


Effectiveness of Leaflet Media on PHBS Knowledge and Attitudes in The Elderly and Pre-Elderly in Jogokariyan Village

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Article Info	ABSTRACT
Keywords: PHBS, Elderly, Knowledge, Attitude.	PHBS (Clean and Healthy Living Behavior) involves conscious actions by individuals, families, and communities to maintain health and prevent disease. Increasing awareness and attitudes toward PHBS can be achieved through health education programs, including the use of leaflets to enhance knowledge and attitudes among the elderly and pre-elderly. This study aims to increase awareness and understanding of the elderly and pre-elderly about PHBS in Jogokariyan Village RW 10. This quasi-experimental study used a one-group pretest-posttest design in Jogokariyan Village RW 10 (February 2025). The population included all elderly and pre-elderly residents, with 27 respondents selected through purposive sampling. Data were analyzed using univariate and bivariate methods, including paired sample t-tests. The average attitude score increased from 30.56 in the pretest to 32.07 in the posttest, showing a difference of 1.51. Univariate analysis showed that after PHBS education using leaflet media, 70.4% of households showed good to very good knowledge compared to the pre-education level. Likewise, the percentage of households that have a positive attitude towards PHBS increased from 40.7% to 63.0% after receiving leaflet-based education. The results of the paired t-test on the knowledge variable obtained a p value of 0.000 (> 0.05) and an attitude of 0.002 (> 0.05). This shows that there is a significant difference between knowledge and attitudes before and after health education using leaflet media. This shows a significant relationship between attitudes, knowledge and PHBS education of the elderly and pre-elderly using leaflet media. Based on the results of counseling activities using leaflet media, it can be concluded that the use of this educational media has proven effective in increasing knowledge and attitudes about Clean and Healthy Living Behavior in the elderly and pre-elderly in Jogokariyan Village.
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INTRODUCTION

Clean and Healthy Living Behavior (PHBS) is a collection of behaviors carried out consciously by individuals and communities to maintain health, improve quality of life, and prevent disease. Based on the 1984 constitution of the World Health Organization (WHO),

optimal health is a basic right of every individual regardless of race, religion, political views, or socioeconomic status. Efforts to improve health and prevent disease are universal rights that need to be encouraged for all groups in society, including the elderly and pre-elderly (D. Julianti, Maryanti, & Efendi, 2022). The PHBS movement aims to improve public health through individual contributions in daily PHBS practices, as stated in Susianti's 2022 research (Susianti, Rudiyanto, Windarti, & Zuraida, 2022). Sustainable Development Goal 6 highlights that billions of people worldwide still lack access to safe water management and adequate environmental sanitation (W, Supadi, Widjijati, & Prasetyo, 2022). The health problems that have emerged today are caused by suboptimal PHBS practices.

Implementing a clean and healthy lifestyle is one of the effective strategies in preventing disease. An unhealthy environment and an unsupportive lifestyle increase the risk of various diseases (SulisyaniAji et al., 2022). PHBS involves important aspects such as personal hygiene, environmental hygiene, and healthy behavior that support improving the quality of life. Health education programs aim to disseminate information about PHBS to individuals, groups, and communities through various promotional media. Optimal implementation of this program can contribute greatly to disease prevention and improving the quality of public health (Nasution, 2020). Health promotion media, both print and electronic, are important means of conveying health messages to the community to encourage positive behavioral changes. This approach also encourages individuals to be actively involved in health-related decision-making through the provision of ongoing information, monitoring, and support during the behavior change process (Isnainy, Zainaro, Novikasari, Ariyanti, & Furqoni, 2020). Health education using leaflet media has been proven to be able to increase individual knowledge and attitudes towards PHBS, where participants are not only passive recipients, but also active in educational activities facilitated by communication media that are appropriate to the target (Salsabila, Lula, Hendroyono, Irbatunnisa, & Br, 2024).

Knowledge is an understanding that individuals gain both theoretically and practically about something. Knowledge can be stored in various educational media such as books, technology, traditions and direct practice (Firdaus J. Kunoli, Djadid Subchan, Abdul Latif, & Amir, 2022). In order for this knowledge to be utilized optimally, proper application is a key factor. In the context of health services, knowledge includes information about hygiene, nutrition, and disease prevention that affect the health of individuals and groups. Individuals with good knowledge are able to make wiser decisions in maintaining and improving their health. Increasing knowledge is an important first step in health promotion programs such as PHBS. Early understanding of PHBS can have a positive impact on people's lifestyle habits, thereby minimizing the risk of disease in the future (Irma et al., 2021).

Attitude is an individual's view or belief towards an object that influences how individuals respond and behave towards the object (Nengsi, Fahdhienie, & Hafnidar, 2024). Attitude plays an important role in the implementation of PHBS because it shows an individual's acceptance or rejection of health practices. Attitudes are formed through personal experiences and interactions with others, which ultimately influence a person's tendency to approach or avoid certain actions. A positive attitude towards PHBS tends to

encourage the implementation of healthy behavior, while a negative attitude can be an obstacle in implementing a clean and healthy lifestyle (Yani, Irianto, Djamil, & Setiaji, 2022). Therefore, increasing community knowledge and attitudes about PHBS is the main goal in health education efforts, including for the elderly and pre-elderly in Jogokariyan Village RW 10.

METHODS

This study used a quasi-experimental design with a one-group pretest-posttest approach. Before the PHBS counseling activity using leaflet media was carried out, participants first took a pretest to determine their initial level of knowledge and attitudes. After the counseling was completed, a posttest was conducted to evaluate the changes that had occurred. This study took place in Jogokariyan Village RW 10 in February 2025. The study population involved all elderly and pre-elderly in the village, while a sample of 27 respondents was selected using a purposive sampling technique.

PHBS was the dependent variable, while participants' knowledge and attitudes were the independent variables. Leaflet media was used as a health promotion tool containing information in the form of text and images. Assessment of knowledge and attitudes was carried out using a questionnaire that had been tested for validity and reliability. Data analysis was carried out using univariate and bivariate analysis, using a paired sample t-test to determine the effectiveness of the educational intervention.

RESULTS

Respondent Characteristics

The study was conducted in Jogokariyan Village RW 10, to assess the effectiveness of the use of leaflet media on knowledge and attitudes regarding PHBS, a study was conducted involving 27 elderly and pre-elderly respondents. The research findings are presented in the following frequency distribution table:

Table 1. Respondent Characteristics

Respondent Characteristics		
Age	n	Persentase
58	1	3,7
60	2	7,4
61	5	18,5
62	5	18,5
63	1	3,7
64	4	14,8
65	2	7,4
66	6	22,2
69	1	3,7
Total	27	100,0
Gender	n	Persentase

Male	3	11,1
Famale	24	88,9
Total	27	100
Education	n	Persentase
Junior High School	2	7,4
Senior High School	21	77,8
College	4	14,8
Total	27	100

Source: Primary Data, 2025

Table 1 shows that the majority of respondents are 66 years old, namely 6 people (22.2%). The gender of the respondents is mostly female, namely 24 people (88.9%) and the highest level of education is high school graduates, as many as 21 respondents (77.8%).

Univariate Analysis

Table 2. Univariate Analysis

Category	Pre-test		Post-test	
	n	presentase	n	presentase
Knowledge				
Not Good	12	44,4	8	29,6
Good	15	55,6	19	70,4
Total	27	100	27	100
Attitude				
Negative	16	59.3	10	37.0
Positive	11	40.7	17	63.0
Total	27	100	27	100

Source: Primary Data, 2025

Table 2 shows that before the elderly and pre-elderly received PHBS education through leaflet media, 12 out of 27 respondents (44.4%) had poor knowledge, while 15 respondents (55.6%) had good knowledge. After the intervention, community knowledge about PHBS increased significantly to 19 respondents (70.4%) showing a good level of understanding.

Before receiving leaflet media education, 16 out of 27 respondents (59.3%) showed negative attitudes, while 11 respondents (40.7%) showed positive attitudes. After the intervention, the number of respondents with positive attitudes increased to 17 (63.0%), while 10 respondents (37.0%) remained negative.

Bivariate Analysis

Tabel 3. Bivariate Analysis

Knowledge	Mean	Std. Deviation	Sig.(2-tailed)
<i>Pre-Test</i>	7.52	1.282	0.000
<i>Post-Test</i>	9.52	1.051	
Attitude			
<i>Pre-Test</i>	30.56	2.172	0,002

Knowledge	Mean	Std. Deviation	Sig.(2-tailed)
<i>Post-Test</i>	32.07	1.492	

Source: Primary Data, 2025

Table 3 shows a significant increase in knowledge after the intervention, with the average knowledge score increasing from 7.52 in the pretest to 9.52 in the posttest, a difference of 1.00. The paired sample t-test yielded a significant p-value of 0.000, so the null hypothesis was rejected and the alternative hypothesis was accepted. This indicates a significant relationship between knowledge and household PHBS education using leaflet media.

The average attitude score increased from 30.56 in the pretest to 32.07 in the posttest, indicating a difference of 1.51. The paired sample t-test yielded a significant p-value of 0.002 ($p < 0.05$), leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis. This indicates a significant relationship between attitude and PHBS education using leaflet media.

Discussion

Univariate analysis of 27 respondents showed that before receiving PHBS education for the elderly and pre-elderly through leaflet media, 15 people (55.6%) had good knowledge. After the intervention, the level of knowledge increased significantly, and all 19 respondents (70.4%) showed very good understanding. The implementation of PHBS in the community can be improved through training and practical support (Angraini, Febriawati, & Amin, 2022). The results of statistical tests showed that there were significant changes in the knowledge ($p = 0.000$) and attitudes ($p = 0.002$) of participants before and after counseling.

Individual knowledge plays a crucial role in supporting the implementation of PHBS, where the higher a person's level of knowledge, the more likely the individual is to implement PHBS well (Zakiah, Septiyanti, & Muhasanah, 2024). The results of the study showed that individuals with higher levels of education, such as high school and college graduates, tend to have a better understanding of PHBS. Further education can help broaden an individual's horizons and mindset. According to Liana, knowledge is the result of an individual's perception of an object that is processed into understanding (Oktariani, Aulia, & Sari, 2021). Education is very important in increasing awareness of the negative impacts of not implementing PHBS, as well as equipping individuals with the skills to take preventive measures in the future (Sarofah, Handayani, & Nuryakin, 2021).

Researchers believe that increasing knowledge can foster greater awareness of the importance of household PHBS, contributing to the maintenance, improvement, and protection of individual and household health from various environmental diseases. To address this, dissemination of information about the importance of implementing household PHBS through effective communication channels is essential to improving community knowledge and attitudes (Yani et al., 2022)(Nurdiansyah, 2024). As shown by Erik's research, positive changes in individual knowledge can lead to more positive attitudes towards implementing PHBS in daily life (Kusuma, Nastiti, Puspitasari, & Handayani, 2022).

Table 2 shows that before receiving PHBS education, 11 out of 27 respondents (40.7%) showed positive attitudes. After the intervention, the number of respondents with positive attitudes increased to 17 (63.0%). Attitude plays an important role in encouraging the implementation of PHBS and contributing to improving the level of community health (R. Julianti & Nasirun, 2018). "Positive attitudes towards household PHBS can be influenced by individual habits in maintaining environmental cleanliness. In addition, communication factors can also significantly influence the attitudes of family members towards implementing PHBS in daily life. The family plays an important role in influencing the implementation of PHBS (Zakiah et al., 2024). is one of the factors influencing the implementation of PHBS (Anggrayni & Susilowati, 2021).

A study aimed at developing and evaluating an instructional booklet to promote healthy lifestyles in people with HIV also found adequate levels of satisfaction in the assessment of appearance. Other studies have also produced satisfactory evaluations when analyzing items related to appearance, suggesting that this component makes the information more interesting and encouraging to read. Limitations of this study include the absence of medical professionals and physical educators in the booklet validity process, as they did not receive an invitation despite repeated attempts to contact them, even though they are part of the care routine for people with diabetes. It is recommended that the target audience be tested for validity. Furthermore, it is recommended that future studies test the effectiveness of this tool using interventional research, such as experiments or quasi-experiments.

CONCLUSION

Based on the results of the outreach activities using leaflet media, it can be concluded that the use of this educational media has proven effective in increasing knowledge and attitudes about Clean and Healthy Living Behavior in the elderly and pre-elderly in Jogokariyan Village. A significant increase in the knowledge and attitude scores of participants shows that the information presented through leaflets is able to provide a better understanding of the importance of maintaining personal hygiene, physical activity, healthy eating patterns, and regular health checks. In addition, family and health cadre support are also important factors in helping the elderly implement PHBS in their daily lives. The success of this program confirms that a simple but informative media-based education approach can be an effective solution in improving the quality of life of the elderly and pre-elderly community.

REFERENCE

- Anggrayni, N., & Susilowati, Y. (2021). The Effect Of Dental Health Education With Digital Literature On Dental Knowledge And Behavior In Elementary School Age Children In Tangerang. *Nusantara Hasana Journal*, 1(7), Page. Retrieved from <https://www.nusantarahasanajournal.com/index.php/nhj/article/view/174/127>
- Angraini, W., Febriawati, H., & Amin, M. (2022). Peningkatan Pengetahuan Perilaku Hidup Bersih dan Sehat Rumah Tangga. *Jurnal Kesmas Asclepius*, 4(1), 26–32.

<https://doi.org/10.31539/jka.v4i1.3698>

- Firdaus J. Kunoli, Djadid Subchan, Abdul Latif, & Amir, A. (2022). Pengaruh Media Leaflet terhadap Pengetahuan Kader Kesehatan tentang Perilaku Hidup Bersih dan Sehat pada Tatanan Rumah Tangga di Posyandu Wilayah Kerja Puskesmas Talise. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*, 5(6), 757–762. <https://doi.org/10.56338/mppki.v5i6.2686>
- Irma, I., Amalia, I. S., Budiman, I., Haqie, E., Putri, R. R., Nuryati, R., & Sari, N. A. (2021). Edukasi Perilaku Hidup Bersih Dan Sehat (Phbs) Dalam Pencegahan Dan Pengendalian Covid-19 Pada Anak-Anak Tk. *Jurnal Pemberdayaan Dan Pendidikan Kesehatan (JPPK)*, 1(01), 30–39. <https://doi.org/10.34305/jppk.v1i01.397>
- Isnainy, U. C. A. S., Zainaro, M. A., Novikasari, L., Ariyanti, L., & Furqoni, P. D. (2020). Pendidikan kesehatan tentang perilaku hidup bersih dan sehat (PHBS) di SMA negeri 13 Bandar Lampung. *Jurnal Kreativitas Pengabdian Kepada Masyarakat*, 3(1), 27–33. Retrieved from <https://ejournalmalahayati.ac.id/index.php/kreativitas/article/view/2588>
- Julianti, D., Maryanti, E., & Efendi, I. (2022). Pengaruh Faktor Perilaku Keluarga Terhadap Penerapan Phbs Pada Tatanan Rumah Tangga Di Kelurahan Timbang Langkat Kecamatan Binjai Timur Kota Binjai. *Journal of Pharmaceutical And Sciences*, 5(2), 364–371. <https://doi.org/10.36490/journal-jps.com.v5i2.153>
- Julianti, R., & Nasirun, H. M. (2018). Pelaksanaan Perilaku Hidup Bersih Dan Sehat (Phbs) Di Lingkungan Sekolah. *Jurnal Ilmiah Potensia*, 3(2), 11–17. Retrieved from www.dinkes.go.id
- Kusuma, E., Nastiti, A. D., Puspitasari, R. A. H., & Handayani, D. (2022). Edukasi melalui Buklet Sehat untuk Meningkatkan Perilaku Hidup Bersih dan Sehat (PHBS) pada Masyarakat Pesisir Kota Pasuruan. *Jurnal Keperawatan*, 14(4), 917–922. <https://doi.org/10.32583/keperawatan.v14i4.474>
- Nasution, A. S. (2020). Edukasi PHBS di Tatanan Rumah Tangga Untuk Meningkatkan Perilaku Sehat. *Jurnal Abdidas*, 1(2), 28–32. <https://doi.org/10.31004/abdidas.v1i2.9>
- Nengsi, P. S., Fahdhienie, F., & Hafnidar, H. (2024). Faktor Yang Berhubungan Dengan Phbs Dalam Tatanan Rumah Tangga Di Gampong Mulia Banda Aceh. *Jurnal Medika Malahayati*, 7(4), 1138–1145. <https://doi.org/10.33024/jmm.v7i4.12445>
- Nurdiansyah, S. I. (2024). Edukasi Pola Hidup Bersih dan Sehat Pada Siswa SMPN 8 Kubu Raya. *Journal of Community Development*, 5(1), 122–127. Retrieved from <https://comdev.pubmedia.id/index.php/comdev/article/view/247/168>
- Oktariani, L., Aulia, I. D., & Sari, R. S. (2021). Peningkatan Pengetahuan Perilaku Hidup Bersih dan Sehat (PHBS) pada Ibu Rumah Tangga Di Wilayah Kota Tangerang. *Syntax Idea*, 3(4), 848–856. <https://doi.org/10.46799/syntax-idea.v3i4.1150>
- Salsabila, S., Lula, F., Hendroyono, K., Irbatunnisa, I., & Br, S. S. (2024). Efektivitas Penyuluhan Gizi Melalui Penggunaan Media Booklet Terhadap Pengetahuan Food Budgeting Pada Ibu Rumah Tangga, 5(1), 104–115. Retrieved from <https://publikasi-adpiindonesia.id/semnas/index.php/semnas/article/view/151/147>
- Sarofah, N., Handayani, S. D., & Nuryakin, N. (2021). Pengaruh Pengetahuan, Sikap, Tindakan Terhadap Kesadaran dan PHBS di Nomporejo. *Media Publikasi Promosi*

- Kesehatan Indonesia (MPPKI)*, 4(4), 488–492.
<https://doi.org/10.56338/mppki.v4i4.1355>
- SulisyaniAji, S. P., Suprpto, Ngambut, K., Ramli, Rosdiana, Azidin, Y., ... Siburian, U. D. (2022). *Kepemimpinan Dan Berfikir Sistem Dalam Kesehatan Masyarakat*. Retrieved from [http://repository.poltekeskupang.ac.id/4052/1/Kepemimpinan dan berpikir sistem dalam kesehatan masyarka%20oleh%20karolus%20ngambut.pdf](http://repository.poltekeskupang.ac.id/4052/1/Kepemimpinan%20dan%20berpikir%20sistem%20dalam%20kesehatan%20masyarka%20oleh%20karolus%20ngambut.pdf)
- Susianti, S., Rudiyanto, W., Windarti, I., & Zuraida, R. (2022). Edukasi Perilaku Hidup Bersih dan Sehat (PHBS) pada Rumah Tangga di Desa Kalisari Kecamatan Natar Kabupaten Lampung Selatan. *JPM (Jurnal Pengabdian Masyarakat) Ruwa Jurai*, 6(1), 1. <https://doi.org/10.23960/jpm611-5>
- W, E. D., Supadi, Widjijati, & Prasetyo, H. (2022). Pendampingan Keluarga Dengan Kartu PHBS Tatanan Rumah Tangga Untuk Meningkatkan Status Kesehatan Keluarga. *JPKM EMAS*, 4(1), 28–32. Retrieved from <https://ejurnal.poltekkestasikmalaya.ac.id/index.php/EMaSS/article/view/851>
- Yani, F., Irianto, S. E., Djamil, A., & Setiaji, B. (2022). Determinan Tingkat Pengetahuan Sikap dan Perilaku Terhadap Perilaku Hidup Bersih dan Sehat (PHBS) Tatanan Rumah Tangga Masyarakat. *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, 12(3), 661–672. Retrieved from <http://journal.stikeskendal.ac.id/index.php/PSKM>
- Zakiah, Septiyanti, & Muhasanah, F. (2024). pengaruh media video terhadap pengetahuan dan sikap mengenai perilaku hidup bersih dan sehat (PHBS) tatanan rumah tangga masyarakat pesisir di Dusun Lakatong Pulau Kabupaten Takalar. *Window of Public Health Journal*, 5(3), 331–340. Retrieved from <https://jurnal.fkm.umi.ac.id/index.php/woph/article/view/1883/670>