



The Effect of Clean and Healthy Lifestyle Education with Poster Media on the Level of Knowledge of Clean and Healthy Lifestyle and the Presence of Mosquito Flies in Geyer Village

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Abstract

Education on Clean and Healthy Living Behavior is considered important as an effort to prevent diseases transmitted through mosquito larvae, especially in areas with low levels of health awareness. The purpose of this study was to analyze the effect of Clean and Healthy Living Behavior education using poster media on the level of community knowledge and the presence of mosquito larvae in Geyer Village. This research method uses a quantitative approach with a pre-test-post-test design. The research location was in Geyer Village. The research was conducted in January-June 2024. The study population included all heads of families in Geyer Village, totaling 2,086 heads of families. The sampling technique was accidental sampling. The sample in this study was 95 family heads. Data collection can be done by using questionnaires in the form of interviews and observations. Data were analyzed using paired t-test, namely Dependent T-Test or Wilcoxon test. The results showed that there was an effect of Clean and Healthy Living Behavior education with poster media on the level of knowledge about Clean and Healthy Living Behavior and the presence of larvae in Geyer Village (p-value=0.000). Education on Clean and Healthy Living Behavior using poster media is effective in increasing community knowledge and reducing the presence of larvae, which in turn can contribute to efforts to prevent mosquito-borne diseases. In addition, education through posters also contributed to a decrease in the presence of larvae in the neighborhood. It is recommended that the Clean and Healthy Living Behavior education program be carried out in a sustainable manner by utilizing various media for optimal impact.

Keywords: *Hygiene and healthy lifestyle, Knowledge, Mosquito larvae*

INTRODUCTION

Indonesia the issue of infectious illnesses persists as a significant health concern. Infectious diseases are caused by microorganisms such as bacteria, viruses, or fungus, and can be passed from an infected individual to a healthy person, resulting in illness (Luqman et al., 2022).

The World Health Organisation (WHO) reports that the number of dengue infections has multiplied by 8 during the last 4 years, rising from 505.430 cases in 2000 to 2.4 million cases in 2010 and 5.2 million cases in 2019. According to WHO, there are an estimated 50 to 100 million infections annually, which includes 500.000 cases of DHF and 22.000 fatalities. (WHO, 2020).

Nationally, based on data from the Indonesian Health Profile, it was reported that there were 108.303 cases of DHF in 2020. In addition to the morbidity rate, the magnitude of the DHF problem can also be known from the mortality rate or CFR which is obtained from the

proportion of deaths to all reported cases. Nationally, the CFR of DHF in Indonesia is 0.7%. A province is said to have a high CFR if it exceeds 1%. In 2020, there were eleven provinces with CFR above 1% (Kemenkes RI, 2020).

DHF data for Semarang city, the capital of Central Java province, has an Incident Rate (IR) of 25.22/100,000 reported by the Semarang City Health Office in 2016. This incidence rate has decreased in the last three years, but the Case Fatality Rate (CFR) has increased in the last three years, CFR in 2016 was 5.1% (Hestingsih, 2020).

The achievement of clean and healthy living habits can be attained via the practice of clean and healthy living behaviour. The adoption of hygienic and health-conscious habits should commence at the most basic level of society, specifically within the household, through the practice of Clean and Healthy Living Behaviour. In order to promote clean and healthy living habits and encourage active participation in the community's health movement, we aim to empower individuals within households to acquire knowledge, develop a desire, and possess the ability to practise such behaviours (Madeira et al., 2019).

The Indonesian government has enacted the Clean and Healthy Lifestyle initiative with the aim of promoting healthy habits within the society. A clean and healthy lifestyle is a conscious and informed choice made by individuals or families to take responsibility for their own well-being and actively contribute to public health initiatives (Kartika et al., 2021).

The Clean and Healthy Living Behaviour Program in Households aims to equip household members with the knowledge, motivation, and ability to adopt and practise clean and healthy living behaviours. This program encourages active participation in the community's health movement (Hendrawati et al., 2020). The objective of Clean and Healthy Living Behaviour in Households is to promote home practices that result in a hygienic and healthy living environment (Syaputri et al., 2023). An individual's adherence to hygienic and health-promoting habits is intricately linked to the enhancement of personal well-being, familial welfare, communal prosperity, and environmental preservation. H.L Blum theory posits a strong correlation between an individual's health state and their behaviour (Damayanti, 2020). Specifically, the theory suggests that the better a person's behaviour is in relation to their health, the better their overall health status will be (Natsir, 2019).

Media as a channel of information is one of the important components in Health Education. Choosing media as a channel to convey health messages is influenced by the methods used, Health Education media is essentially a health education tool. One of the efforts that can be made is to provide counseling through media that is easy to understand and interesting to see (Mufidah et al., 2024). The effectiveness of posters is proven to be able to

change behavior from low to high in a Clean and Healthy Lifestyle, especially hand washing (Mahdalena & Handayani, 2021).

E-posters can visualize information accompanied by attractive images, colors, and words, as well as the characteristics of conventional posters. The advantage of this e-poster is that it is not easily damaged and makes it easier for readers to access it because it is linked to the internet network or electronic media, this can attract readers and increase understanding (Harsono et al., 2019). E-posters are a feasible alternative media for providing education (Shin, 2012; Niruri et al., 2023).

All subdistricts in Grobogan district are endemic for dengue fever. Grobogan District is a water scarce area, so there are still efforts by the community to store water in the house for a long period of time for daily supplies in case of drought but the water reservoirs are not closed. There are still many endemic areas that store water in various types of containers and are rarely cleaned because they are used for supplies, which in turn has the potential to become a breeding ground for *Aedes* mosquitoes which makes Grobogan an endemic area for dengue fever. Last year, 7 people died from dengue fever, compared to 9 this year. Cases of dengue fever are also supported by the lifestyle of the people who still ignore the importance of a clean and healthy lifestyle, including mosquito nest eradication activities.

METHODS

This study used a quantitative approach with a pretest-posttest research design. The research location was in the village of Geyer village, January-June 2024. The population includes all heads of households in Geyer village, which is 2,086. Accidental sampling technique. The minimum number of samples is based on the Slovin formula with an error tolerance of 10%, so the sample in this study was 95 household heads. Data collection techniques, data collection techniques can be done using questionnaires in the form of interviews and observations. Data analysis was tested for normality with the Kolmogorov-Smirnov test and homogeneity with the Levene test. Data on characteristics were analyzed with the Kruskal-Wallis test. The pretest-posttest results were analyzed using a paired t-test, namely the Dependent T-Test or Wilcoxon test, if it did not meet the requirements of the Dependent T-Test test. Data processing in this study used SPSS version 20 computer software.

RESULTS

Normality test is a test carried out with the aim of assessing the distribution of data in a group of data or variables, whether the data distribution is normally distributed or not. The normality test in this study is as follows:

Table 1. Normality Test

| | Statistics | df | Sig. | Statistics | df | Sig. |
|-----------|------------|----|------|------------|----|------|
| Pre Test | ,397 | 95 | ,000 | ,618 | 95 | ,000 |
| Post Test | ,537 | 95 | ,000 | ,127 | 95 | ,000 |

Based on Table 1. it can be seen that the significance value on the Pre Test and Post Test variables <0.05 ($0.00 < 0.05$). This proves that the data is not normally distributed. Because the data is not normally distributed, it can be concluded that the data does not meet the requirements in parametric statistical testing. Furthermore, testing was carried out using the Wilcoxon test.

Table 2. Effect of clean and healthy living behavior education with poster media on the level of knowledge and the presence of larvae in Geyer Village

| Variable | N | Z | P-value |
|----------------------|----|--------|---------|
| Pre Test – Post Test | 95 | -7,483 | 0,000 |

According to the data presented in Table 2, it is evident that the P value is statistically significant, as it is less than 0.05 ($0.00 < 0.05$). This indicates disparities in the outcomes of the Pre Test and Post Test on Clean and Healthy Living Behaviour, as well as the level of awareness regarding the existence of larvae after receiving education on Clean and Healthy Living Behaviour through poster media. Hence, it can be inferred that there exists a correlation between instructing Clean and Healthy Living Behaviour using poster media and the level of understanding of Clean and Healthy Living Behaviour.

DISCUSSION

Clean and Healthy Living Behaviour refers to all health-related actions undertaken based on personal awareness, with the aim of enabling the family and its members to take care of their own health and actively participate in community activities (Karim, 2018). The primary goal of the Clean and Healthy Living Behaviour movement is to enhance health quality by fostering individual awareness and promoting clean and healthy everyday behaviours. The primary advantage of adopting Clean and Healthy Living Behaviour is the establishment of a health-conscious community that possesses the information and awareness necessary to maintain cleanliness and adhere to health standards (Mufidah et al., 2024; Maharani, 2021).

Health promotion media encompass various methods and endeavours to communicate certain messages or information through print, electronic, and outdoor platforms. The purpose is to enhance the target's understanding, which is anticipated to result in a beneficial shift in behaviour within the health sector (Notoadmodjo, 2003). The implementation of health promotion is inherently intertwined with the media, as it serves as a platform to provide captivating and comprehensible health messages. This facilitates the target audience's acceptance of the imparted messages (Notoatmodjo, 2014).

The results of the Wilcoxon test in this study indicate that there is an effect of Clean and Healthy Living Behavior education with poster media on the level of knowledge about Clean and Healthy Living Behavior and the presence of larvae in Geyer Village. The difference between the results of the Pre Test and Post Test on Clean and Healthy Living Behavior and the level of knowledge of the presence of larvae after Clean and Healthy Living Behavior education using poster media is seen in the p-value of 0.000 (p-value <0.05).

The results of this research are in line with Niruri et al., (2023), stated that education with learning poster media showed a significant increase (p<0.05) in knowledge and attitudes of Clean and Healthy Living Behavior in adapting to the new COVID-19 era.

The average value of readers' responses shows that e-posters provide better results than conventional posters in terms of legibility, readability, accessibility, and scientific value. The aspects of legibility and accessibility are statistically significant (Shin, 2012). The advantage of e-posters is that they are more cost-effective than conventional printed posters in providing education. E-posters can be used as an alternative media if animated video media or learning videos cannot be provided (Newsom et al., 2021; Putra & Herlina, 2020).

The Clean and Healthy Living Behaviour initiative aims to enhance learning opportunities for individuals, families, groups, and communities. This is achieved through effective communication, provision of information, and educational activities. The ultimate goal is to enhance knowledge, attitudes, and behaviours related to health by employing advocacy, social support, and empowerment strategies. The initiative seeks to promote a healthy lifestyle and contribute to the overall improvement of public health (Kemenkes RI, 2018).

Improving Clean and Healthy Living Behavior in the community must be done as an effort to empower the community through health promotion, such as counseling or education to the community. Therefore, the education of Clean and Healthy Living Behavior to the community will definitely increase people's knowledge about how to live a healthy life (Sari & Susilawati, 2022; Perdana & Sinaga, 2022).

According to Notoadmojo (2018), knowledge is the result of human sensing, or a person's understanding of something through their senses such as eyes, nose, ears, etc. Thus, the visualization of the activity of draining, covering, recycling in the poster media helps the community understand how to eliminate mosquito larvae in water reservoirs and ensure that the house does not have mosquito larvae.

Based on the discussion above, the effect of Clean and Healthy Living Behavior education with poster media can increase knowledge about Clean and Healthy Living Behavior and the presence of larvae. However, the presence of people who have vision problems is an obstacle to its application. For this reason, oral education is also needed by explaining the contents of the poster.

According to the researcher's assumption, the use of poster media in providing education counseling has a significant impact on community understanding of the clean and healthy living behavior material presented. Because the poster media is more attractive because there are pictures that are favored by the target so that it allows many enthusiasts and the delivery of the material can be understood. This counseling technique can certainly be applied in every provision of counseling to the community.

CONCLUSIONS

The results of this study indicate that there is an effect of Clean and Healthy Living Behavior education with poster media on the level of knowledge about Clean and Healthy Living Behavior and the presence of larvae in Geyer Village. It is recommended to develop more diverse educational media, carry out Clean and Healthy Living Behavior education in a sustainable manner, and involve collaboration with related parties such as village government and health cadres. In addition, further research with a wider scope and regular evaluation and monitoring are needed to ensure the sustainability of the impact on community knowledge and mosquito larval control.

REFERENCE

- Damayanti, A. Y. (2020). Perilaku hidup bersih dan sehat (PHBS) dan status gizi remaja di pondok pesantren. *Darussalam Nutrition Journal*, 4(2), 143. <https://doi.org/10.21111/dnj.v4i2.4850>
- Harsono, H., Yulia Rosanti, S., & Aslinda Abu Seman, N. (2019). The Effectiveness of Posters as a Learning Media to Improve Student Learning Quality. *The Journal of Social Sciences Research*, 1(1), 97–103. <https://doi.org/10.32861/jsr.54.1046.1052>
- Hendrawati, S., Rosidin, U., & Astiani, S. (2020). Perilaku Hidup Bersih Dan Sehat (PHBS) Siswa/siswi di Sekolah Menengah Pertama Negeri (SMPN). *Jurnal Perawat Indonesia*, 4(1), 295. <https://doi.org/10.32584/jpi.v4i1.454>

- Hestningsih, R. (2020). Pemberdayaan Masyarakat Dalam Program Pencegahan dan Penanganan Penyakit Demam Berdarah Dengue (DBD) Berbasis Keluarga di Desa Lebak Kecamatan Grobogan Kabupaten Grobogan. *Seminar Nasional Kolaborasi Pengabdian Kepada Masyarakat UNDIP-UNNES 2019*, 242–244.
- Karim, D. S. P. (2018). Determinan Perilaku Hidup Bersih dan Sehat (PHBS) Tatanan Rumah Tangga. *Jurnal Ilmu Kesehatan Masyarakat*, 7(1), 1–9. <https://doi.org/10.33221/jikm.v7i01.46>
- Kartika, Y., Pramestian, F., Masayu, N., Hasanah, F., Fera, F., & Arifin, R. (2021). Penerapan Pola Hidup Bersih Dan Sehat Untuk Meningkatkan Imunitas Tubuh di Desa Kalirancang, Alian, Kebumen. *Jurnal ABDI: Media Pengabdian Kepada Masyarakat*, 7(1), 78–87. <https://doi.org/10.26740/ja.v7n1.p78-87>
- Kemendes RI. (2018). *Promosi Kesehatan dalam Bencana*. Kementerian Kesehatan Direktorat Promosi Kesehatan Dan Pemberdayaan Masyarakat.
- Kemendes RI. (2020). *Profil Kesehatan Indonesia 2019*. Kementerian Kesehatan RI.
- Luqman, L., Sudaryo, M. K., & Suprayogi, A. (2022). Analisis Situasi Masalah Kesehatan Penyakit Menular di Provinsi Kalimantan Barat. *Jurnal Epidemiologi Kesehatan Komunitas*, 7(1), 357–374. <https://doi.org/10.14710/jekk.v7i1.13269>
- Madeira, E., Yudiernawati, A., & Maemunah, N. (2019). Hubungan Perilaku Hidup Bersih dan Sehat (PHBS) Ibu dengan Cara Pencegahan Demam Berdarah Dengue. *Nursing News*, 4(1), 288–299. <https://doi.org/10.33366/nn.v4i1.1549>
- Maharani, D. (2021). Hubungan Pengetahuan tentang Perilaku Hidup Bersih dan Sehat dengan Pola Hidup Sehat Usia Anak Sekolah di Masa Pandemi Covid-19. In *Skripsi* (p. 6).
- Mahdalena, V., & Handayani, L. (2021). Efektivitas Music Video (MV) Terhadap Perubahan Perilaku Siswa Paud Mengenai Perilaku Hidup Bersih Dan Sehat (PHBS). *Ekspresi Dan Persepsi : Jurnal Ilmu Komunikasi*, 4(2), 224–236. <https://doi.org/10.33822/jep.v4i2.2979>
- Mufidah, N. A. N., Isyrofi, A. Q. A. Al, & Abdullah, S. A. (2024). Efektivitas Media Promosi Kesehatan Tentang Perilaku Hidup Bersih Dan Sehat (PHBS). *Jurnal Ilmu Kesehatan Umum*, 2(1), 160–172.
- Natsir, M. F. (2019). Perilaku Hidup Bersih dan Sehat (PHBS) pada Tatanan Rumah Tangga Masyarakat Desa Parang Baddo. *Jurnal Nasional Ilmu Kesehatan*, 1(3), 54–59.
- Newsom, L. C., Miller, S. W., & Chesson, M. (2021). Use of Digital vs Printed Posters for Teaching and Learning in Pharmacy Education. *American Journal of Pharmaceutical Education*, 85(6), 398–402. <https://doi.org/10.5688/ajpe8307>
- Niruri, R., Rakhmawati, R., Saputri, R. N., & Farida, Y. (2023). Efektifitas Media untuk Peningkatan Pengetahuan dan Sikap pada Perilaku Hidup Bersih-Sehat Siswa Sekolah Dasar saat Adaptasi Kebiasaan Baru Era COVID-19. *JPSCR: Journal of Pharmaceutical Science and Clinical Research*, 8(3), 291–300. <https://doi.org/10.20961/jpscr.v8i2.56862>
- Notoadmodjo. (2003). *Ilmu Kesehatan Masyarakat*. Jakarta: Rineka Cipta Medika.
- Notoadmojo, S. (2018). *Promosi Kesehatan, Teori dan Aplikasinya*. CV. Rineka Cipta.
- Notoatmodjo, S. (2014). *Ilmu Prilaku Kesehatan*. Rineka Cipta.
- Perdana, F., & Sinaga, D. (2022). Pemanfaatan Poster Sebagai Media Edukasi Pola Hidup Bersih Dan Sehat (Phbs) Dalam Meningkatkan Literasi Informasi Ibu Di Masa Pandemi. *Jurnal Kajian Budaya Dan Humaniora*, 4(2), 209–214. <https://doi.org/10.61296/jkbh.v4i2.15>
- Putra, R. D., & Herlina, L. (2020). Pengaruh Pendidikan Kesehatan Dengan Media Vidio dan Poster terhadap Pengetahuan dan Sikap PHBS pada Anak-Anak Panti Asuhan Aisyiyah Cempaka Baru Kemayoran Jakarta Pusat. 3(1), 30–52.
- Sari, A. P., & Susilawati, S. (2022). Upaya meningkatkan derajat kesehatan melalui perilaku hidup bersih dan sehat di lingkungan masyarakat. *FLORONA : Jurnal Ilmiah Kesehatan*,

- I*(2), 47–52. <https://doi.org/10.55904/florona.v1i2.315>
- Shin, S. J. (2012). Evaluation of electronic versus traditional format poster presentations. *Medical Education*, *46*(5), 519–520. <https://doi.org/10.1111/j.1365-2923.2012.04253.x>
- Syaputri, D., Manalu, S. M. H., Apsari, D. A., & Suprawihadi, R. (2023). The Influence of Clean and Healthy Living Behavior Education on Changes in Student Behavior. *Contagion: Scientific Periodical Journal of Public Health and Coastal Health*, *5*(4), 1194. <https://doi.org/10.30829/contagion.v5i4.17857>
- WHO. (2020). *Comprehensive Guidelines for Prevention and Control of Dengue and Dengue Haemorrhagic Fever*. Geneva : World Health Organization.