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The Influence of PHBS Education in Preventing Infectious Diseases: Tuberculosis

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ABSTRAK

Tuberkulosis merupakan penyebab utama kematian akibat penyakit menular. Perilaku hidup bersih dan sehat atau PHBS berperan penting dalam pencegahan penyakit menular, termasuk tuberkulosis yang masih menjadi masalah kesehatan global. Penelitian ini bertujuan untuk mengetahui pengaruh edukasi PHBS terhadap pencegahan penyakit menular: tuberkulosis. Penelitian ini dilakukan di Dusun Konja Selatan, Pamboborang, Kabupaten Majene, Sulawesi Barat pada bulan Mei 2025. Jumlah responden sebanyak 21 orang. Instrumen penelitian menggunakan kuesioner pengetahuan pre dan post-tes untuk mengukur pengetahuan responden sebelum dan sesudah menerima edukasi PHBS. Data dianalisis menggunakan analisis frekuensi pengetahuan sebelum dan sesudah menerima edukasi PHBS. Sebelum dilakukan edukasi PHBS mengenai pencegahan penyakit menular tuberkulosis, 71.4% responden memiliki pengetahuan cukup dan 23.8% memiliki pengetahuan baik, sementara 4.8% memiliki pengetahuan kurang. Hasil post-test setelah edukasi menunjukkan bahwa mayoritas pengetahuan masyarakat 62% baik dan 38% memiliki pengetahuan cukup. Edukasi PHBS memiliki pengaruh terhadap pencegahan penyakit menular tuberkulosis. Pengetahuan warga Dusun Konja Selatan meningkat setelah dilakukan penyuluhan tentang pencegahan penyebaran penyakit menular tuberkulosis.

Keyword: pendidikan kesehatan, penyakit menular, PHBS, tuberkulosis.

ABSTRACT

Tuberculosis is a leading cause of death from infectious diseases. Clean and healthy living behavior or PHBS plays a crucial role in preventing infectious diseases, including tuberculosis is an infectious disease that remains a global health problem. This study aims to determine the effect of PHBS education on preventing infectious diseases: tuberculosis. This research was conducted in Konja Selatan Hamlet, Pamboborang, Majene Regency, West Sulawesi, in May 2025. Twenty-one respondents were recruited. The research instrument used a pre- and post-test knowledge questionnaire to measure respondents' knowledge before and after receiving PHBS education. Data were analyzed using frequency analysis of knowledge before and after receiving PHBS education. prior to receiving PHBS education regarding the prevention of infectious diseases tuberculosis, the majority 71.4% had sufficient knowledge. Furthermore, 23.8% had good knowledge, while 4.8% had poor knowledge. Following the education, post-test results showed that the majority of the community's knowledge was good 62% and 38% had sufficient knowledge. PHBS education has an impact on preventing the infectious disease tuberculosis. The knowledge of the people of South Konja Hamlet increased after conducting outreach on preventing the spread of infectious diseases tuberculosis.

Keywords: health education, infectious diseases, PHBS, tuberculosis.

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INTRODUCTION

Clean and healthy living behavior or PHBS plays a crucial role in preventing infectious diseases, including tuberculosis is an infectious disease that remains a global health problem. Tuberculosis is a leading cause of death from infectious diseases and its prevalence is quite high in at-risk countries,

particularly in Asia and Africa (Supriatun & Insani, 2021; Marini et al., 2023). In Indonesia, tuberculosis prevalence rate is estimated at 354 cases per 100,000 people (Ayu & Rahmayati, 2023). This indicates that for every 100,000 people, there are 354 individuals suffering from tuberculosis. With sufficient knowledge, the community can adopt effective PHBS, thereby reducing the risk of tuberculosis transmission and improving overall health (Yetti R. et al., 2023). Tuberculosis is an infectious disease that remains a global health problem and can be controlled through effective preventive measures, including public education on healthy lifestyles (Yahya et al, 2023). Healthy lifestyles education aims to increase public knowledge about preventive measures that can reduce the risk of tuberculosis transmission.

A preventive approach through education and outreach is essential to increase public knowledge about tuberculosis and how to prevent it, especially in areas with high prevalence (Ayu & Rahmayati, 2023; Sunuh et al., 2024). Therefore, health programs that target public education on tuberculosis prevention are crucial to reduce prevalence rates and address the challenges facing tuberculosis elimination in Indonesia and globally.

Implementing healthy lifestyles PHBS within the family is a significant first step. Therefore, hygiene practices such as regular handwashing and maintaining a clean home environment are crucial to minimizing the development and transmission of tuberculosis. This study aims to determine the effect of PHBS education on preventing infectious diseases: tuberculosis.

METHOD

This research was conducted in Konja Selatan Hamlet, Pamboborang, Majene Regency, West Sulawesi, in May 2025. Twenty-one respondents were recruited. The intervention provided was in the form of education on preventing the infectious disease tuberculosis using the lecture method. The research instrument used a pre- and post-test knowledge questionnaire to measure respondents' knowledge before and after receiving PHBS education. Data were analyzed using frequency analysis of knowledge before and after receiving PHBS education.

FINDING AND DISCUSSION

In this study, pre- and post-tests were conducted to determine differences in community knowledge before and after PHBS education. The pre and post-test results were then analyzed using frequency distributions. The analysis of pre- and post-test knowledge gains is shown in the following table:

Table 1. Frequency distribution of knowledge before and after PHBS education

Level of knowledge	Pre test	Percentage	Post test	Percentage
Good	5	23.8 %	13	62 %
Enough	15	71.4 %	8	38 %

Less	1	4.8 %	0	0 %
Total	21	100 %	21	100 %

The table above shows that of the 21 respondents of South Konja Hamlet, prior to receiving PHBS education regarding the prevention of infectious diseases tuberculosis, the majority 71.4% had sufficient knowledge. Furthermore, 23.8% had good knowledge, while 4.8% had poor knowledge. Following the education, post-test results showed that the majority of the community's knowledge was good 62% and 38% had sufficient knowledge. This indicates that the community's knowledge of South Konja Hamlet increased after the education regarding the prevention of infectious diseases tuberculosis.

These results align with previous research, which showed an increase in knowledge of up to 93.52% in several studies, accompanied by changes in healthy behaviors such as cough etiquette, mask use, and maintaining environmental cleanliness (Marniati, 2025). Furthermore, other research has also shown an effect of tuberculosis education on mask use among tuberculosis patients (Krisdianto et al., 2025). This is also in line with previous research, which showed that after five days of implementation, participants' knowledge improved from 46% to 86%, from lacking knowledge. Success factors in providing education include family support, motivating patients to take their medication regularly, checking in when medication runs out, and monitoring patients to maintain high-risk behaviors (Andriani & Hidayat, 2024).

The success of educational strategies on healthy lifestyles, particularly those related to tuberculosis prevention, lies in increasing public knowledge and awareness. Research shows that community outreach can increase their understanding of the dangers of tuberculosis and necessary preventive measures (Yahya et al, 2023). In this context, educational programs should focus on explaining tuberculosis symptoms, how it is transmitted, and preventive measures, such as maintaining personal and environmental hygiene, as well as the importance of supporting vaccination programs (Eriskawati et al., 2024).

Healthy lifestyles education aims not only to provide information but also to encourage positive behavioral changes. In a Studies have shown a significant increase in knowledge after outreach (Platini, 2023). For example, one study noted that after outreach, residents demonstrated a better understanding of how to prevent tuberculosis transmission, including the importance of clean and healthy living behaviors such as proper handwashing, mask use by tuberculosis sufferers, and good cough etiquette measures (Yahya et al, 2023).

One approach proven effective in increasing public awareness about healthy lifestyles (PHBS) and tuberculosis prevention is through the use of audiovisual media and participatory methods, which can reach a wide range of groups and increase their interest in health information (Pebiansyah et al., 2023; Fitriyani et al., 2023). For example, training in campaign video production for health cadres has been successful in educating the public about the risks of tuberculosis and its prevention (Fitriyani et al., 2023). Furthermore, regular evaluation of community knowledge and attitudes after educational activities It is

also important to ensure the effectiveness of the program being implemented (Cumayunaro & Hidayati, 2020; Amalia et al., 2023).

Education about PHBS encompasses various aspects, such as proper handwashing practices, mask use and maintaining environmental cleanliness. In the context of tuberculosis, one important step in preventing transmission is implementing preventive measures delivered through effective education programs. One study showed that effective PHBS education can improve community knowledge about tuberculosis prevention, with results showing significant improvements in understanding and prevention practices in households (ElHanim & Oktavianti, 2023). Varied teaching methods, such as the use of multimedia and interactive methods, can increase the effectiveness of PHBS education. PHBS plays a crucial role in increasing public knowledge about disease prevention, including tuberculosis. PHBS aims to raise individuals' awareness, willingness, and ability to implement good health practices in their daily lives. This is particularly relevant given that tuberculosis is a contagious disease that can be prevented through proper understanding and action.

The results of the study show that the implementation of PHBS education can increase the knowledge of mothers, who play a key role in maintaining family health. Mothers with good knowledge of PHBS are more effective in implementing tuberculosis prevention measures, such as maintaining environmental cleanliness and practicing healthy lifestyles at home. One relevant study noted that after a PHBS education program, participants' knowledge scores increased significantly, demonstrating the effectiveness of outreach in increasing knowledge among the target group (Shabrina et al., 2022).

PHBS education focused on family groups, including mothers, helps deepen understanding of tuberculosis prevention measures. For example, research shows that educational interventions that include practical and theoretical explanations of PHBS have a positive impact on health behaviors, which are directly related to infection prevention efforts, including tuberculosis (Sujoko et al, 2023). Furthermore, module-based education has also been shown to be effective in increasing knowledge about respiratory infections, including tuberculosis (Alwi et al., 2023).

An educated community not only improves individual knowledge but also encourages collective action in Community engagement strengthens collaborative efforts to prevent tuberculosis transmission. Various educational methods, from multimedia to direct outreach, play a crucial role in how the public receives health information (Rokhmayanti et al., 2022). It is crucial to ensure that messages about healthy lifestyles or PHBS and tuberculosis prevention are clearly communicated and accepted by all levels of society (Anggraeni et al., 2022). Overall, the results of various studies indicate that education about PHBS is very influential in increasing knowledge about health practices that can help prevent tuberculosis and requires ongoing support to reach and educate the community effectively.

Education also serves as a means to raise individual and community awareness of the importance of implementing PHBS in daily life. Community involvement in educational programs, whether through

seminars, workshops, or field activities, is essential to ensure the success of tuberculosis and other infectious disease prevention programs (Anggraeni et al., 2022). With increased knowledge and awareness fostered through education, it is hoped that the number of tuberculosis cases will decrease and communities will become healthier and more productive (Rokhmayanti et al., 2022).

The intervention provided in this research was education on tuberculosis prevention using the lecture method. The lecture method, in the context of clean and healthy living behavior or PHBS education, is closely related to increasing public knowledge about tuberculosis prevention. Generally, lectures are an easy and economical method for conveying health information to the public. Research shows that the lecture method can efficiently increase participants' knowledge about various aspects of health, including tuberculosis (Safitra et al., 2022).

In implementing PHBS education for tuberculosis prevention, lectures can be accompanied by interactions, such as questions and answers, that can encourage more active participant involvement. This is important because interaction can strengthen understanding of the concepts discussed and provide an opportunity to clarify potentially confusing information. Research has found that after counseling using the interactive lecture method, there was a significant increase in knowledge about tuberculosis among participants (Jatmiko et al, 2018).

The effectiveness of the lecture method in the context of PHBS education is also supported by research showing that this method increases parents' knowledge of nutrition and child health, which are part of PHBS. In this regard, the lecture method, complemented by supporting media (such as visual presentations), can increase the material's appeal and facilitate participant understanding. This suggests that although the lecture method is considered traditional, the information delivery process can be modified to increase acceptance and understanding (Mufidah et al., 2023).

However, there are concerns that the lecture method tends to be one-way, where participants receive information without a high level of active engagement. Therefore, it is important to combine the lecture method with other methods, such as group discussions, games, or practical activities, to achieve better results in improving community knowledge and behavior regarding PHBS and tuberculosis prevention (Laela et al, 2022).

Overall, the use of lectures in PHBS education has proven effective in increasing public knowledge and awareness of tuberculosis prevention. To achieve optimal results, it is recommended that lectures be balanced with interactive methods that encourage active community participation and involvement. The importance of PHBS education lies in its ability to provide individuals with the information they need to take appropriate preventive measures against infectious diseases. Through education, communities are not only provided with knowledge but also motivated to play an active role in maintaining their personal and environmental health, which in turn contributes to the control of tuberculosis and other infectious diseases (Anggraeni et al., 2022).

Continuous outreach through various methods can also raise awareness of the importance of tuberculosis prevention, especially in areas with high transmission rates. In this regard, the role of the government and health institutions is crucial in providing the necessary support for the development of routine PHBS education programs, which can increase public knowledge and awareness in facing health challenges, including tuberculosis prevention (Siregar et al, 2023; Suprapto & Arda, 2021).

The increase in community knowledge following education is due to a better understanding of the basic concepts of PHBS regarding infectious diseases tuberculosis after receiving the information. This increased knowledge is expected to be the starting point for behavioral change toward a clean and healthy lifestyle.

CONCLUSIONS

PHBS education has an impact on preventing the infectious disease tuberculosis. The knowledge of the people of South Konja Hamlet increased after conducting outreach on preventing the spread of infectious diseases tuberculosis.

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