



The Relationship of Clean and Healthy Living Behavior and the Incidence of Malaria: Systematic Review

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A B S T R A C T

Malaria is a tropical disease caused by the bite of the Anopheles mosquito. Malaria is an infectious disease that is of global concern. This disease still often causes extraordinary events. This disease can attack all individuals regardless of age and gender. Factors related to the incidence of malaria are the environment and community behavior. Clean and Healthy Living Behavior is a set of behaviors practiced based on awareness because of learning in the health sector, and it plays an active role in realizing public health. One effort to eradicate malaria is clean and healthy living behavior. This research analyzes the relationship between Healthy, Clean-Living Behavior and malaria incidence. Systematic Review (PRISMA) is used. All articles that pass the selection are then reviewed and summarized based on the purpose, author name, year published, instruments used, research results, and suggestions for further research. The results of this literature research aim to implement healthy and clean-living habits to avoid environments that cause malaria. It is also more optimal to build a clean environment by implementing clean and healthy living behaviors, which will ultimately have a good effect on health. Malaria is one of the infectious diseases that is still a public health problem in the world, including Indonesia.

INTRODUCTION

In 2004, as many as 424 malaria-endemic districts or cities out of 579 existing towns or neighborhoods were found, with an estimate of about 42.42% of the population domiciled in areas at risk of contracting malaria. Malaria cases in Indonesia have the highest place of spread and incidence of malaria in Papua Province, which is 31.93%; the second place that has the highest cases of malaria cases is West Papua Province, while North Sumatra Province occupies the highest position of 13 out of 33 provinces in Indonesia, experiencing the incidence of malaria cases. Malaria is one of the infectious diseases that is still a public health problem in the world, including Indonesia (Mutmainah and Rohima, 2021). The large percentage of the population at risk of malaria transmission in Indonesia is due to different environmental factors and community behavior (Kaltsum, Windusari, and Hasyim, 2022). Symptoms of malaria experienced by patients include experiencing fever continuously for three or four days with a shivering phase, then sweating accompanied by headaches, nausea, and vomiting (Bagau et al., 2022).

The World Health Organization (WHO) said that malaria has attacked 106 countries in the world, most of which occur in the African region with as many as (90%) cases, the Southeast Asian region with as many as (7%) cases and as many as (2%) cases in the Mediterranean region. Globally, nearly 85% of malaria cases occur in nineteen sub-Saharan African Indian countries. Six countries account for more than half of

all malaria cases worldwide: Nigeria (25%), the Democratic Republic of Congo (12%), Uganda (5%), and Cote d'Ivoire, Mozambique, and Niger (4% each) (WHO, 2022). Tropical and subtropical countries are endemic areas of this disease where the rainy season can provide a high availability of clean water so that vector mosquitoes can lay eggs and breed (Sugianto, 2011).

Clean and healthy living behavior (PHBS) is the essence and human right to maintain survival. This is in line with what is covered in the constitution of the World Health Organization of 1948, which agreed, among others, that obtaining the highest degree of health is a fundamental right for everyone regardless of race, religion, politics, and socioeconomic level. This high degree of health can be obtained if everyone has a behavior that pays attention to health (Nur, 2018).

A healthy state is the will of all parties, not only dominated by individuals but must also be owned by groups and society. Everyone has the right to health services, obtain information and education about health that can create a clean environment, and have clean and healthy living behaviors. One is through clean and healthy living behavior programs in the community (Ajeng Ginanjar, 2019). Clean and healthy living behavior (PHBS) is the essence and human right to maintain survival. This is in line with what is covered in the constitution of the World Health Organization of 1948, which agreed, among others, that obtaining the highest degree of health is a fundamental right for everyone regardless of race, religion, politics, and socioeconomic level. This high degree of health can be obtained if everyone has behavior that pays attention to health (Khariri et al., 2023).

PHBS is all health behaviors because of personal awareness so that families and all members can help themselves in the health sector and have an active role in community activities (Kartika et al., 2022).

Clean Healthy Living Behavior (PHBS) is a set of behaviors practiced based on awareness due to learning in the health sector. It plays an active role in realizing public health (Ariasih and Budiharsana, 2020). The Clean Healthy Living Behavior Program aims to improve knowledge, attitudes, and behaviors of healthy, clean living through community empowerment (Patras and Tinungki, 2021).

Law 36/2009 on health explains the importance of health development as an investment in improving the quality of human resources. This means that all components of the Indonesian nation should carry out health development with the aim of increasing awareness, willingness, and ability to live a healthy life so that everyone realizes the highest degree of public health. Indicators of community support in achieving health development are shown by the implementation of clean and healthy living habits (PHBS) in daily life, which is one of the national policies in health promotion as outlined in the decree of the Minister of Health of the Republic of Indonesia No.1193 / MENKES / SK / X / 2004. Clean and Healthy Living Behavior (PHBS) is all health carried out on awareness so that family members can help themselves in the health sector and play an active role in public health activities. It is a form of community

empowerment that is aware, willing, and able to practice clean and healthy living behavior (Sari & Susilawati, 2022).

METHOD

The research database search produced all keyword search results, which obtained 1,049 research articles, from Garuda as many as 37 articles, Google Scholar as many as 981 articles, PubMed as many as 1 article, and DAOJ as many as 30 articles. The method used is a Systematic Review. All articles that passed the selection were then reviewed and summarized based on the aim, author's name, year of publication, instruments used, research results, and suggestions for further research. Inclusion criteria include 1) research on clean and healthy living behavior with the incidence of malaria using the internet, 2) research on clean and healthy living behavior with the incidence of malaria using the internet, and 2) published in the form of research articles. Exclusion criteria include 1) research conducted in the community at the research location and 2) literature or prism review articles. The search process begins by reviewing the abstracts of all search results and comparing them with relevant criteria.

RESULT AND RESULT

Article search results using Google Scholar, PubMed, Garuda, and DAOJ found 1,049 articles. From Google Scholar, as many as 981 articles, Garuda as many as 37 articles, as many as 1 article, and DAOJ, as many as 30 articles. After marking the title, duplicate article titles were found in three different databases. The screening results were 67 articles. A total of 683 articles were double published. A total of 936 articles were excluded because they were a) articles not by the question or aim of the literature and b) articles that did not have full text. The articles were selected using inclusion criteria including 1) Research articles written in Indonesian, 2) Literature in the form of research articles published in journals, 3) Discussion of scientific articles related to the relationship between clean and healthy living behavior and malaria incidence, and 4) Published articles in 2020-2022. Exclusion criteria include 1) articles that do not match the question or aim of the literature and 2) articles that do not have full text. The selection results are based on the literature titles of 30 relevant articles. The article was assessed and reviewed by looking at the entire content; only five articles were relevant or matched the title.

The data results are displayed in the table

Writer	Article title	Journal Name, Volume, Number	Researcher's objectives
1. (Ajeng Ginanjar 2019)	Development of Clean and Healthy Living Knowledge and Behavior In The Home Setting	Jurnal Kala Manca Volume. 7 No. 2 July-December 2019 ISSN: 2615-4447 (Online)/ 2303-2189 (Print)	The aim is to discover or describe the reality of the studied event.
2. (Kaltsum, Windusari, and Hasyim 2022)	Vector Control and Elimination of Malaria: Literature Review Ummi	Batanghari University Jambi Scientific Journal, 22(3), October 2022, 1709-1713 Institute for Research and Community Service, Batanghari University Jambi ISSN 1411-8939 (Online), ISSN 2549-4236 (Print) DOI 10.33087/jiubj.v22i3.2768	The goal of vector control is the reduction of the vector capacity of the local vector population below the critical threshold required to maintain transmission.
3. (Amirus et al. 2022)	Relationship between the Sanitation Risk Index and the Incidence of Environmental-Based Diseases in Pesawahan Village, Bandar Lampung City	Indonesian Journal of Environmental Health 21 (3), 2022, 366 – 372 DOI: 10.14710/ jkli.21.3.366-372 Connection	The research aims to determine the relationship between the sanitation risk index and the incidence of environmental-based diseases in Pesawahan Village, Bandar Lampung City. Method:
4. (Khariri et al. 2023)	Socialization of the Importance of Clean and Healthy Living Behavior (PHBS) in Preventing Environmentally Based Diseases in Panjunan Village, Cirebon City	Gervasi: Journal of Community Service Vol. 7, no. 1, April 2023 ISSN 2598-6147 (Print) ISSN 2598-6155 (Online) Socialization	The outreach activity aims to increase public awareness, especially housewives, of the importance of clean and healthy living behavior in the family environment in preventing environmental-based diseases.
5. (Fitri Lestari, Hasyim, and Novrikasari 2022)	Risk Factors for Malaria Incidence in Mining Area Communities: Literature Review Risva	Batanghari University Jambi Scientific Journal, 22(3), October 2022, 1700-1705 Institute for Research and Community Service, Batanghari University Jambi ISSN 1411-8939 (Online), ISSN 2549-4236 (Print) DOI 10.33087/jiubj.v22i3.2766	The aim is to raise awareness of the importance of keeping the environment clean in the mining community.

CONCLUSION

Malaria is an infectious disease that is still a public health problem in the world, including Indonesia. The source of malaria comes from environmental conditions suitable for the life of Anopheles mosquitoes, so that as the mosquito population increases, the risk of contracting malaria increases. Clean and healthy living behavior (PHBS) is the essence and human right to maintain the continuity of life. PHBS is all health behavior carried out of personal awareness so that the family and all its members can help themselves in the health sector and actively participate in community activities. This is in line with what is included in the constitution of the World Health Organization in 1948, which agreed, among others, that obtaining the highest level of health is a fundamental right for every person regardless of race, religion, political beliefs, and socio-economic level.

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