

**Review**

**Health Promotion for the Prevention of Extraordinary Events or Outbreaks: A Systematic Review**

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**ABSTRACT**

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**Background:** Health promotion is key in dealing with extraordinary events or outbreaks. This approach empowers the public to understand disease risks, adopt preventive behaviors, and improve compliance with health protocols. Various health promotion interventions have been implemented in recent decades to deal with outbreaks such as dengue fever, influenza, and the COVID-19 pandemic. However, a systematic study is still needed to evaluate the strategies' effectiveness and identify existing challenges and opportunities. This study aims to systematically assess the role of health promotion in managing outbreaks, focusing on best practices, barriers, and opportunities for implementation.

**Methods:** This study uses a systematic review method by following the guidelines of PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). Data is obtained from major databases, such as Google Scholar, Science Direct, and PubMed. Article searches were carried out systematically from 2019-2024 using several keywords, namely " Health Promotion ", or " Extraordinary Events ", or " Outbreaks ". The selection process includes identifying, screening, selecting, and analyzing articles based on predetermined inclusion and exclusion criteria

**Results:** Of the 2,000 articles identified, 45 met the inclusion criteria. Furthermore, it was selected into the 10 best articles by the author. The results showed that health promotion effectively increased public awareness, changed behavior, and prevented disease spread. Community-based interventions, digital media campaigns, and the involvement of local figures have proven successful. However, obstacles such as low health literacy, cultural resistance, and limited resources are still the main obstacles..


**Conclusion:** Health promotion has a significant role in preventing outbreaks. An integrated, adaptive, evidence-based approach to local contexts involving multiple stakeholders is needed to improve its effectiveness. By addressing existing challenges, health promotion can be a key pillar in preventing and dealing with future outbreaks.

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
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## Introduction

Health promotion is one of the main pillars to improve public health. This approach not only focuses on disease treatment, but also focuses on prevention through empowering individuals and communities to adopt healthy behaviors. In the context of extraordinary events (Outbreaks) or outbreaks, health promotion plays a strategic role in minimizing the spread of diseases, increasing public awareness, and ensuring compliance with health protocols. Rapid technological advances, especially in transportation, can affect human mobility and threaten the emergence of a problem, one of which is (Extraordinary Event). Extraordinary Events (Outbreaks) are the occurrence of events or an increase in the incidence of illness/death exceeding normal conditions in a community group in a certain period (Marhaban et al., 2019). In addition, the threat of new emerging and re-emerging diseases is also a global challenge that must be prepared to be anticipated. In addition, climate change due to global warming is also accelerating, this condition will affect the pattern and type of potential diseases both directly and indirectly, such as malaria, Dengue Haemorrhagic Fever (DHF), and new emerging diseases (Corbin et al., 2021).

The data on cases that occurred in several countries was Ebola (EVD) in 2014, with a total of 28,652 cases and 11,325 deaths (WHO data as of June 10, 2016). This is a great risk to public health in other countries. Some factors that may cause transmission include the weak health system and health services. The WHO declared the disease caused by the Ebola virus as a Public Health Emergency of World Concern (KKMMD) and the status statement was revoked on March 29, 2016. The revocation of this status is due to a decrease in the transmission rate, the risk of international spread has been reduced

and the infected country is considered to have been able to respond quickly in controlling the outbreak. In addition to Ebola (EVD), another example of a case is COVID-19 which occurred around early December 2019. All people are urged to reduce mobility, *physical distancing*, wear masks and wash their hands with soap. In this case, WHO also declared COVID-19 as a Global Health Emergency with a total of 170,426,245 cases and 3,548,628 deaths. COVID-19 vaccination is one of the prevention efforts that all countries can carry out to reduce the incidence rate (Kemenkes RI, 2021).

Indonesia is one of the countries that has several potential diseases of such as diarrhea, cholera, diphtheria, anthrax, rabies, measles, malaria, fever, dengue, leptospirosis and *new emerging/re-emerging diseases*. These diseases, if not monitored or controlled, can threaten the health of the Indonesian people and cause to even spread to neighboring countries. Against this background, the implementation of the Early Warning and Response System must be improved again in all regions in Indonesia.

Preventive and promotive efforts are very fundamental in efforts to prevent an outbreak. Health promotion is one of the pillars in health development which is carried out by providing education/knowledge to influence changes in the behavior of individuals and groups. Health promotion also supports increasing public health awareness, including reducing the rate of illness and healthy living behaviors through health service programs. Health promotion is divided into several scopes, including, health promotion includes health education (*Health Education*), health promotion includes social marketing, health promotion in communication and information efforts (counseling), health

promotion in efforts to improve (promotive), health promotion includes advocacy efforts in the health sector and health promotion includes community organizing (community organization (Caron et al., 2024)).

The next health promotion strategy is social support, an approach carried out through community leaders to bridge the implementation of public health programs being launched. This strategy is also called an effort to foster an atmosphere for activities. The last health promotion strategy is community empowerment, which is a promotional strategy aimed at the community directly to realize the ability of the community to maintain and improve health independently.

This article aims to systematically analyse the available literature on health promotion's role in managing extraordinary events or outbreaks. This study is expected to provide useful insights for policymakers, health practitioners, and researchers in designing more effective and sustainable health promotion strategies.

## Methods

### Study Design

This research article uses a systematic review design following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) standard

Criteria	Inclusion	Exclusion
Population	<i>Epidemic</i>	Apart from <i>Epidemic</i>
Intervention	<i>Health Promotion</i>	-
Comparison	Do not use comparison factors	-
Outcomes	Extraordinary Events or Outbreaks	-
Study design and type of publication	All research designs	Systematic review
Year of publication	2019-2024	< 2019
Language	English and Indonesia	-

### Search Strategy

The databases utilized for this systematic review include Google Scholar, Science Direct, and Pubmed. Article

guidelines. This approach is designed to ensure that the review process is carried out in a structured, transparent, and thorough manner. Guided by PRISMA, every stage in the review process, from identification, screening, selection, to data analysis, is carried out systematically and according to the standards set. This aims to increase the validity, accuracy, and reproducibility of the review results, so that it can significantly contribute to producing reliable conclusions.

### Eligibility Criteria

This article applies the PICO (Population, Intervention, Comparison, Outcome) method as a framework to determine inclusion and exclusion criteria in the random systematic review of various studies. The PICO approach ensures that research selection is carried out in a structured and relevant manner to the research question. Using the PICO method, the research selection process is carried out systematically to ensure that only articles that meet the relevance and quality criteria are included in the review. This is so that the results of the study can provide precise and reliable insights into the role of health promotion in the management of or outbreaks:

searches were carried out systematically from 2019-2024 using several keywords, namely " Health Promotion ", or " Extraordinary Events ", or " Outbreaks ".

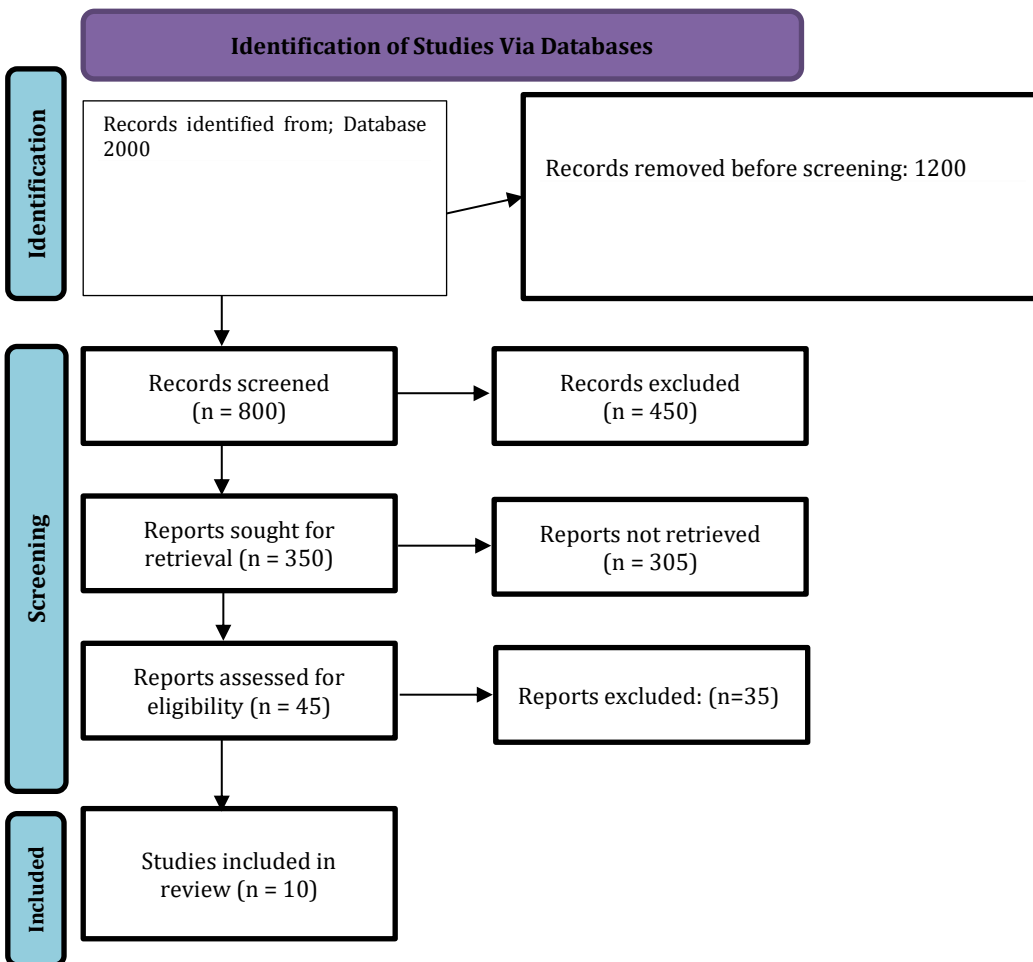


### Study Selection and Synthesis

The feasibility assessment of the articles was conducted by reviewing full-text articles. Articles deemed relevant and suitable were included in this systematic

review. The selection process and results are illustrated in the PRISMA diagram, identifying the nine most appropriate articles.

### Results



**Figure 1 Flowchart PRISMA**

The following are the results of the systematic review of the 10 best articles along with the results of their research:

**Table 1. Characteristic Study**

No	Title, Author and Year of Publication	Research Results
1	A health promotion approach to emergency management: effective community engagement strategies from five cases (Corbin et al., 2021)	The case study emphasizes the importance of collaboration in the development of education and communication strategies, the central role of community leaders, the empowerment of community members to achieve common goals, adaptation to

No	Title, Author and Year of Publication	Research Results
		changing situations, early planning for emergency preparedness, and recognition of historical context.
2	Health Promotion Regarding COVID-19 Prevention and Vaccination Efforts at the Siak Hulu I Public Health Center, Kampar Regency ( <a href="#">Rustam et al., 2022</a> )	Efforts to improve planned health promotion with the application of PMT theory are very effective in increasing COVID-19 prevention and vaccination efforts in the community.
3	The Early Vigilance of Dengue Hemorrhagic Fever Outbreak in the Community ( <a href="#">Indawati et al., 2021</a> )	Knowledge is measured by 3 indicators, attitudes with 1 indicator, and behavior with 2 indicators, all of which are proven to be valid and reliable. The public understands the transmission factors and dengue fever quite well. Risk control measures are also reasonable (93.9%), but dengue eradication is still not optimal (67.7%). The attitude shows that the community is not fully ready to act based on awareness. Psychological function is a component of initial awareness of the DHF outbreak. The results of the measurement model show significant statistical values. The level of alert for the DHF outbreak is quite good.
4	Health Promotion, Health Protection, and Disease Prevention: Challenges and Opportunities in a Dynamic ( <a href="#">Caron et al., 2024</a> )	This research identifies challenges and opportunities in implementing health promotion, health protection, and disease prevention in an ever-changing context. The results of the study show that the main challenges lie in the difference in access to quality health information, gaps in resources, and rapid changes in social and environmental factors affecting health. In addition, there is a need to increase collaboration between sectors and community-based approaches to address health issues more effectively. Opportunities include using technology to increase health awareness and access to information, as well as increasing the capacity of health systems to cope with dynamic change. Innovation in evidence-based policies and interventions is also key to strengthening health promotion and disease prevention efforts at the individual and community levels. Despite the significant challenges, there are many opportunities to improve health promotion and disease prevention through a more inclusive, data-driven, and adaptive approach to changing times.
5	Pencegahan Kejadian Luar Biasa (Outbreaks) Demam Berdarah Dengue di Wilayah Kerja Puskesmas Baqa Kota Samarinda ( <a href="#">Dewi et al., 2022</a> )	The results of the activity showed that countermeasures for epidemiological investigations were effective in increasing public knowledge and awareness of dengue transmission. A proactive attitude from the community to report dengue cases also needs to be carried out so there is no delay in intervening.
6	Tantangan dalam Penanggulangan Kejadian Luar Biasa (Outbreaks) Penyakit Hepatitis A di Pacitan ( <a href="#">Suni, 2019</a> )	In the law, regulatory materials related to health promotion are needed which include advocacy, social support, and community empowerment in overcoming infectious disease outbreaks.
7	Study of the Ottawa Charter Health Promotion Strategy as an Effort to Overcome Dengue Hemorrhagic Fever	The strategy for efforts to overcome dengue cases in Sukoharjo Regency has included based on the five Ottawa Charter Health Promotion Strategies.



No	Title, Author and Year of Publication	Research Results
	(DHF) in Sukoharjo Regency ( <a href="#">Noviyanti et al., 2024</a> )	However, each plan needs to be optimized to cooperate across sectors.
8	Penyuluhan Pentingnya Menjaga PHBS sebagai Upaya Preventif Penyebaran Infeksi Hepatitis A di TPA Masjid Al-Ikhlas, Surakarta ( <a href="#">Azzahra, 2023</a> )	The existence of this counseling activity makes children more understanding and enthusiastic in implementing PHBS in their daily lives.
9	Tingkat Partisipasi Masyarakat Dalam Promosi Kesehatan Sebagai Upaya Pencegahan Diare Pada Anak Balita ( <a href="#">Johan, 2024</a> )	There is a significant influence between advocacy, social support, and community empowerment on community participation in the prevention of diarrhea in children under five in the Sempaja Health Center work area.
10	Prevention of the Spread of COVID-19 through Health Promotion (Mulyani, 2021)	The results of the analysis showed that the significance value was $0.000 < 0.05$ , indicating that there was a difference in knowledge before and after the intervention in the form of socialization HATMA SEMAR.

## Discussion

Health promotion is essential in tackling extraordinary events (Outbreaks) or outbreaks, considering that this approach focuses on prevention through increasing public awareness and empowerment. This systematic review provides comprehensive insights into the various health promotion approaches implemented, their effectiveness, and their challenges ([Hz et al., 2023](#); [Mulyani, 2021](#)). The discussion focused on the following key aspects: The reviewed study shows that health promotion has a positive impact in minimizing the spread of disease during an outbreak. Approaches involving community-based education have been proven to increase public awareness of disease risks and how to prevent them. For example, campaigns on mosquito nets during malaria outbreaks or the promotion of hand-washing behavior during the COVID-19 pandemic have significantly reduced transmission rates. Social media-based campaigns are also an effective tool to reach a wider population. Health information disseminated through digital platforms such as Facebook, Twitter, and Instagram improve public accessibility and engagement, especially among young age

groups. Despite having great potential, implementing health promotion in or outbreaks faces various obstacles. Some of these include: Many communities, especially in remote areas, have a limited understanding of health, making it difficult to understand the importance of prevention. Local beliefs and stigmas often hinder the adoption of healthy behaviors. For example, the use of masks at the beginning of the COVID-19 pandemic was rejected in some communities because it was considered culturally inappropriate. In many developing countries, limited funds, health workers, and facilities are the main obstacles in implementing health promotion programs ([Ghufron, 2021](#)).

This review identifies several health promotion strategies successfully implemented in tackling or outbreaks: Programs involving community leaders, religious leaders, or health cadres have proven more acceptable because they adapt to local contexts. Collaboration between governments, non-governmental organizations, and the private sector results in more integrated and high-impact programs. For example, the provision of handwashing facilities in public places during the pandemic involving the private

sector. Health apps and online reporting speed up the dissemination of information and case tracking during outbreaks.

Based on these findings, there are several recommendations to improve the effectiveness of health promotion: Health promotion programs should be designed based on epidemiological data and analysis of local needs. Continuous education must be strengthened through schools, mass media, and digital platforms. Augmented reality (AR) technology or interactive videos can make health information more interesting and easily understood. Governments, the private sector, academia, and communities must work together to address resource barriers and increase program reach ([Noprianty et al., 2023](#)).

Health promotion must be a priority in public health policy, especially in the face of potential future outbreaks. Investments in education, technology, and health infrastructure need to be increased to support the sustainable implementation of the program. Health promotion has effectively tackled or outbreaks if strategically designed and implemented. By addressing existing challenges and capitalizing on opportunities, health promotion interventions can be a more powerful tool for preventing and managing future outbreaks. An integrated and evidence-based approach must continue to be developed to maximize the impact ([Noviyanti et al., 2024](#)).

## Conclusion

Health promotion is very important in managing extraordinary events (Outbreaks) or outbreaks. Based on the results of a systematic review, various health promotion strategies, such as community-based education, digital media campaigns, and community leader engagement, have proven effective in raising awareness, motivating behavior

change, and encouraging adherence to health protocols. These interventions significantly minimize the spread of disease and increase community capacity to deal with health emergencies.

## Authors Contributions

Author contribution was search literature and analysed study

## Conflicts of Interest

There is no conflict of interest

## Acknowledgment

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