at Pondok Boarding school.

Conclusion: Education on clean and healthy living behaviours plays a pivotal role in the prevention of pediculosis capitis. By enhancing knowledge and promoting hygiene practices, communities can significantly reduce the prevalence of this common yet often overlooked condition. Future research should focus on longitudinal studies to evaluate the long-term impact of educational interventions on head lice prevention.

INTRODUCTION

Pediculosis Capitis (head lice) is a scalp disease caused by obligate ectoparasite infestation (mites/lice), this parasite is a blood-sucking parasite (hemophagydea) and spends its entire life cycle in humans. The parasite that causes pediculosis capitis is Pediculus humanus var.capitis (Anggraini, 2018). Pediculosis capitis is a disease that can attack anyone regardless of gender and age. This disease can cause itching caused by saliva and lice feces and irritation that can occur because these lice suck blood on the scalp.

Pediculosis capitis is a disease with a fairly high prevalence that often occurs among school-age children, especially among adolescents in Islamic boarding schools (Hardiyanti, 2019). This disease is an infectious disease that is influenced by behavior and the environment, so it becomes a dominant health problem in densely populated areas such as Islamic boarding schools. The spread of pediculosis capitis can be through direct transmission, namely contact between the head of an infected person and a healthy

Received 10 December 2024; Accepted 31 December 2024; Published 1 February 2025
 DOI: https://doi.org/10.55700/oahsj.v6i1.62

person. Indirect transmission can be through combs, hats, towels, pillows, mattresses and headscarves (Lukman, Armiyanti, and Agustina 2018). Islamic boarding schools are institutions for students to receive Islamic religious lessons as well as a place to live. Many people think that Islamic boarding schools are dirty places, the environmental conditions are unhealthy, and the lifestyles shown by the students, both female and male, often look dirty. Some bad traits that are considered not to reflect clean and healthy living behavior (PHBS) are the habit of not being able to maintain hygiene, maintain the environment, and maintain their nutritional intake as well as being lazy to clean (Rosdiana, 2021). This pediculosis disease is usually experienced by children aged 3-12 years. At the age of >15 years, a person can still be infected with pediculosis capitis even though they are no longer included in the vulnerable age.

In the United States, pediculosis capitis attacks 6-12 million people every year. While in Thailand, the incidence of school-age children ranges from 12.26-29.76% (Hardiyanti et al. 2015). The incidence of pediculosis in school-age children in developed countries is 8.9%, in developing countries it reaches 16.59-81.9% (Alatas Saleh and Linuwih 2013). The Turkish health agency reported that the incidence of Pediculosis capitis in Turkey reached 16.7% or around 1,569 school-age children with a higher incidence of girls than boys (Sudarsono and Miguna 2019). In Selangor, Malaysia, the incidence of pediculosis was also reported at (15.3%) (Rosa et al. 2021)

In Indonesia itself, there is no definite data on this pediculosis capitis disease, but it is estimated that 15% of Indonesian children experience this head lice problem (Pringgayuda, 2021). In Indonesia, this is also reinforced by research that was also conducted in Jatinangor, Sumedang, West Java by Karimah et al, (2016), where the incidence rate was 55.3. In Bandar Lampung, Sari and Fatriyadi (2017) reported an incidence of pediculosis of (58.6%). And Lukman et al, (2018) in Jember, East Java also showed an incidence of pediculosis of (74.6%) (Rosa et al. 2021). Another study from Jember reported that out of 287 samples at the Miftahul Ulum Islamic boarding school, there were 214 (74.6%) positive for pediculosis capitis (Pramadena et al. 2021). At the Al-Huda Islamic Boarding School in Sragi Village, Songgon District in Banyuwangi, out of 58 female students, 27 or 47% still have head lice (pediculosis capitis), with transmission or spread being quite rapid.

According to the Ministry of Health (2016) clean and healthy living behavior (PHBS) is something that includes knowledge and healthy behavior applied by the community, both private and public, in everyday life. Lack of knowledge and clean and healthy living behavior can affect the level of health towards a healthy and quality life. With increased knowledge, it can improve the level of life and health in order to realize a healthy society in everyday life.

Based on the results of a preliminary study conducted to determine the knowledge of clean and healthy living behavior possessed by female students using a questionnaire, data was obtained that 37 (64%) female students knew that washing their hair 3 times a week can prevent pediculosis capitis, but many female students answered that they did not know that tying their hair when wet, not drying pillows, using shared combs, cleanliness of rooms, clothes, towels and lending hair accessories can cause transmission of pediculosis capitis. Knowledge or cognitive is something that is very important in shaping a person's actions or behavior (overt behavior). If knowledge is balanced by continuous behavior or practice, it will have a meaningful meaning for life. Therefore, knowledge is a supporter in carrying out clean and healthy living behavior (PHBS) (Rosdiana, 2021). Based on the problems above, the author realizes how important education on clean and healthy living behavior is in Islamic boarding schools and is expected to be an effort to prevent pediculosis capitis.

METHODS

Research design is an important thing in research, allowing maximum control of several factors that can influence the accuracy of a result (Nursalam, 2015). This study uses a quantitative design of quasi-experimental pre and post design, namely a study that uses only one experimental group without a comparison group that is measured by a pre-test before being given treatment and a post-test conducted after the treatment. This study analyzes the differences before and after being given education on clean and healthy living behavior in preventing pedisculosis capitis disease using the Wilcoxon Test with a significant value of <0.05 so that H1: There is a difference in the average value of the pre-test and post-test data.

This research has passed the research ethics protocol test conducted by the Research Ethics Commission of the University of STRADA Indoensia with the number: No. 8766/Sket/Ka-Dept/RE/STRADA/V/2024

RESULTS

This study consisted of 51 respondents who were only made into one group to be measured with *a pre-test* before being given treatment and *a post-test* which was carried out after the treatment.

Table 1. PHBS Pre-Test and Post-Test

			Post-Test Tabulation Data X1 (PHBS)	Total
			Good	
Pre-Test Tabulation Data X1 (PHBS)	Not enough	N	4	4
		%	8%	8%
	Enough	N	27	27
		%	53%	53%
	Good	N	20	20
		%	39%	39%
Total		N	51	51
		%	100%	100%

Based on the results of the table above, it can be seen that most respondents during the pre-test had a fairly clean and healthy lifestyle, namely (53%) there were 27 respondents. It is also known that after education, the post-test results showed that all respondents had an increase in good clean and healthy lifestyle behavior. It is also known that there were 27 respondents (53%) from the sufficient category in the pre-test to the good category during the post-test.

Table 2. Pre-Test and Post-Test Pediculosis Capitis

			Post-Test Y1 Tabulation Data (PK)		Total
			Enough	Good	
Pre-Test Y1 Tabulation Data (PK)	Not enough	N	14	8	22
		%	28%	16%	43%
	Enough	N	5	24	29
		%	10%	47%	57%
	Good	N	0	0	0
		%	0%	0%	0%
Total		N	19	32	51
		%	37%	63%	100%

Based on the results of the table above, it can be seen that the results during the pre-test were 29 respondents (57%) who had sufficient pediculosis capitis prevention behavior. And there was an increase in pediculosis capitis prevention behavior after the post-test, there were 32 respondents (63%) who had good pediculosis capitis prevention behavior. It is also known that there were 24 respondents (47%) from the sufficient category in the pre-test to the good category during the post-test.

Table 3. PHBS Pre-Test and Pediculosis Capitis Pre-Test

			Pre-Test Y1 (PK)		Total
			Not enough	Enough	
Pre-Test X1 (PHBS)	Not enough	N	0	0	0
		%	0%	0%	0%
	Enough	N	12	14	26
		%	24%	28%	51%
	Good	N	10	15	25
		%	20%	29%	49%
Total		N	22	29	51
		%	43%	57%	100%

Based on the results of the table above, it can be seen that most respondents have a clean and healthy lifestyle in the sufficient category (51%). Respondents in the clean and healthy lifestyle category have sufficient pediculosis capitis disease prevention behavior in the sufficient category, there are 14 respondents (28%) and the less category is 12 respondents (24%).

Table 4. Post-Test PHBS and Post-Test Pediculosis Capitis

			Post-Test Y1 (PK)		Total
			Enough	Good	
Post-Test X1 (PHBS)	Not enough	N	0	0	0
		%	0%	0%	0%
	Enough	N	0	0	0
		%	0%	0%	0%
	Good	N	19	32	51
		%	37%	63%	100%
Total		N	19	32	51
		%	37%	63%	100%

Based on the results of the table above, it can be seen that most respondents have a good category of clean and healthy living behavior. Respondents who have a good category of clean and healthy living behavior mostly have good pediculosis capitis disease prevention behavior, namely 32 respondents (63%) and respondents in the sufficient category are 19 respondents (37%).

Table 5. PHBS Statistical Test Results

Test Statistics[b]

	PostTest_PHBS- PreTest_PHBS
Z	-6.292[a]
Asymp. Sig. (2-tailed)	.000

a. Based on negative ranks.
b. Wilcoxon Signed Ranks Test

It can be seen that the value of α = 0.000 which can be interpreted that the value (<0.05) and it can be concluded that there is a significant difference before and after education on clean and healthy living behavior. So accept H1 which means there is an influence of education on clean and healthy living behavior on the clean and healthy living behavior of female students at the Al-Huda Islamic Boarding School, Sragi Village, Songgon District, Banyuwangi Regency.

Table 6. Pediculosis Capitis Statistical Test Results

Test Statistics[b]

	PostTest_PK- PreTest_PK
Z	-6.337[a]
Asymp. Sig. (2-tailed)	.000

a. Based on negative ranks.
b. Wilcoxon Signed Ranks Test

It can be seen that the value of α = 0.000 which can be interpreted that the value (<0.05) and it can be concluded that there is a significant difference before and after education on clean and healthy living behavior. So accept H1 which means there is an influence of education on clean and healthy living behavior on the prevention behavior of pediculosis capitis disease of female students at the Al-Huda Islamic Boarding School, Sragi Village, Songgon District, Banyuwangi Regency

DISCUSSION

Based on the results of the Wilcoxon statistical test reveal a significant correlation between the education on clean and healthy living behaviour and the prevention of pediculosis capitis disease at the Al-Huda Islamic Boarding School, located in Sragi Village, Banyuwangi Regency. The test yielded a p-value of $\alpha = 0.000$, which is notably lower than the conventional threshold of 0.05. This result leads to the acceptance of the alternative hypothesis (H1), indicating a clear influence of health education on the prevention of this specific disease. Such a statistical outcome not only underscores the effectiveness of educational interventions but also highlights the importance of promoting health awareness in communal settings, particularly among vulnerable populations like school-aged children.

The observational data further corroborate these findings, revealing that the post-test values significantly exceeded the pre-test values. This increase suggests a marked improvement in the participants' understanding and implementation of clean and healthy living practices. Importantly, there were no instances where the post-test scores fell below those of the pre-test, reinforcing the assertion that the educational initiative had a positive impact. This outcome is particularly noteworthy, as it illustrates the potential for structured educational programmes to effect meaningful behavioural changes in health-related practices.

This study's results resonate with the findings of Rosdiana (2021), whose research, titled "The Relationship between the Level of Knowledge of Clean and Healthy Living Behaviour (PHBS) and the Prevention of Pediculosis Capitis Disease in Female Students at the Daarul Muttaqien 1 Modern Islamic Boarding School, Cadas Sepatan, Tangerang," presents a similar narrative. In her study, a majority of the respondents demonstrated a good level of knowledge regarding clean and healthy living behaviours, which directly correlated with effective prevention strategies against pediculosis capitis. Specifically, 46 respondents, constituting 63.0% of the sample, exhibited a strong understanding of health practices, thereby reducing the incidence of this disease. The Chi-Square test conducted in Rosdiana's research also yielded a p-value of 0.000, leading to the rejection of the null hypothesis (Ho) and acceptance of the alternative hypothesis (Ha). This parallel reinforces the assertion that knowledge and education play a pivotal role in health behaviour modification.

The theoretical framework provided by Notoadmojo (2012) further elucidates the significance of health education. He posits that health education encompasses all planned activities aimed at influencing individuals, groups, or communities, thereby enabling them to adopt behaviours that align with the objectives set forth by educators. This perspective aligns with the understanding that education is not merely the transmission of information but a transformative process that fosters awareness and behavioural change. Suharyat (2009) adds depth to this discussion by defining behaviour as the outcome of interactions between individuals and their environments, shaped by personal experiences. This interplay between education and behaviour underscores the necessity of a comprehensive approach to health education that considers both cognitive and experiential dimensions.

The implications of these findings extend beyond mere statistics; they suggest a need for a concerted effort to enhance the education on clean and healthy living behaviours (PHBS) within educational institutions, particularly in Islamic boarding schools. Such initiatives are crucial for fostering an environment where students are not only aware of the health risks associated with pediculosis capitis but are also equipped with the knowledge and skills necessary to prevent its transmission. The success of health education initiatives is contingent upon various factors, including the target audience's characteristics, their health status, and their levels of attention and interest in the educational content.

To illustrate, a tailored approach that takes into account the specific needs and backgrounds of the students at Al-Huda Islamic Boarding School could enhance the effectiveness of the educational intervention. For instance, incorporating culturally relevant examples and practical demonstrations of hygiene practices could make the learning experience more relatable and impactful. Additionally, engaging students in interactive activities, such as workshops or group discussions, can foster a sense of ownership over their health decisions and encourage peer-to-peer learning.

Moreover, increasing awareness and understanding of clean and healthy living behaviours is essential for students in Islamic boarding schools, as it empowers them to take proactive steps in preventing the transmission of pediculosis capitis. This proactive stance not only benefits the individual students but also contributes to the overall health and well-being of the school community. By instilling these values, educational institutions can cultivate a culture of health consciousness that extends beyond the classroom and into the students' daily lives.

Evidence presented underscores the critical role of education in shaping health behaviours, particularly in the context of preventing pediculosis capitis disease among students at Islamic boarding schools. The statistical significance of the findings, coupled with the theoretical underpinnings of health education, highlights the necessity of structured educational interventions that are tailored to the needs of the target population. As demonstrated by both the Al-Huda and Daarul Muttaqien studies, enhancing knowledge of clean and healthy living behaviours can lead to significant improvements in health outcomes. Ultimately, fostering a culture of health awareness and proactive behaviour among students is essential for the long-term prevention of pediculosis capitis and other communicable diseases. Through continued efforts in health education, we can hope to empower future generations to lead healthier lives, thus contributing to the overall well-being of the community.

CONCLUSION

There is an influence of providing Clean and Healthy Living Education in Preventing Pediculosis Capitis Disease at the Al-Huda Islamic Boarding School, Sragi Village, Songgon District, Banyuwangi Regency.

ACKNOWLEDGMENTS:

Thank you on support from for respondent which has participate in this research activity.

CONFLICTS OF INTEREST

The authors declare that this study is free from any conflicts of interest

REFERENCES

Aisy, R. (2018). *The Relationship between Knowledge Level and Prevention Behavior to the Incidence of Pediculosis Capitis*. 2 (2), 2016.

Alatas Saleh, SS, & Linuwih, S. (2013). Relationship between Level of Knowledge Regarding Pediculosis Capitis and Demographic Characteristics of Students of Islamic Boarding School X, East Jakarta. *Indonesian Medical EJournal*, 1 (1), 53–57.

Anggraini, A., Anum, Q., & Masri, M. (2018). The Relationship between Knowledge Level and Personal Hygiene to the Incidence of Pediculosis Capitis in Foster Children at the Liga Dakwah Orphanage, West Sumatra. *Andalas Health Journal*, 7 (1), 131.

Azim, F., & Andriani, N. (2018). Comparison of Pediculosis Capitis Incidence Rates Between Boys and Girls at Al-Kautsar Al-Akbar Islamic Boarding School, Medan. *Ibnu Sina Biomedika*, 2 (1), 72-79.

Burkhart, CN, Burkhart CG & Morell, DS 2018, *'Infestation' in Dermatology*, *4thedn*, eds. JL Bolognia, JV Schaffer & L. Cerroni, Elsevier, In., China, pp.1507-1509.

Directorate of Health Promotion and Community Empowerment, Ministry of Health of the Republic of Indonesia. (2021) Implementation of PHBS in Islamic Boarding Schools. https://promkes.kemkes.go.id/pelaksanaan-phbs-di-pesantren

Ernyasih, & Sari, MM (2020). Factors Related to Clean and Healthy Living Behavior (PHBS) in MTS Students at the Al-Amanah Al-Gontory Islamic Boarding School in 2020. *Environmental Occupational Health and Safety Journal*, 1 (2), 205–214.

Hardiyanti, NI, Kurniawan, B., & Mutiara, H. (2019). The Relationship between Personal Hygiene and the Incidence of Pediculosis Capitis in Female Students at the Jabal An-Nur Al-Islami Islamic Boarding School, West Teluk Betung District, Bandar Lampung. *Journal of Agromedicine*, 6 (1), 38–45.

Hernawati, DS (2017). *Research Methodology in the Health Sector*

Lukman, N., Armiyanti, Y., & Agustina, D. (2018). Relationship of Pediculosis Capitis Risk Factors to Its Occurrence in Students at Miftahul Ulum Islamic Boarding School, Jember. *Journal of Agromedicine and Medical Sciences*, 4 (2), 102–109.

Lutfiah, FA (2020). The Relationship Between Hair Hygiene and Pediculosis Capitis in Students at the Subulussalam Islamic Boarding School, Plaju District, Palembang. *In Orphanet Journal of Rare Diseases*.

Monalisa, A. (2018). Description of Pediculosis Capitis Incidents in Elementary School Students in Medan Selayang District. In University of North Sumatra

Notoatmodjo, S. (2003). *Education and health behavior*. Jakarta: Rineka Cipta.
Notoatmodjo, S. (2012). *Health Promotion and Health Behavior*. Jakarta: Rineka Cipta
Notoatmodjo, S. (2014). *Health Promotion and Health Behavior*. Jakarta: Rineka Cipta.
Nurkholis. (2013). Education in an Effort to Advance Technology By: Nurkholis Doctor of Education, Alumnus of Jakarta State University Extraordinary Lecturer in the Department of Tarbiyah STAIN Purwokerto. *Journal of Education*, 1 (1), 24–44.
Nursalam. (2015). Nursing Science Research Methodology: A Practical Approach .
PERMENKES 2269. (2011). Regulation of the Minister of Health of the Republic of Indonesia. In Regulation of the Minister of Health No. 2406 YEAR 2011 concerning General Guidelines for Fostering Clean and Healthy Living Behavior (PHBS) .
Rosa, E., Zhafira, A., Yusran, M., & Anggraini, DI (2021). Relationship between Pediculosis Capitis Incidence and Hair Characteristics, Hair Type, and Hair Shampooing Frequency in Female Students of Al-Hikmah Islamic Boarding School, Bandar Lampung. Indonesian Public Health Journal, 13 (2), 220–231.
Rosdiana, N., Rochmani, S., & Septimar, ZM (2021). Relationship between the Level of Knowledge of Clean and Healthy Living Behavior (PHBS) and the Prevention of Pediculosis Capitis Disease in Female Students at the Daarul Muttaqien 1 Modern Islamic Boarding School, Cadas Sepatan, Tangerang. Nusantara Hasana Journal, 1 (3), 10–19.
Rumampuk, MV (2014). The Role of Scalp and Hair Cleanliness in Epidemiological Control. *Jurnal Ners*, 9 (1), 35–42.
Sari, RW (2018). Development of Clean and Healthy Living Behavior (PHBS) Among Santri. In Doctoral dissertation, UIN Walisongo Semarang.
Sudarsono, & Miguna, S. (2019). The Relationship Between Personal Hygiene and the Incidence of Pediculosis Capitis in Female Students of the Pancasila Islamic Boarding School, Bengkulu in 2018. *Journal of Batam University*, 9 (1), 70–81.
Suharyat, Y. (2009). The relationship between attitudes, interests and human behavior. *Region Journal*, 1 (3), 1-19.
Sulistyaningtyas, AR, Ariyadi, T., & Zahro', F. (2020). The Relationship Between Personal Hygiene and the Incidence of Pediculosis at the Al Yaqin Islamic Boarding School, Rembang. *Jurnal Labora Medika*, 25–31.