

The Influence of Health Promotion on The Health Behavior of Students

Sisca Nur Rohima¹, Dodik Hartono², Zainal Abidin³

¹ Bachelor of Nursing Student, Faculty of Health Sciences,
Hafshawaty Zainul Hasan University, Indonesia

² Faculty of Health Sciences, Hafshawaty Zainul Hasan
University, Indonesia

³ Faculty of Nursing, University of Jember, Lumajang, Indonesia

Correspondence should be addressed to:
Sisca Nur Rohima
Acsisisca@gmail.com

Abstract:

Health issues arise from human behavior in interacting with themselves and their environment. The Healthy Indonesia 2025 policy establishes three pillars: healthy behavior, a healthy environment, and equitable, high-quality healthcare services. Living in group settings, such as Islamic boarding schools, poses risks of quickly contracting various diseases, particularly skin diseases like ringworm, itching, tinea versicolor, athlete's foot, and scabies. Transmission occurs when personal and environmental hygiene is not adequately maintained. This study aims to determine the effect of health promotion on health behavior among students at the Raudlotul Falah Islamic Boarding School in Lumajang. The research design employs a pre-experimental method with a pre-test and post-test one-group design. The sample consisted of 32 students selected using purposive sampling. Data collection was conducted using a questionnaire. The Wilcoxon statistical test was used to analyze the data. The study concluded that health promotion positively influenced students' clean and healthy living behavior at the Raudlotul Falah Islamic Boarding School. Before the intervention, all respondents (32 students, 100%) exhibited poor health behaviors. Following health promotion, 13 students (40.6%) remained in the poor health category, 17 students (53.1%) improved to a moderately healthy category, one student (3.1%) reached a healthy category, and one student (3.1%) attained a very healthy category. The impact of health promotion on clean and healthy living behaviors was statistically significant, as evidenced by the Wilcoxon test results, which showed a p-value of 0.000 (<0.05). To enhance these outcomes, implementing solutions such as increased education and counseling programs for students on the importance of healthy lifestyles is recommended. These initiatives could involve distributing educational materials, conducting health campaigns, or holding seminars using print media, games, or simulations.

Article info:

Submitted:
16-12-2024
Revised:
25-01-2025
Accepted:
29-01-2025

Keywords:

health; students; skin diseases; environment; Islamic boarding schools

DOI: <https://doi.org/10.53713/htechj.v1i5.95>

This work is licensed under CC BY-SA License.



INTRODUCTION

National health problems in Indonesia reported every five years through the Riskesdas survey often result from health behaviors that lead to negative impacts. Health issues are consequences of human behavior in interacting with themselves and their environment, including biological, psychological, sociocultural, and even political aspects. The Healthy Indonesia 2025 policy outlines three pillars: healthy behavior, a healthy environment, and equitable, high-quality healthcare services. To achieve these goals, the government has promoted the Clean and Healthy Lifestyle Behavior program through local health institutions using various promotional strategies targeting all segments of society, including educational institutions such as schools, universities, and Islamic boarding schools (Asrina et al., 2022; Kurniyawan et al., 2024; Afandi et al., 2023).

In Indonesia, the prevalence of certain infectious diseases has shown an upward trend compared to the 2013 report, including pneumonia, pulmonary tuberculosis, hepatitis, and filariasis (Widiyani et al., 2022). Living in group settings like Islamic boarding schools poses significant risks for the transmission of various diseases, particularly skin conditions such as ringworm, itching, tinea versicolor, athlete's foot, and scabies. Transmission often occurs when personal and environmental hygiene is poorly maintained. Some Islamic boarding schools are in poor environmental conditions, characterized by dirty bathrooms and toilets, damp surroundings, and inadequate sanitation. These issues are compounded by unhealthy behaviors among students, such as hanging clothes in shared rooms and exchanging personal items like combs and towels (Pona et al., 2021; Ritami et al., 2022).

Students often contract communicable diseases due to air, water, and physical contact transmission. Common illnesses in Islamic boarding schools include airborne diseases like coughs, throat infections, and colds; contact-transmitted conditions such as scabies, fungal infections, and diarrhea; and waterborne diseases like eye infections (Yang et al., 2021; Kumar et al., 2023). A preliminary study conducted on February 20, 2024, at the Roudlotul Jannah Islamic boarding schools found that out of 35 students, nine practiced spitting indiscriminately, and most shared towels and soap bars. Clean and Healthy Lifestyle Behavior indicators have been established for Islamic boarding schools, including No smoking, Using clean water, Washing hands with soap and clean water, Using proper toilets, Maintaining personal hygiene, Eliminating mosquito larvae, Keeping dormitories and the Islamic boarding schools environment clean, Avoiding the consumption of narcotics, psychotropics, and other addictive substances (NAPZA), Not spitting in public places. Students in Islamic boarding schools face unique vulnerabilities compared to formal educational institutions due to their communal living arrangements. All students share the same facilities, infrastructure, and sanitation conditions within the same boarding environment (Hu et al., 2025; Asrina et al., 2022).

Health promotion is a process that enables individuals to take control of and improve their health. This definition implies that health promotion efforts require community empowerment to maintain, enhance, and protect health at individual and community levels. Therefore, the vision of health promotion in Indonesia aligns with the country's broader health development vision: increasing awareness, willingness, and ability to lead a healthy lifestyle for every individual, ultimately achieving the highest possible standard of public health as an investment in productive human resources, both socially and economically (Pia et al., 2024; Aisyiah et al., 2021; Jalali et al., 2024).

Health behavior refers to actions taken by individuals that can positively or negatively impact their health status. Behaviors that tend to deteriorate health include smoking, physical inactivity, alcohol consumption, unhealthy eating habits, and more (Rogova et al., 2024; Nikmah et al., 2023; Laturette et al., 2023). community involvement is essential and inevitable in public health activities. Collaboration among researchers, academics, and impartial community leaders free from conflicting interests is vital for implementing health promotion activities (Gafari et al., 2024; Widiyani et al., 2022; Fredriksson et al., 2025). Health promotion is a key strategy for improving health behaviors, which in turn enhances the quality of life for individuals, including students; adequate health promotion initiatives and awareness programs are necessary to foster positive health behaviors and, ultimately, contribute to improving public health standards.

METHOD

This research employs a pre-experimental design with the type of pre-test post-test one-group design. The study observes one group of respondents under two conditions, without using a

comparison group, enabling each subject to act as their control. The population comprises all 35 students at the Islamic boarding school Roudlotul Falah in Lumajang during July 2024. A purposive sampling technique is used, selecting 32 respondents who meet specific inclusion criteria, such as willingness to participate, being aged 15-22 years, and having the ability to read and write. Data collection involves questionnaires validated using Pearson's correlation and tested for reliability with Cronbach's alpha, showing values above the standard threshold (0.6).

Data will be analyzed statistically using SPSS version 25, employing descriptive and inferential analyses to measure the impact of health promotion on behavioral changes among the students. Ethical approval for the study has been granted by Hasanuddin University's Research Ethics Committee (No. 294/KEPK-UNHASA/VIII/2024). This ensures adherence to principles such as informed consent, confidentiality, voluntary participation, and avoiding harm to participants. Data is used solely for research purposes, with participants free to withdraw at any point.

RESULT

Table 1. Characteristics of Respondents (n=32)

Characteristics	Frequency	Percentage (%)
Age		
15-17 year	15	46.8
18-20 year	17	53.2
21-23 year	0	0
Gender		
Male	32	100
Female	0	0
Education		
Elementary School	11	18.3
Junior High School	9	15
Senior High School	20	33.3
Higher Education	16	26.7
Length of Stay in Boarding School		
0-1 year	13	40.6
1-3 years	7	21.9
3-5 years	12	37.5

The characteristics of the respondents in this study show a diverse demographic. Regarding age, most respondents are between 18-20 years old, comprising 53.2% of the total sample, while 46.8% are aged 15-17. No respondents were in the 21-23 year age group. Regarding gender, all respondents were male, accounting for 100% of the sample, with no female participants.

In terms of education, most respondents had completed senior high school (33.3%), followed by those who attended higher education (26.7%), elementary school (18.3%), and junior high school (15%). When considering the length of stay in the boarding school, the distribution was relatively even: 40.6% of respondents had stayed for 0-1 year, 37.5% for 3-5 years, and 21.9% for 1-3 years. These characteristics provide a clear demographic profile of the participants in this study.

Table 2. Distribution of Health Behavior Frequency Before And After Health Promotion

Health Behavior	Before		After	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Poor health	32	100	13	40.6
Fair Health	0	0	17	53.1
Good health	0	0	1	3.1
Very good health	0	0	1	3.1

Before the health promotion intervention, all 32 respondents (100%) reported having poor health, with no participants in the fair, good, or very good health categories. After the health promotion intervention, the distribution of health behavior changed significantly. 40.6% of respondents (13 individuals) reported poor health, while the majority (53.1%, 17 respondents) reported fair health. A small proportion, 3.1% (1 respondent), reported good health, and another 3.1% (1 respondent) reported very good health. This indicates an improvement in health behaviors following the health promotion intervention, with most respondents experiencing a shift toward better health categories.

Table 3. Wilcoxon Analysis Results

Variable	Sig. 2-tailed
The Influence of Health Promotion on Clean and Healthy Living Behaviors	0.000

The results indicate a significant effect of health promotion on the behaviors related to clean and healthy living among Islamic boarding schools Roudlotul Falah students. With a p-value of 0.000 (2-tailed), the statistical analysis shows that health promotion positively impacts health behaviors, such as handwashing, healthy food, proper sanitation, waste disposal, and avoiding harmful substances. This significant effect suggests that health promotion activities can encourage students to adopt better hygiene and health practices, improving their overall health behavior.

DISCUSSION

Health Behavior of Students at Roudlotul Falah Islamic Boarding School in Lumajang Before Health Promotion Actions

The results of this study show that 32 (100%) of the students exhibited poor health behaviors. This was based on the questionnaire scores before the health promotion intervention, which were below 65. Many of the students still engaged in unhealthy behaviors, such as smoking within the boarding school environment and not practicing the 6-step handwashing method. This situation is in line with the common stigma surrounding Islamic boarding schools, which are often perceived as lacking in hygiene.

The factors affecting cleanliness in these institutions are complex, with a lack of awareness regarding the importance of health being a significant factor. Low awareness of health matters creates new problems, and a careless attitude often neglects health facilities and resources. Insufficient exposure to information, low awareness, poor hygiene practices among students, and poor sanitation in schools result in limited knowledge, negative attitudes, and unsanitary behaviors, making the environment susceptible to various diseases (Kabir et al., 2021; Cha et al., 2021). The researcher assumes that these issues have persisted over time and led to normalizing unhealthy practices. If left unaddressed, this could result in more complex problems in the future.

Health Behavior of Students at Roudlotul Falah Islamic Boarding School in Lumajang After Health Promotion Actions

The results of this study indicate that after health promotion interventions, 13 (40.6%) of the students scored as having poor health (48-65). There were 17 (53.1%) who scored as having fair health (66-83), 1 (3.1%) students scored as having good health (84-93), and 1 (3.1%) scored as very healthy (94-96). It was noted that 13 students still had poor health behaviors after the health promotion intervention. Behaviors such as smoking in the boarding school area, suffering from skin rashes, and not maintaining clean rooms were still present. The skin rashes most likely resulted from contact with students who did not follow healthy practices.

It is suspected that the closed behavior of some students played a role in preventing the full impact of health promotion efforts. Students with closed-off behavior may not openly show that they are following the guidance provided in the health promotion. The response to health promotion, is not always observable by others. Responses are often internal, involving feelings, attention, perception, attitudes, and knowledge related to health promotion stimuli (Beca-Martínez et al., 2022).

However, after the health promotion activities, 17 students exhibited fair health behaviors, 1 showed good health, and 1 showed very good health. This suggests that there was an improvement in health behaviors among the students following the intervention. Health promotion influences behavior change. The knowledge gained during the health promotion sessions highlighted the importance of personal and environmental health maintenance (Levin-Zamir et al., 2021).

Additionally, the behavior change among the students became evident in their eating habits and environmental cleanliness. After the health promotion, the students began adopting healthier eating habits, such as consuming rice, vegetables, and side dishes three times a day. Areas in the boarding school -like the bathrooms and wudhu (ablution) spaces, which had been prone to water stagnation- started applying the 3M strategy: draining, burying, and covering. These various changes occurred after the health promotion intervention. The researcher believes these behavioral changes resulted from the students' positive response to the health promotion efforts, as they adapted their behaviors in alignment with the health promotion message (Overt Behaviour).

The Impact of Health Promotion on the Health Behavior of Students at Roudlotul Falah Islamic Boarding School

The study results show that based on the Wilcoxon statistical test, the 2-tailed significance value obtained was $0.000 < 0.05$, which means the hypothesis in this study is accepted. Health promotion significantly impacts the health behavior of students at Roudlotul Falah Islamic Boarding School. Health promotion aims to improve public health and prevent diseases through various strategies and activities. Health promotion is the process of enabling people to control over and improve their health.

Clean and Healthy Living Behavior refers to all health behaviors carried out due to personal awareness, enabling individuals and families to care for their health and actively participate in community activities (Macassa, 2022; Nisar et al., 2022). There are three factors influencing the success of health promotion namely knowledge, attitude, and behavior (Li et al., 2021). Prior to the health promotion intervention, knowledge about health in the Roudlotul Falah Islamic Boarding School was relatively limited as there had been no previous health promotion. The curiosity about health issues and strategies for resolving them became one of the success factors for health promotion in the school.

The second factor influencing the success of health promotion is attitude. As the target of health promotion, the students exhibited a positive attitude in accepting and responding to new

information. This attitude helped ensure the success of the health promotion efforts (Lisnyj et al., 2020).

The researcher assumes that the responses given by the students at Roudlotul Falah are overt behaviors, meaning open responses, indicating that the students were receptive to new knowledge in the form of health promotion. This led to changes in their health behavior. Health promotion is a form of rehabilitation aimed at preventing the continuation of health issues. Without health promotion, unhealthy behaviors would persist and worsen over time.

CONCLUSION

The study shows that before health promotion, the students at Roudlotul Falah Islamic Boarding School exhibited poor health behaviors, such as smoking and improper handwashing. After the intervention, improvements were observed, with many students adopting healthier habits, like better eating and cleanliness practices. Although some still showed poor health behaviors, the promotion significantly impacted their health behaviors, enhancing knowledge, attitudes, and actions. The conclusion is that health promotion effectively improves students' health behaviors, prevents unhealthy practices, and promotes better hygiene and health habits. It is recommended that health promotion programs continue to be strengthened for sustained improvements.

ACKNOWLEDGEMENT

I sincerely thank Roudlotul Falah Islamic Boarding School for their invaluable support and cooperation throughout this research. I sincerely thank the school's management, teachers, and all the Santri for their active participation and willingness to engage in the health promotion activities, which played a crucial role in the success of this study.

The hospitality and assistance provided by the staff have greatly facilitated the research process, and their dedication to fostering a healthy and supportive environment for Santri is commendable. Without their collaboration, this research would not have been possible.

Thank you once again to everyone at Roudlotul Falah Islamic Boarding School for your contributions and commitment to improving the health and well-being of the Santri. Your support has been invaluable in achieving the goals of this study.

CONFLICT OF INTEREST

There are no conflicts of interest in this study. The author declares that this research was conducted objectively and that no personal, financial, or professional relationships could influence the results or interpretation of the study. All research activities were carried out with high academic and professional integrity.

REFERENCES

- Afandi, A., Nur, K. R. M., Kurniawan, D. E., & Kurniyawan, E. H. (2023). Clean and Healthy Living Behavior (Washing Hands with Soap) with a Peer Group Support Approach to the Community. *International Journal of Community Services*, 1(1), 22–27. <https://doi.org/10.61777/injcs.v1i1.7>
- Aisyiah, A., Wowor, T. J., & Ahufruan, Y. (2021). The Effect of Health Promotion of Animation Videos on Behavior of Prevention of Dengue Fever In the Work Area of Health Center, Pasar

Minggu District South Jakarta City Year 2021. *Nursing and Health Sciences Journal (NHSJ)*, 1(2), 107-111. <https://doi.org/10.53713/nhs.v1i2.41>

- Asrina, A., Sutriani, S., Tenri, A., Yusriani, Y., & Palutturi, S. (2022). The Effect Of Health Promotion Media On Breastfeeding Mothers' Attitude About Exclusive Breastfeeding In Bone Regency, South Sulawesi. *Open Access Macedonian Journal Of Medical Sciences*, 10(E), 894–899. <https://doi.org/10.3889/Oamjms.2022.8547>
- Beca-Martínez, M. T., Romay-Barja, M., Falcón-Romero, M., Rodríguez-Blázquez, C., Benito-Llanes, A., & Forjaz, M. J. (2022). Compliance with the main preventive measures of COVID-19 in Spain: The role of knowledge, attitudes, practices, and risk perception. *Transboundary and Emerging Diseases*, 69(4), e871-e882. <https://doi.org/10.1111/tbed.14364>
- Cha, Y. E., Fu, Y. Z., & Yao, W. (2021). Knowledge, practice of personal hygiene, school sanitation, and risk factors of contracting diarrhea among rural students from five western provinces in China. *International Journal of Environmental Research and Public Health*, 18(18), 9505.
- Fredriksson, M., Sampaio, F., & Moberg, L. (2025). The impact of patient and public involvement in healthcare services: A conceptual review spanning social sciences and health sciences. *SSM - Qualitative Research in Health*, 7, 100517. <https://doi.org/10.1016/j.ssmqr.2024.100517>
- Gafari, O., Bahrami-Hessari, M., Norton, J., Parmar, R., Hudson, M., Ndegwa, L., Agyapong-Badu, S., Asante, K., Alwan, N., McDonough, S., Tully, M., Calder, P., Barker, M., & Stokes, M. (2024). Building trust and increasing inclusion in public health research: Co-produced strategies for engaging UK ethnic minority communities in research. *Public Health*, 233, 90-99. <https://doi.org/10.1016/j.puhe.2024.05.007>
- Hu, H., Zhao, Y., Guo, D., Deng, Y., Luo, H., Hao, Y., Sun, C., & Yu, K. (2025). Cognitive function differs across healthy lifestyle behavior profiles: A 10-year population-based prospective cohort study. *The Journal of Nutrition, Health and Aging*, 29(2), 100487. <https://doi.org/10.1016/j.jnha.2025.100487>
- Jalali, A., Rajati, F., & Kazeminia, M. (2024). Empowering the older people on self-care to improve self-efficacy based on Pender's health promotion model: A randomized controlled trial. *Geriatric Nursing*, 61, 574-579. <https://doi.org/10.1016/j.gerinurse.2024.12.020>
- Kabir, A., Roy, S., Begum, K., Kabir, A. H., & Miah, M. S. (2021). Factors influencing sanitation and hygiene practices among students in a public university in Bangladesh. *PLoS One*, 16(9), e0257663. <https://doi.org/10.1371/journal.pone.0257663>
- Kumar, P., Singh, A., Arora, T., Singh, S., & Singh, R. (2023). Critical review on emerging health effects associated with the indoor air quality and its sustainable management. *Science of The Total Environment*, 872, 162163. <https://doi.org/10.1016/j.scitotenv.2023.162163>
- Kurniyawan, E. H., Hykal Adlan Zein, A., Selvia Amelinda Novianti, Ivada Dea Nintiarso, Rosyidi Muhammad Nur, K., Dicky Endrian Kurniawan, Tri Afandi, A., & Ida Zuhroidah. (2024). Clean and Healthy Living Behavior to Prevent Acute Respiratory Infection among Farmer's Families. *Health and Technology Journal (HTechJ)*, 2(4), 424–433. <https://doi.org/10.53713/htechj.v2i4.216>
- Laturette, S., Novelia, S., & Syamsiah, S. (2023). The Relationship Between Knowledge and Behavior Regarding COVID-19 Prevention among Elderly. *Nursing and Health Sciences Journal (NHSJ)*, 3(3), 285-288. <https://doi.org/10.53713/nhsj.v3i3.145>
- Levin-Zamir, D., Sorensen, K., Su, T. T., Sentell, T., Rowlands, G., Messer, M., Pleasant, A., Saboga Nunes, L., Lev-Ari, S., & Okan, O. (2021). Health promotion preparedness for health crises – a 'must' or 'nice to have'? Case studies and global lessons learned from the COVID-19 pandemic. *Global Health Promotion*. <https://doi.org/10.1177/1757975921998639>
- Li, J., Liu, X., Zou, Y., Deng, Y., Zhang, M., Yu, M., ... & Zhao, X. (2021). Factors affecting COVID-19 preventive behaviors among university students in Beijing, China: an empirical study based on the extended theory of planned behavior. *International Journal of Environmental Research and Public Health*, 18(13), 7009. <https://doi.org/10.3390/ijerph18137009>

- Lisnyj, K. T., Pearl, D. L., McWhirter, J. E., & Papadopoulos, A. (2020). Exploration of Factors Affecting Post-Secondary Students' Stress and Academic Success: Application of the Socio-Ecological Model for Health Promotion. *International Journal of Environmental Research and Public Health*, 18(7), 3779. <https://doi.org/10.3390/ijerph18073779>
- Macassa, G. (2022). Can Sustainable Health Behaviour Contribute to Ensure Healthy Lives and Wellbeing for All at All Ages (Sdg 3)? A Viewpoint. *Journal of Public Health Research*. <https://doi.org/10.4081/jphr.2021.2051>
- Nikmah, Iis Hanifah, & Mega Silvan Natalia. (2023). The Relationship between Adolescent Girls' Behavior on Reproductive Health and the Motivation to Do Premarital Health Examinations. *Health and Technology Journal (HTechJ)*, 1(3), 259–265. <https://doi.org/10.53713/htechj.v1i3.27>
- Nisar, M., Khan, A., & Kolbe-Alexander, T. L. (2022). 'Cost, culture and circumstances': Barriers and enablers of health behaviours in South Asian immigrants of Australia. *Health & Social Care in the Community*, 30(5), e3138-e3149. <https://doi.org/10.1111/hsc.13759>
- Pia, C. O., Anna Siauta, J., & Suprihatin. (2024). Effect of Health Promotion Using Leaflets on Childbirth Readiness in Pregnant Women. *Health and Technology Journal (HTechJ)*, 2(2), 139–144. <https://doi.org/10.53713/htechj.v2i2.166>
- Pona, H. T., Xiaoli, D., & Ayantobo, O. O. (2021). Environmental health situation in Nigeria: Current status and future needs. *Heliyon*, 7(3), e06330. <https://doi.org/10.1016/j.heliyon.2021.e06330>
- Ritami, A. R., Rizkika, R., Atika, N., Tresia, S., Saputra, G. D., & Permatasari, J. (2022). Counseling on Scabies Skin Disease at Al-Ikhwan Islamic Boarding School, Mekar Jaya Village, Muaro Jambi Regency. *KESANS: International Journal of Health and Science*, 1(9), 846-852. <https://doi.org/10.54543/kesans.v1i9.90>
- Rogova, A., Lowenstein, L. M., Reitzel, L. R., Casey, K., & Volk, R. J. (2024). Missed Opportunities for Lung Cancer Screening among Behavioral Health Patients with Elevated Cigarette Smoking Rates: Lung Cancer Screening and Behavioral Health. *CHEST*. <https://doi.org/10.1016/j.chest.2024.11.039>
- Yang, F., Sun, Y., Wang, P., Weschler, L. B., & Sundell, J. (2021). Spread of respiratory infections in student dormitories in China. *Science of The Total Environment*, 777, 145983. <https://doi.org/10.1016/j.scitotenv.2021.145983>
- Widiyanti, L. R., Dias, V. A., Christina, C. G., Restha, I. G. A., & Devis, V. R. R. (2022). Faktor Yang Mendasari Perilaku Kepatuhan Mahasiswa Di Yogyakarta Terhadap Protokol Kesehatan Covid-19 Pendekatan Com-B Theory Of Change. *Journal Of Health Promotion And Service Management*, 1(1), 46–57. <https://doi.org/10.52232/Jhpsm.V1i1.60>