



Warta Pengabdian Andalas

Jurnal Ilmiah Pengembangan dan Penerapan Ipteks

ISSN (Print) 0854-655X | ISSN (Online) 2797-1600

Promoting Healthy Behaviors through Education and Practical Interventions for Disease Prevention in Sungai Pisang

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Submitted: September 17, 2024

Accepted: May 29, 2025

Published: June 30, 2025

ABSTRACT

Sungai Pisang Village is confronted with several public health issues, particularly a high incidence of diseases attributable to inadequate sanitation facilities and unhealthy lifestyle practices. This community-based intervention aimed to improve clean and healthy living behaviors through a combination of educational strategies and practical disease prevention activities. The intervention consisted of structured health education sessions, hands-on demonstrations of hygiene practices, and subsequent evaluations to measure behavioral outcomes and program effectiveness. Active engagement from community members and institutional support from the local health center facilitated program implementation. Findings revealed a significant increase in public awareness and the adoption of clean and healthy living behaviors practices, especially in terms of environmental hygiene, healthy dietary behavior, and preventive health measures. The results suggest that such integrative health promotion efforts can effectively foster sustainable behavioral changes, provided that continuous support from stakeholders is maintained.

Keywords: community engagement, disease prevention, health education, hygiene behavior

INTRODUCTION

Health is a fundamental human right and a critical investment in the sustainable development of a nation. Accordingly, comprehensive and equitable health development must be pursued to achieve a healthy and productive society. This underscores the notion that improving public health is not merely a moral obligation but also a strategic imperative that contributes significantly to national progress and socioeconomic advancement (Departemen Kesehatan RI, 2008). Clean and healthy living behavior constitutes a foundational strategy in advancing public health outcomes. It reflects a household's commitment to safeguarding the health and well-being of all its members. Enhancing awareness and fostering consistent implementation of Clean and Healthy Living Behavior at the family level empowers individuals to serve as agents of change, not only in promoting personal and familial health, but also in contributing to broader community-based public health initiatives (Departemen Kesehatan RI, 2014).

Clean and Healthy Living Behavior encompasses more than just physical practices such as proper handwashing, environmental sanitation, and appropriate waste management. It also includes broader components such as the adoption of a balanced diet, regular physical activity, effective stress management, and comprehensive disease prevention strategies. Among these, a healthy diet plays a pivotal role, as it is essential for

maintaining overall physiological function and supporting long-term health outcomes (Kartika et al., 2021). Maintaining a balanced diet that is rich in essential nutrients, low in saturated fats, and mindful of portion sizes is a key component of healthy eating. The consumption of foods high in dietary fiber, vitamins, and minerals plays a critical role in supporting optimal physiological functions and in reducing the risk of chronic diseases such as diabetes and cardiovascular disorders. At the household level, sustained educational efforts are necessary to promote awareness of nutritious food choices and to discourage unhealthy eating behaviors (Cena and Calder, 2020; Rofidah et al., 2024).

In addition to a healthy diet, adequate physical activity represents a vital component of Clean and Healthy Living Behavior. Engaging in regular exercise and routine physical activities contributes to cardiovascular health, enhances muscular strength, and aids in weight management. Beyond its physical benefits, an active lifestyle also plays a significant role in promoting overall well-being at both the individual and family levels (Kementerian Pendidikan dan Kebudayaan, 2019). Therefore, the promotion of physical activity should be systematically integrated into public health programs to encourage active engagement in regular exercise and to prevent the development of sedentary and unhealthy lifestyle patterns.

Stress management is a critical component of Clean and Healthy Living Behavior, as effective stress regulation contributes to mental and emotional well-being. Techniques such as relaxation exercises, time management strategies, and healthy coping mechanisms are essential in preventing mental health disorders and enhancing overall quality of life. In this regard, public health programs should prioritize education and capacity-building related to stress reduction and time management skills (Ganapathi et al., 2023). Clean and Healthy Living Behavior encompasses comprehensive disease prevention strategies, including immunizations, routine health screenings, avoidance of alcohol consumption and tobacco use, and the establishment of healthy sleep patterns (Muda and Handayani, 2020).

Teluk Kabung Selatan Urban Village, previously known as Sungai Pisang Urban Village, is located in the southernmost region of Padang City. Spanning an area of approximately 9.14 square kilometers, the village is administratively divided into two community units (RW) and nine neighborhood units (RT). With a total population of 3,015 residents, the area exhibits a relatively high population density. (Rais, 2023). The high population density in this area may affect the availability and accessibility of health resources and sanitation facilities. Teluk Kabung Selatan Urban Village is served by health infrastructure, including an auxiliary community health center integrated with the Bungus Community Health Center, as well as several integrated service posts (Posyandu) that contribute to community health surveillance. These facilities play a critical role in delivering essential health services such as immunization programs, medical consultations, and maternal and child health monitoring. The majority of households have access to clean water, which is a crucial determinant in promoting hygiene and preventing disease within the community.

Despite the availability of basic health facilities, several public health concerns remain in Teluk Kabung Selatan Urban Village. One of the most prominent issues is the high prevalence of smoking among residents, which significantly increases the risk of smoking-related illnesses, including cardiovascular diseases and respiratory disorders. Environmental sanitation also poses challenges, particularly the limited availability of household latrines and the substandard condition of existing sanitation facilities. These factors heighten the risk of communicable diseases, especially those related to inadequate sanitation, such as diarrheal illnesses and helminth infections. Additionally, the presence of free-roaming livestock, such as cattle and goats, increases the potential for zoonotic disease transmission, posing further risks to community health (Ilmiawati et al., 2019). Given the identified health and sanitation challenges, the development and implementation of

targeted public health programs are essential to improving community well-being in the region. These programs should prioritize health education, the enhancement of environmental sanitation, and the control of health risk factors to effectively address the root causes of preventable diseases and promote sustainable health improvements.

The primary objective of this community service initiative is to enhance awareness and the implementation of Clean and Healthy Living Behavior practices among households in the Sungai Pisang Village. The anticipated outcomes include improved public health through consistent adoption of Clean and Healthy Living Behavior, a reduction in the incidence of preventable diseases, the promotion of sustainable behavior change at the household level, and a meaningful contribution to broader public health development. Ultimately, this program aims to institutionalize healthy living practices within families, thereby contributing to the overall improvement of community health status.

METHOD

This community service initiative commenced with a preliminary field survey to collect baseline data, followed by stakeholder engagement and the acquisition of formal permissions from relevant community partners. The implementation phase was then carried out, along with a subsequent evaluation of the program's effectiveness. Teluk Kabung Selatan Urban Village consists of two community units (RW). To ensure a more focused and effective intervention, one community unit was selected, and within it, a specific neighborhood unit (RT) was identified as the primary target of the community service activities. This selection was based on a prior needs assessment and problem analysis conducted during the initial phase. Following this, appropriate problem-solving strategies were formulated to improve Clean and Healthy Living Behavior practices within the selected neighborhood. The methods and stages of implementation are outlined as follows:

1. Socialization and Education on Clean and Healthy Living Behavior

This stage aims to increase knowledge and awareness of Clean and Healthy Living Behavior among community members. The process includes:

a. Preparation of Counseling and Training Materials:

Educational materials were developed focusing on the prevention of common diseases identified in the target area. The content was designed to be relevant and context-specific to maximize its impact in reducing disease risk within the community.

b. Scheduling and Logistical Arrangements:

The time and venue for the counseling sessions were coordinated in collaboration with local stakeholders to ensure accessibility and community attendance.

c. Implementation of Counseling and Training:

Counseling and training sessions were conducted with the active involvement of community members. Interactive methods were used to facilitate engagement and retention of key messages.

2. Live Demonstration of Clean and Healthy Living Behavior Practices

This stage was conducted to translate knowledge into practice through hands-on demonstrations. The process includes:

a. Preparation of Demonstration Materials and Equipment:

Necessary materials and tools were prepared to illustrate key Clean and Healthy Living Behavior practices within the household setting, such as proper handwashing, waste management, and latrine hygiene.

b. Scheduling and Selection of Demonstration Sites:

Demonstration sites were identified in coordination with local leaders, focusing on households that represent common conditions within the community.

c. Implementation of Live Demonstration:

Demonstrations were carried out directly in the selected households with the active participation of residents. This participatory approach was intended to encourage practical learning and foster behavior change.

This community service initiative employed a combination of observation, discussion, and educational outreach to engage the target population and assess current practices related to Clean and Healthy Living Behavior. Structured observations were conducted to obtain a direct understanding of environmental conditions and community behaviors. These observations focused on key locations, including households, water sources, and sanitation facilities. Indicators such as handwashing habits, environmental cleanliness, and waste disposal practices were systematically documented through photographs and detailed field notes. The data collected served as a foundation for identifying key behavioral and infrastructural challenges and for designing more targeted and effective interventions.

To further explore community perspectives, interactive question-and-answer sessions and open discussions were conducted. These sessions allowed participants to articulate their personal experiences, perceived barriers, and expectations concerning the implementation of healthy behaviors. Sample guiding questions included: "What healthy habits have been adopted in your household?" and "What challenges do you face in maintaining environmental cleanliness?" These qualitative insights provided valuable input for tailoring intervention strategies that align with community needs. Educational outreach activities were also carried out to disseminate essential information about Clean and Healthy Living Behavior and to promote practical strategies for its daily implementation. The socialization efforts aimed to raise awareness, enhance motivation, and foster long-term behavioral change among community members. The success of the intervention was evaluated using quantitative indicators such as attendance rates, level of engagement (e.g., number of questions and contributions during discussions), and participant feedback. Although no pre- and post-tests were conducted, reflective responses from participants contributed to an understanding of the perceived impact of the program.

RESULTS AND DISCUSSION

Teluk Kabung Selatan Urban Village is located within the Bungus Teluk Kabung Sub-district and is characterized by its coastal setting and hilly topography. The area presents infrastructural challenges, particularly in terms of transportation, as many of the roads remain unpaved and consist of rocky dirt tracks, which become especially problematic during the rainy season. The local population primarily engages in fishing and farming, relying on marine and agricultural resources for their livelihoods. This socioeconomic profile not only highlights the region's economic potential but also underscores key challenges related to nutrition, health, and food security (Badan Pusat Statistik, 2024). These contextual factors are crucial in shaping the design and implementation of public health interventions. The following table presents demographic data from the Bungus Teluk Kabung Community Health Center, including the distribution of male and female residents as well as the total population across the villages within its service area.

Based on the data presented in the Table 1, the population distribution across the six urban villages within the service area of the Bungus Teluk Kabung Community Health Center can be outlined. Bungus Timur records the highest population, totaling 8,474 residents, whereas Teluk Kabung Selatan has the lowest population, with 2,534 residents.

In total, the Bungus Teluk Kabung Health Center serves a population of 31,777 individuals, comprising 16,416 males and 15,361 females.

Table 1. Population data of the bungus teluk kabung community health center service area

Village	Population (Person)		Among
	Male	Female	
West Bungus	4,093	3,812	7,905
East Bungus	4,380	4,094	8,474
South Bungus	1,985	1,872	3,857
North Teluk Kabung	2,510	2,394	4,904
Central Teluk Kabung	2,100	2,003	4,103
South Teluk Kabung	1,348	1,186	2,534
Among	16,416	15,361	31,777

Source: Data center and information technology of the Ministry of Health year 2023

According to the Bungus Community Health Center report (2023), several prominent public health concerns have been identified within this region. These include limited access to adequate sanitation facilities and a high incidence of acute respiratory infections. These issues are particularly prevalent in areas with suboptimal environmental health conditions, and they underscore the need for targeted health interventions. The following table outlines the ten most commonly reported diseases in the Bungus Teluk Kabung Community Health Center service area during 2023.

Table 2. The most common diseases in the Bungus Health Center Area in 2023

Type of disease	Gender		Among
	Male	Female	
Acute Respiratory Tract Infection	1,968	1,200	3,168
Hypertension	625	2,400	3,025
Dyspepsia	420	934	1,354
Diabetes Mellitus	351	955	1,306
Gastritis	522	721	1,243
Low Back Pain	423	521	944
Dermatitis	120	451	571
Rheumatoid Arthritis	242	324	566
Acute Bronchitis	321	232	553
Necrosis	125	230	355

Source: E-puskesmas Bungus 2023

Based on the data presented in the table, Acute Respiratory Tract Infection was identified as the most prevalent disease in the area. In response, this community service program was designed to offer relevant and evidence-based interventions, particularly focused on the prevention and control of ARI within the local population. The implementation of the program began with the acquisition of formal approval through the authorized governmental institution, namely the Investment and One-Stop Integrated Services Office of West Sumatra Province. Subsequently, permission was also obtained from the Bungus Community Health Center, as the authority responsible for the health service area. Prior to the implementation of service activities, initial coordination and engagement were conducted with the midwife assigned to the Sungai Pisang Integrated Community Health Post, serving the Teluk Kabung Selatan area. During this phase, an initial needs assessment was carried out to explore the key health issues faced by the

community. As a result of these discussions, it was mutually agreed to focus the intervention in the Lansano Housing area. The topics raised include: Clean and Healthy Living Behavior, Ending Open Defecation Practices, Protecting Mothers and Children from Acute Respiratory Tract Infection, and The Six Steps of Handwashing with Soap.



Figure 1. Opening of activities and submission of materials by the head of the service team

The community service activity was attended by approximately 50 residents, including mothers, children, and health personnel from the Bungus Community Health Center and the Sungai Pisang Sub-Health Center. The high level of community enthusiasm was evident through the active participation during the discussion sessions and the number of questions posed by participants. This observation aligns with previous studies suggesting that participatory approaches in health education significantly enhance community comprehension and acceptance of health-related information. Such engagement fosters a sense of ownership, which is essential for the sustainability of health behavior interventions at the community level. (Sudiyono, 2023). The activity commenced with an opening address by the head of the service team, who expressed appreciation for the presence and support of all stakeholders involved. This was followed by remarks from representatives of the Bungus Community Health Center and the midwife from the Sungai Pisang Auxiliary Health Center. These remarks highlighted the objectives and significance of the community service activities, particularly in the context of improving public health outcomes. Furthermore, the speeches underscored the importance of collaborative efforts between communities, healthcare professionals, and academic institutions in fostering a healthier society. Educational sessions were subsequently delivered in rotation by students participating in the community service program, allowing for interactive engagement and dissemination of relevant health information to the participants. The material presented includes:

1. Clean and Healthy Living Behavior Material

The service team delivered educational sessions on Clean and Healthy Living Behavior, covering key components essential to improving quality of life and enhancing public health. One of the central themes emphasized was the importance of engaging in regular physical activity. Physical activity not only contributes to maintaining physical fitness but also plays a critical role in reducing the risk of various chronic conditions such as obesity, diabetes, and cardiovascular diseases (Ayenigbara, 2020). The educational content included practical guidelines for routine exercise and recommendations for incorporating physical activity into daily routines, such as walking, cycling, or household chores. Another key focus was the promotion of regular consumption of fruits and vegetables, due to their rich content of essential vitamins, minerals, and dietary fiber. Adequate intake of fruits and vegetables supports disease prevention, strengthens the immune system, and promotes digestive health (Wicaksono and Handoko, 2020). In

addition, the educational materials addressed topics including the use of sanitary latrines, access to clean water, mosquito larvae eradication, and tobacco-free living. These elements are critical components of Clean and Healthy Living Behavior and serve as preventive strategies to reduce the incidence of infectious and non-communicable diseases in the community.



Figure 2. Clean and healthy living behavior education poster

2. Socialization on Ending Open Defecation Practices

The team emphasized the adverse public health implications of open defecation, particularly its role in the transmission of waterborne and fecal-oral diseases such as diarrhea, cholera, and helminth infections. This practice contributes to environmental contamination and undermines efforts to improve community health. Participants were actively engaged in a participatory dialogue to explore practical and context-appropriate solutions for addressing local sanitation challenges. This approach was intended to promote community awareness, ownership, and collective action toward improving sanitation infrastructure and eliminating open defecation practices.



Figure 3. Educational poster on disposing of water in healthy latrines

After outlining the adverse effects of open defecation, the service team facilitated a participatory discussion to identify feasible solutions to improve local sanitation conditions. Several strategies were proposed:

1. Promotion of Proper Sanitation Facilities:

Community members were encouraged to construct and consistently use hygienic latrines. The service team provided technical guidance on the construction of latrines that adhere to public health and sanitation standards.

2. Community Involvement through Sanitation Working Groups:

The establishment of village-level sanitation task forces was recommended. These groups are expected to play a key role in community-based monitoring, education, and advocacy related to sanitation and hygiene practices.

3. Collaboration with Stakeholders:

The community was encouraged to collaborate with local government entities and non-governmental organizations (NGOs) to gain access to resources such as funding, capacity building, and sanitation infrastructure.

This comprehensive approach, promoted under the slogan “Stop Open Defecation”, aims to foster behavioral change, leading to improved sanitation practices, better public health outcomes, and enhanced quality of life for community members.

3. Education to Protect Mothers and Children from Acute Respiratory Infections

A targeted educational session was conducted for mothers, focusing on strategies to prevent and manage Acute Respiratory Infection, which are among the most prevalent health concerns in the region. The session covered key topics, including early recognition of Acute Respiratory Infections symptoms such as coughing, shortness of breath, and fever. Emphasis was placed on preventive measures such as maintaining proper hygiene, ensuring adequate ventilation in the home, avoiding exposure to tobacco smoke, and the importance of timely immunization, particularly for children. The session aimed to enhance mothers’ awareness and capacity to take preventive action, thereby reducing the incidence of Acute Respiratory Infections among vulnerable groups, especially infants and young children.



Figure 4. Educational poster to protect mothers and children from ISPA disease

4. Practicing the Six Steps of Handwashing with Soap

This session focused on the demonstration and hands-on practice of the six proper steps of handwashing using soap, guided by the service team. Participants were actively involved in following and repeating the handwashing steps to reinforce correct techniques. The aim was to instill the habit of effective hand hygiene as a fundamental component of disease prevention, particularly in reducing the transmission of infectious diseases. This activity aligns with previous initiatives, such as the 2022 program titled Education to Increase Community Knowledge about the Application of the 3R Concept, Prevention of Non-Communicable Diseases, Smart Drug Management, and Clean and Healthy Living Behavior in Nagari Paninggahan (Siswati et al., 2023) which emphasized similar preventive health behaviors.

The service team conducted demonstrations and invited participants to practice the six steps of proper hand washing with soap. The steps taught include (Yusuf et al., 2021):

- 1) Wet both hands with clean running water.
- 2) Pour enough soap into the palm of your hand.
- 3) Rub your palms against each other until foam forms.
- 4) Rub the back of the left hand using the right palm and between the fingers, then do the same with the other hand.
- 5) Rub the fingertips with the palm of the opposite hand to clean the underside of the nails.
- 6) Rinse both hands with clean running water thoroughly, then pat dry with a clean towel or tissue.



Figure 5. Educational poster 6 steps to handwashing with soap

After delivering the handwashing education, the service team distributed hygiene supplies, including handwashing soap, to the community. Educational leaflets on the various health topics presented during the activity were also provided to reinforce the information shared. This distribution aimed to support the community in applying Clean and Healthy Living Behavior in their daily lives. Before concluding the activity, participants were invited to ask questions and share their experiences and challenges in maintaining environmental hygiene and health. The active engagement observed during the discussion session suggested that participants had not only understood the material presented but had also begun to internalize the importance of practicing Clean and Healthy Living

Behavior in their daily routines. Some participants expressed their intent to implement improvements in personal and environmental hygiene based on what they had learned. This illustrates an increase in awareness and motivation, although no quantitative pre- and post-measurements were conducted. The session concluded with remarks from the head of the service team, who expressed gratitude to all stakeholders involved. It was emphasized that the knowledge shared should be practiced and disseminated further within the community.



Figure 5. Group photo documentation after the implementation of the activity

For the sustainability of this Clean and Healthy Living Behavior education activity, the role of health promotion or environmental health officers from the community health center is expected. They have responsibilities and work areas that include health education and promotion in the community. In addition to directly involving health promotion and environmental health officers, training and capacity building are also provided related to specific Clean and Healthy Living Behavior materials, such as prevention of Malaria and Dengue Fever. This aims to improve knowledge and skills to effectively deliver information to the community. By involving health promotion or environmental health officers from the public health center in coordinating the sustainability of Clean and Healthy Living Behavior education activities, it is expected that efforts to prevent diseases that often occur can be carried out continuously and have a positive impact on public health. Although the implementation of Clean and Healthy Living Behavior education activities in Sungai Pisang faced several obstacles, such as the limited level of community literacy, and limited participation of participants due to their daily activities, these obstacles did not necessarily reduce the overall success of the activities. Mitigation efforts involved cadres and local health workers to expand beneficiary coverage. In addition, a simpler and more interactive communication approach succeeded in increasing the understanding of most participants. In the future, it is hoped that this activity can have a positive impact, especially in increasing public awareness of the importance of clean and healthy living behaviors. This requires the implementation of more adaptive and collaborative strategies to ensure the sustainability of similar programs, so that they can continue to run effectively and provide wider benefits. Looking ahead, it is hoped that this activity will have a lasting impact in raising awareness about the importance of Clean and Healthy Living Behavior. Continued implementation of adaptive and collaborative strategies will be crucial to ensure the long-term success and broader impact of similar community-based health promotion efforts.

CONCLUSION

The community service activities conducted in Teluk Kabung Selatan Urban Village, through a combination of educational interventions and practical demonstrations, successfully stimulated an active response from the residents. This outcome reflects an increased awareness and motivation among the community to adopt Clean and Healthy

Living Behavior. During the discussion and question-and-answer sessions, numerous participants voluntarily shared their personal experiences and challenges related to hygiene practices within their households and neighborhoods. The attendance records and the number of questions posed during the sessions further demonstrated a high level of community engagement. Although no quantitative measurements were taken, the observed participation and the participants expressed intentions to implement behavioral changes serve as valid qualitative indicators of the intervention's effectiveness in promoting Clean and Healthy Living Behavior. The sustainability of this program is closely linked to the continued involvement of health promotion officers from the local Public Health Center. Their role in conducting regular monitoring and providing follow-up support is essential to ensure that the positive health behaviors initiated through this intervention are maintained and further strengthened over time.

ACKNOWLEDGMENT

We extend our sincere gratitude to all parties who have contributed to and supported the implementation of this Community Service activity, which was funded by the DIPA of the Faculty of Public Health, Andalas University, under contract number T/36/UN16.12/PT.01.03/KI-PPM/2024. Special thanks are directed to the Bungus Teluk Kabung Health Center and the community of Teluk Kabung Selatan Urban Village for their invaluable support and active participation throughout the program. We hope that the collaboration and partnership that have been established will continue and bring lasting benefits to all stakeholders involved.

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