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Strategies for Community-Based Total Sanitation in Improving Hygiene Behavior: A Case Study of Purwosari II Village, Tamban District

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ABSTRACT

This study looks at how the Community-Based Total Sanitation (CBTS) Program is being used in Purwosari II Village, Tamban Sub-district, Barito Kuala Regency, to find effective ways to change the community's hygiene habits and enhance public health. The program aims to improve sanitation and health through five key pillars. However, challenges in changing hygienic behavior remain significant in practice. The methodology used is a qualitative approach, with data collection techniques including observation, interviews, documentation, and focus group discussions (FGD). A SWOT analysis was conducted to identify internal and external factors affecting the program's implementation. The results show that although sanitation facilities such as communal toilets have been built, their distribution is uneven, and some people still maintain unhygienic behavior. Factors influencing such behavior include poorly developed policies, a lack of specialized CBTS cadres, and the community's reliance on government physical assistance. Based on these findings, suggested strategies include strengthening written policies, improving inter-sectoral coordination, and empowering the community through training and triggering healthy behaviors at the community level. It is hoped that these measures will make the CBTS program in Purwosari II Village more effective in creating behavior change and sustainably improving public health.

INTRODUCTION

The implementation of Community-Based Total Sanitation (CBTS) varies across Indonesia. While community participation in CBTS planning, socialization, and development has been ongoing, the results remain limited due to insufficient assistance to meet the community's needs (Stiawati, 2021). The methods used to achieve these goals include enhancing rights, improving services, and engaging the community. The Unitary State of Indonesia's emphasis on democracy, equality, justice, and regional identity enhances regional competitiveness. The relationship between the central and local governments, as well as among local governments, needs more attention to improve its efficiency and effectiveness. The CBTS program, or Community-Led Total Sanitation (CLTS), aims to promote celan living, reduce environmental diseases, and improve community well-being (Stiawati, 2021). To meet the Millennium Development Goals (MDGs), the government has committed to expanding access to sustainable drinking water and sanitation, which is being implemented through this program. The program is expected to bring about changes and sustainability of clean and healthy behavior in the community (Octavia et al., 2020). CBTS techniques clearly link hygienic behavior modifications to improved public health. Preventing sickness requires proper cleanliness, especially in developing nations. Prüss-Üstün et al. (2019) found that inadequate sanitation causes a significant disease burden in low- and middle-income countries, where clean water and sanitation facilities are directly related to public health with cases of diseases such as diarrhea and respiratory infections.

CBTS strategies should be based on a comprehensive understanding of community conditions and behaviors. Tools for evaluating public health risks can help assess sanitation gaps and promote cleaner behaviors (Okaali et al., 2022). Collaboration between the government and community is essential for planning programs that improve sanitation behavior. CBTS success depends on active community participation in sanitation decision-making. Research by Lestari et al. (2021) shows that the availability of adequate sanitation facilities greatly influences community behavior. Budi (2018) emphasized how socioeconomic factors, particularly household decisions, shape community access to sanitation.

According to reports from WHO and UNICEF, around 2.4 billion people worldwide still do not have access to proper sanitation (Prüss-Üstün et al., 2019). This impacts individual health and worsens socioeconomic conditions, with children being the most vulnerable (Okaali et al., 2022). Poor sanitation is a major cause of infectious diseases, particularly in developing countries, and it is linked to waterborne diseases like cholera, diarrhea, and respiratory infections (Lestari et al., 2021). In addition, inadequate hygienic behaviors, such as open defecation and lack of awareness of proper hand-washing practices, contribute significantly to the disease burden. Communities often lack knowledge about the importance of hygiene practices (Suryani, 2020). Low-income communities often lack access to quality WASH (Water, Sanitation, and Hygiene) services, worsening their sanitation conditions (Patil et al., 2014).

Many areas struggle to build supportive infrastructure in spite diverse sanitation programs (Canggih et al., 2021). Building suitable sanitary facilities is costly, and neglecting underprivileged populations will exacerbate access disparities (Andrade et al., 2017).

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Despite being implemented in various regions, the CBTS program still faces challenges, particularly in Purwosati II Village, Tamban Sub-district, Barito Kuala Regency. Data obtained from the Batola Health Office in the previous 2023 that Defecation access *Baseline Open* was low with an achievement of 39% and in its progress until the end of the year only increased by 10% to 49.61%. A village is said to be *Open Defecation Free* (ODF) if 100% of the village population has access to defin latrines (Minister of Health Regulation, 2014).

Low community awareness and participation in hygienic behavior are major causes of the program. The CBTS program begins with ODF, the entry point to total sanitation. The goal is to stop the chain of human feces contaminating raw water for drinking, eating, and other sources. Research on open defecation behavior in Purwosari II Village shows that healthy latrines were built by the local government in collaboration with the village government, but not all households received government assistance (Azwari et al., 2024). Some households still use unfit latrines, as seen from several latrine buildings along the road in Purwosari II Village, which are far from healthy latrines that are still used by the community. Particularly, older people have grown accustomed to using these decades-old latrines.

Figure a. one of the latrines in Purwosari II Village
Source: research results, 2024

Although some household received communal toilets, distribution remains uneven and insufficient. Azwari et al. (2024) also found that household waste and liquid waste management behaviors are suboptimal. Many households throw garbage and liquid waste into the river, which has the potential to cause environmental pollution and disease. These habits are very difficult to change, especially because people have been accustomed to this way of life for many years. In this case, it is important to understand that behavior change is not enough; it is not just about providing sanitation facilities, but it also requires a more comprehensive approach through education and triggering that involves all elements of the community.

In addition to the habit factor, another challenge faced by the CBTS program in Purwosari II Village is the lack of trained human resources, such as CBTS cadres, who have the knowledge and skills to conduct counseling and mentoring for the community. Most of the existing health cadres also have dual duties, making them less focused on implementing the CBTS program. The geography of Purwosari II Village, located along the river, worsens sanitation problems. Most households lack proper sewage systems and rely on untreated water from rivers. Purwosari II Village has one of three active Pamsimas buildings, part of the CBTS program to provide clean water. However, Nisa et al. (2023) found that most Pamsimas in the village treat the water from the river. Treating the river water with chemicals cannot alter its natural taste. Although the water appears clean for daily use, it is still unsuitable for drinking due to residual acidity and an unpleasant taste, despite being boiled.

The Community-Based Total Sanitation (CBTS) Program is a program that originated from the results of coordination between the government and the community so that there is communication between the government and the community (Stiawati, 2021). The coordination carried out by both parties starts from planning, implementation, monitoring, and evaluation involving the community (Sitra et al., 2019). The community has an important role in this program, which is ultimately able to manage it themselves. Meanwhile, the government's role is only to facilitate the CBTS program. This is based on Bintari (2017), which states that the purpose of CBTS is to conduct a social approach to residents to foster more personal *hygiene* as well as sanitation through counseling for the community.

The CBTS program in Purwosari II Village still faces issues such as a lack of sanitation facilities, low public understanding of hygiene, and minimal government support in empowerment. Most research emphasizes infrastructure more than the social methods needed to change behavior in the long term. While some studies discuss the implementation of CBTS, they do not pay attention to the role of the community in managing the program and the importance of education and cadre training to change behavior at the household level.

This study focuses on exploring socio-economic factors, local policies, and communication strategies that influence changes in community behavior. This study proposes the analysis of community behavior and active participation as the main strategies to enhance the effectiveness of the CBTS program. therefore, the hypothesis found in this research is viewed from Community empowerment, particularly through cadre training and cross-sectoral collaboration, is a significant factor in improving sanitation behavior in Purwosari II Village. And this statement is supported by the results of the VOSviewer below:

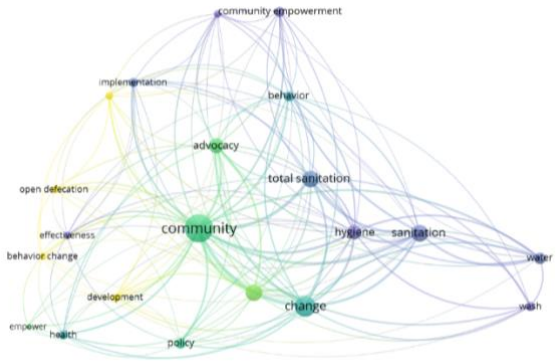

Figure b. Research by VOSviewers Results
Source: Processed by researchers, 2024

Figure b. highlights that there is a gap in research on behavior change related to sanitation, as indicated by the yellow line, underscoring the need for further study on this issue to improve CBTS program effectiveness. According to the context and theory presented in this investigation, the goal of this study are:

- To identify and formulate the most effective strategies for improving the CBTS program's effectiveness in Purwosari II Village.
- To Analyze the factors influencing changes in community sanitation behavior in Purwosari II Village.

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To assess the role of community empowerment and government collaboration in achieving sustainable hygenic behvaior.

METHOD

This study uses a qualitative methodology. According to Sugiyono (2023), qualitative research methods are grounded in positivist or interpretative philosophy and are used to investigate the conditions of natural objects. In these studies, the researcher serves as the primary instrument, employing triangulated data collection techniques. The data obtained is typically qualitative, and the analysis is inductive. The findings of qualitative research are used to build phenomena, understand meaning, and generate hypotheses.

A descriptive study is being carried out, meaning that the researcher uses language and words, a natural setting, and various natural methods to try to understand the entire phenomenon that the research subjects experienced, including behavior, perception, motivation, and actions. According to Sugiyono (2023), qualitative research gathers data through observation, interviews, documentation, and triangulation, a combination of these three techniques.

In this study, SWOT analysis was carried out by integrating information from pertinent literature with focus group discussion (FGD) activities with participants, specifically the residents of Purwosari II Village, which included ten to fifteen key informants. By examining the advantages, disadvantages, opportunities, and dangers encountered during the CBTS program's implementation, the FGD is meant to make data collecting easier. The village head, village cadres, RT heads, and several housewives actively participating in the program and engaged in village community empowerment are invited participants. We conducted additional interviews with the Puskesmas officials.

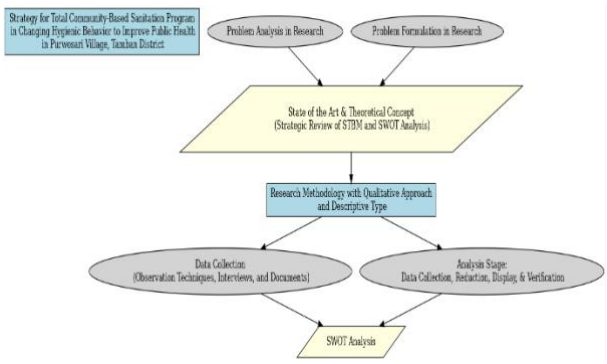

Figure c. Research flow chat
Source: Processed by researchers, 2024

The steps in this research are shown in the flowchart in **Figure C**. After the data collection phase, which includes interviews and focus group discussions, we use SWOT analysis to produce alternate strategies. Evaluation and implementation will come after these processes.

By guaranteeing that each participant gives their informed consent before participation, this study unquestionably complies with research ethics guidelines. We will keep the gathered information private and use it solely for research purposes. To preserve their privacy, the participants' identities will also remain private.

RESULTS AND DISCUSSION

A. THE FIVE PILLARS OF COMMUNITY-BASED TOTAL SANITATION

Open Defecation Free (ODF)

Under the first pillar of the Community-Based Total Sanitation (CBTS) initiative, Purwosari II Village has systematically worked to become Open Defecation Free (ODF). The main goal of these initiatives is to build communal restrooms, which the local authority provides on a rotating basis. Despite these efforts, according to data from the Tamban Community Health Center in 2023, 237 out of 455 families still defecate in the open and lack access to adequate sanitation.

Geographical factors play a major role in this ongoing problem. Due to convenient access and ingrained customs, many households in this riverbank village still defecate in the river. Despite the development of restrooms, their distribution is unequal, and technical constraints such as the absence of septic systems make usage much more difficult. Cultural aversion has persisted, and behavior change has been sluggish even in areas with restrooms.

Sanitation awareness and adoption vary greatly, according to field observations and interviews. While underserved areas have overlapping problems of infrastructural deficits, cultural resistance, and limited outreach, better-equipped and accessible areas exhibit greater community participation and faster behavioral changes. Programs for socialization and counseling have been run by the local government and health cadres, but their scope and depth have varied throughout the community.

The case of Purwosari II illustrates how behavioral, cultural, and infrastructural factors interact to obstruct ODF achievements. As Azwari et al. (2024) highlight, infrastructure is only the initial step—changing sanitation behavior is a deeper challenge requiring long-term social transformation. Despite toilet availability, the use of river-based sanitation remains prevalent due to entrenched habits and community norms. This supports Freeman et al. (2021) and Saleem et al. (2019), who emphasize that educational interventions-particularly in schools-are vital for shaping hygiene behavior but must be supported by practical facilities and household reinforcement.

Moreover, cultural norms often discourage the use of shared sanitation facilities. The feelings of unfamiliarity and stigma may prevent adoption of communal toilets (Jain et al., 2020; King et al., 2016). Wasonga et al. (2014) recommend culturally sensitive advocacy to navigate such resistance, while aligning new practices with local values

Purwosari II's river-centric geography reinforces dependence on traditional sanitation habits. According to Bintari (2017), proximity to water bodies fosters habitual waste disposal practices that are difficult to shift without integrated design solutions. Therefore, simply enhancing access is insufficient-appropriately tailoring infrastructure to environmental and social contexts is essential.

While the interventions in Purwosari II-such as counseling and hygiene education-reflect international best practices, they fall short in terms of localized adaptation and continuity. The SHINE project in Tanzania highlights the effectiveness of participatory approaches (Freeman et al., 2021; Saleem et al., 2019), suggesting that programs in Purwosari II need to be more community-anchored and iterative.

To address overlapping behavioral and infrastructural gaps, a holistic strategy is needed. The strategy includes strengthening educational outreach, aligning sanitation messages with cultural

expectations, and ensuring equitable infrastructure rollout. These actions must be supported by formal policy frameworks, long-term funding, and consistent local engagement to create sustainable change.

Handwashing with Soap

The implementation of Handwashing with Soap (CTPS) in Purwosari II Village has accelerated, particularly due to the increased public awareness of hygiene practices stemming from the COVID-19 pandemic. Data from the Tamban Community Health Centre indicates that the community has improved in the adoption of CTPS practices, especially in educational institutions and public areas. The Community Empowerment Cadres, in partnership with local educators, have conducted awareness campaigns in both classrooms and residences.

By 2024, educational institutions will have five handwashing stations, public areas will have three, and households will have thirty. Water for handwashing is primarily obtained from borewells and the Pamsimas system. Data on coverage reveals a 75% usage rate in educational institutions, 60% in public areas, and 50% in residential settings.

Table 1. Distribution of CPTS Facilities in Purwosari II Village

Location	Number of CPTS Facilities	Water Source	Percentage of People Accessing
Schools	5	Bore Well, Pamsimas	75%
Public Places	3	Pamsimas	60%
Household	30	Bore Well, Pamsimas	50%

Source: Purwosari II Village Data, 2024

Notwithstanding this advancement, obstacles persist. Numerous households fail to engage in consistent handwashing practices, and this behavior poses challenges for real-time observation and measurement. The availability of soap and water is not consistently reliable in all regions. Health cadres indicate that, although facilities are available, daily routines and cultural practices do not consistently facilitate adherence to regular CTPS.

A positive example of how crisis events, such as the COVID-19 pandemic, can spur awareness of hygiene is the enhanced CTPS behavior in Purwosari II. According to Indriyani et al. (2016), maintaining this momentum requires cooperation between Posyandu, schools, and health cadres. Monthly gatherings between medical professionals and community members in Purwosari II aided in establishing CTPS in nearby establishments. The change from awareness to persistent conduct is complicated, though. Equal access to handwashing facilities is not enough on its own, as Stiawati (2021) points out; behavioral reinforcement is essential. Accessibility affects consistency, and Purwosari II's efficacy is impacted by variations in soap availability and water pressure (Oswald et al., 2016).

Behavioral change is made more difficult by the psychological disconnect between action and knowledge. Knowledge-based campaigns need to use behavioral models like the Theory of Planned Behavior to address underlying motivation and social norms (Sax et al., 2007; Srigley et al., 2015). Multi-modal strategies that integrate infrastructure, reinforcement, and teaching result in improved long-term adherence, according to Stedman-Smith et al. (2013).

The pandemic's worldwide findings support these conclusions. Perceived health risks and the effectiveness of policies influenced handwashing compliance (Szczuka et al., 2021). Changing post-pandemic concerns in Purwosari II point to the necessity of integrating CTPS into routine rather than crisis response. The importance of digital and community media is becoming more and more significant. In underprivileged and low-income communities, social media health message can boost CTPS adoption (Wichaidit et al., 2019; Zhang et al., 2020).

It will ultimately take regular facility maintenance, a dependable soap and water supply, and culturally appropriate behavior reinforcement to maintain CTPS behavior in Purwosari II. In order to optimize reach and impact, interventions must be demographically targeted and locally informed, leveraging both traditional outreach and digital means.

Household Food and Beverage Management

The outreach initiative carried out by the Tamban Community Health Center has played an important role in improving food and beverage management in Purwosari II Village by educating local community about proper food safety procedures. Important topics such as ensuring that water is boiled adequately for human consumption and storing food in a hygienic manner were the focus of the outreach. With more families adopting practices such as storing raw food in the refrigerator and using serving covers for ready-to-eat food to keep it clean, there has been a noticeable change in community behavior towards better food storage practices.

However, the water provided by PAMSIMAS in Purwosari II Village still does not meet drinking water requirements (Nisa et al., 2023). Although the water is considered pure, it must still be boiled before consumption, making it difficult to achieve the highest standards of food and water safety. Poor food hygiene management can be a major cause of foodborne infections, especially in places with limited access to sanitation facilities (Opu et al., 2021). This study highlights the importance of providing ongoing education to ensure that everyone in the community adheres to safe food handling procedures. Promoting the use of fresh ingredients and proper food storage can improve long-term family health and prevent digestive disorders.

Overall, Purwosari II has made significant progress toward fulfilling the third pillar of the CTPS, which focuses on household food and beverage management. However, water quality remains a critical issue that needs improvement. The community can further enhance food and beverage management practices, which will ultimately improve public health outcomes, through continuous education and increased access to clean water. The community in general and households in particular highly value food safety. Hygienic food and beverage management is crucial for individual health and overall community well-being (Yulianti et al., 2022). This study emphasizes the importance of maintaining cleanliness throughout the entire food handling process, from preparation to serving.

Understanding Good Manufacturing Practices (GMP) can help improve food safety standards in business environments, especially for micro, small, and medium enterprises (MSMEs), by ensuring that products meet health and safety criteria (Yuliana & Tangkilisan, 2024). This strategy improves overall food quality, its impact on customer health, and awareness among surrounding companies. Additionally, the food safety procedures and information taught in schools closely align with the available training and resources. According to Yahya et al. (2022), to

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ensure efficient food safety procedures, school kitchen managers must receive adequate training. Food hygiene in daily routines can directly influence student health, highlighting the importance of schools in fostering safety and sanitation.

Rahmawati et al. (2020) found that the hygiene standards for food handlers have improved as a result of ongoing activities, including educational materials in the form of booklets. This indicates that to promote improvements in food handling techniques at home and in other community settings, sustained education is required.

Household Waste Security

Household trash management is a major problem in Purwosari II Village, where there are major behavioral and infrastructure barriers. Households lack adequate garbage disposal locations, whereas public areas like schools and mosques have the only facilities for disposing of waste. Rubbish builds up in some places as a result of the continued irregularity of trash collection. To address this problem, some locals burn their waste, which lessens accumulation but produces offensive odors and pollutes the environment. Furthermore, it is still common practice to throw trash into the river, especially along the banks where homes are located near the water. This method is thought to be more practical than burning rubbish or transferring it to a far-off disposal location.

The local government and health officials have tried to encourage appropriate trash management through counseling and socialization programs, but the results have been mixed. Socialization efforts, such as banners and brochures, have not changed long-standing behaviors. The continued practice of discarding rubbish into the river reflects the community's long-standing customs and the lack of easily accessible alternatives.

Inadequate infrastructure and ingrained behavioral patterns are also contributing factors to Purwosari II's continued use of inappropriate waste disposal techniques. Bintari (2017) emphasizes how crucial community-based trash management is and how local involvement in recycling and sorting can aid in resolving these problems. However, many people now just burn their rubbish or dispose of it in the river since it is convenient, especially since there are not many accessible options for disposing of home waste. Cultural conventions and the lack of an all-encompassing waste management system serve to reinforce this practice.

Poor waste management greatly increases the hazards to the environment and public health, including the spread of diseases (Donkor et al., 2022). The extensive garbage disposal in rivers in Purwosari II raises the risk of health issues, especially for children, in addition to aggravating water contamination. According to Juniardi et al. (2020), more than half of the population still disposes of their garbage in an unhygienic manner, highlighting the severity of the issue. This conclusion implies that changing the community's attitude toward garbage management requires more than just infrastructural upgrades; a cultural revolution is also required.

The results suggest that Purwosari II requires a comprehensive strategy to handle waste management. Changing community behavior is just as vital as developing infrastructure. The long-term health and environmental advantages of appropriate garbage disposal should be emphasized in educational initiatives. These programs will be more successful if they include well-known members of the community and are in line with regional cultural values (Wasonga et al., 2014). To overcome opposition to change and advance environmentally friendly waste management techniques, community-based education is essential.

In conclusion, even though there has been some physical improvement, addressing the underlying causes of Purwosari II's subpar waste disposal methods will require a more comprehensive and culturally aware strategy. To improve sanitation and public health in the village, it is imperative to develop waste disposal facilities, strengthen the role of local government, and encourage ongoing community involvement.

Household Liquid Waste Safety

In Purwosari II Village, managing household liquid waste continues to be a major problem, endangering public health and the environment. The neighborhood still dumps liquid trash into the river, which degrades the water quality and raises the possibility of contracting waterborne illnesses. The issue is worsened by the absence of facilities for the collection and treatment of liquid waste, such as septic tanks or appropriate disposal systems. Wastewater is being disposed of unregulated, especially along riverbanks, due to the lack of an integrated liquid waste management system at the household or village level.

According to research by Opu et al. (2021), poor domestic liquid waste management might have detrimental effects on the environment and public health. Liquid trash dumped into the river at Purwosari II contaminates the water and aids in the spread of illnesses like cholera, hepatitis, and diarrhea. The habitual discharge of liquid waste into water bodies in rural areas is frequently caused by a lack of sanitation infrastructure, thus degrading environmental sanitation (Stiawati, 2021).

Due in large part to cultural customs and a lack of suitable facilities, the community still disposes of liquid waste incorrectly even after the Tamban Community Health Center made an effort to address this problem. Research by Khasanah & Setiyabudi (2023) showed that 64% of respondents experienced poor household wastewater management, which has implications for the health of children and the community in general. The findings of Yustiana (2023), who observes that inadequate waste management techniques cause a reversal of community understanding regarding the significance of appropriate liquid waste disposal, are in line with this pattern.

The geographic setting of Purwosari II exacerbates the problem. The neighborhood has been accustomed to disposing of rubbish in the water since it feels convenient and natural to live next to the river. These communities frequently oppose adopting alternate garbage disposal techniques because of their long-standing reliance on water bodies (Bintari, 2017). In addition to providing adequate facilities, addressing this practice calls for a change in the community's perception of the disposal of liquid waste. One sustainable option that has been proposed is the employment of green technologies, such as turning home liquid waste into organic fertilizer. Home garbage can be recycled into beneficial goods like liquid organic fertilizers, which could lessen the impact on the environment and support regional farming (Salawati et al., 2020). As suggested by Rahmuniyati & Sahayati (2021), educating the public about these technologies may enhance waste management procedures and lessen dependency on water bodies for garbage disposal.

A diversified strategy is required to address Purwosari II's liquid waste management problem. This approach entails supplying suitable means for disposing of liquid waste, like septic tanks or treatment plants, as well as providing instruction on

alternative waste management technologies. Additionally, educational initiatives should be created to promote more environmentally friendly garbage disposal methods and challenge long-standing behaviors. Fostering long-term behavior change will require including community leaders and incorporating local cultural values into the educational process, as recommended by Wasonga et al. (2014).

In summary, Purwosari II's household liquid waste security calls for an all-encompassing strategy that incorporates community education, infrastructure development, and the advancement of sustainable technologies. The village can enhance environmental conditions and public health by offering easily available liquid waste management options and promoting behavioral change.

B. **Community-Based Total Sanitation Program Strategy in Changing Hygienic Behavior to Improve Public Health in Purwosari II Village, Tamban Subdistrict**

CBTS Advocacy (Policy, Commitment, Funds, and Infrastructure). The implementation of the Community-Based Total Sanitation (CBTS) program in Purwosari II Village has encountered several successes and challenges, especially concerning policy, commitment, funding, and infrastructure. Despite the provision of physical assistance from the local government, including the construction of communal toilets and handwashing facilities, a notable disparity in the distribution of sanitation facilities persists. According to Focus Group Discussions (FGD) and interviews, approximately 42% of households have access to communal toilets, indicating that a significant number continue to depend on latrines situated along the riverbank. This situation underscores a significant inequality in access to sanitation services, notwithstanding initiatives aimed at enhancing infrastructure. The lack of documented policies regulating the implementation of CBTS intensifies this disparity. The commitment of the local government and Tamban Community Health Center to the program is evident; however, the absence of formal policies obstructs long-term planning and consistency in resource allocation. Clear and well-enforced policies for fostering community participation and ensuring the sustainability of sanitation programs (Arif, 2024; Jati & Susiloadi, 2022; Muchsin & Saliro, 2020).

In the absence of such policies, community engagement will lack consistency, resulting in a slower pace of behavioral change. In Purwosari II, there is significant community engagement in educational and awareness-raising initiatives conducted by the health center. Community participation in the physical construction and maintenance of sanitation facilities is, however, still restricted. This gap suggests that although the community recognizes the significance of sanitation, there is a deficiency in active involvement in the construction and upkeep of sanitation facilities. Successful of CBTS programs necessitate both awareness and active involvement throughout all stages, including planning and maintenance (A'yunina et al., 2020; Herniwanti et al., 2022). Engaging the community at each stage of the process is essential for realizing sustainable change. The financial support for sanitation infrastructure is insufficient, with constrained funding impeding the growth of sanitation services. Securing adequate funding is essential for the effective implementation of CBTS programs (Farha et al., 2021; Sucahya et al., 2021).

In Purwosari II, insufficient funding has hindered the construction of communal toilets and other infrastructure, resulting in many households lacking access to safe sanitation. Despite these challenges, initiatives by the local government and community health centers have effectively reduced open defecation and enhanced hygiene practices. The establishment of handwashing facilities and the execution of PAMSIMAS for clean water supply represent significant accomplishments; however, the equitable distribution of these resources continues to pose a substantial challenge. Creating a reporting system to track CBTS activities can help fill the gaps and allow for a clear assessment of how well the program is working (Maulida & Prabawa, 2023; Mustafidah et al., 2020).

CBTS Atmosphere Building (Coordination, Program Socialization, and Training). Effective coordination, program socialization, and continuous training are critical to the CBTS program's successful implementation in Purwosari II Village. Addressing sanitary issues has been made easier thanks to monthly coordination meetings involving the Public Works and Spatial Planning Office of Barito Kuala, village officials, and the Community Health Center. A cross-sectoral approach to attaining sanitation goals is reflected in these sessions, which concentrate on crucial subjects such as environmental management, sanitation, and stunting.

Although there has been a fair amount of cooperation among the major players, other sectors, like Regional Development Planning Agency (Bappeda) and the private sector, have not been heavily involved. For sanitation programs to be more successful, cross-sector collaboration must be strengthened. The adoption of improved sanitation methods is accelerated by multi-stakeholder involvement (Coffey et al., 2017; Koch et al., 2020; Rany et al., 2022). Increased participation from regional planning organizations and the corporate sector in Purwosari II may result in more financial and technical assistance, bolstering the CBTS initiative even further.

Although socialization initiatives have been crucial in raising community knowledge of sanitation issues, there are still obstacles to overcome until everyone completely comprehends how important it is to alter their sanitation habits. Reaching the uninformed requires intensive communication through media outreach and community gatherings. Persistent socialization initiatives-especially those that emphasize hand hygiene-are essential for enhancing public health outcomes (Baggett et al., 2013; Sarkar & Shukla, 2024). More focused outreach is required to guarantee that all facets of the community are included, even though media use has proven successful in reaching wider audiences.

Another essential element of the CBTS program is the training of community health cadres. The Health Office has regularly held yearly training sessions, which have improved the cadres' ability to promote sanitary behavior and provide sanitation education. However, the absence of a comprehensive evaluation undermines the efficacy of these training sessions. According to studies by Karadağ et al. (2016) and Sobhan et al. (2022), continuous assessments and modifications to training initiatives are required to guarantee their efficacy. To improve cadres' capacity to provide high-quality instruction and encourage long-lasting behavioral changes, systematic and practice-based training methods are crucial.

CBTS Community Empowerment. The success of the CBTS program in Purwosari II has been greatly attributed to community empowerment, especially through the implementation of a community-based strategy in which Community Empowerment Cadres oversee the triggering and educational activities. To effectively teach the cadres and enable

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them to conduct sanitation instruction through participatory techniques that are appealing to the local population, the population health center and village officials collaborated.

Purwosari II's triggering techniques, such as highlighting the risks of open defecation and the advantages of washing your hands with soap, have been successful in increasing awareness. The community has benefited from these techniques, which combine practical demonstrations and visual aids to help them comprehend the significance of proper sanitation practices. According to Istiana et al. (2021), behavior change that lasts longer results from empowering the community by addressing all five CBTS pillars. Community members' participation in socialization and decision-making guarantees that the program is applicable to their everyday life and raises the possibility of adoption. Nevertheless, there are still obstacles in the way of maximizing community empowerment. The scarcity of cadres with a specific concentration on CBTS is a significant barrier. Due to their combined responsibilities, many cadres have less time and money available for sanitation-related tasks. Due to time constraints, dual-duty cadres frequently find it difficult to carry out cleanliness initiatives successfully (Stiawati, 2021). More cadres devoted exclusively to CBTS would improve the program's effectiveness and enable more regular community involvement.

In terms of education, enhancing public awareness of hygienic habits requires carefully thought-out outreach. Improved sanitation practices are directly correlated with increased sanitation knowledge, according to a study conducted in rural Indonesia by Arif (2024). This result is consistent with studies by Muchsin & Saliro (2020) and Rany et al. (2022), which highlight the value of stakeholder engagement in developing and delivering successful educational materials. Furthermore, to make sure that behavior improvements are maintained over time, ongoing observation and follow-up are required. Organized monitoring systems are essential for evaluating progress and resolving issues as they emerge (Arif, 2024).

Several actions are required to increase community empowerment's efficacy. First, we will enhance program delivery by dedicating more cadres to CBTS. Second, making the monitoring and assessment process stronger will guarantee that the behavioral improvements are long-lasting. Third, encouraging cooperation between CBTS cadres and other health cadres would guarantee a more cohesive and successful strategy. Last, recognizing communities or families who successfully adopt healthy and clean living habits can serve as extra encouragement for sustained participation in sanitation activities.

C. SWOT ANALYSIS of CBTS Program in Purwosari II Village

SWOT (analysis *Of Strengths, Weaknesses, Opportunities, And Threats*) was used to identify internal and external factors that influence the implementation of the CBTS Program in Purwosari II Village. This approach helps formulate appropriate strategies to strengthen program strengths, minimize weaknesses, take advantage of opportunities, and overcome existing threats. Comparison with previous research shows that the CBTS program in Purwosari II Village is unique in its application of local strategies but faces similar challenges to other areas.

The SWOT analysis indicates that the implementation of the CBTS Program in Purwosari II Village has a lot of potential to be improved. By optimizing existing strengths and opportunities and addressing weaknesses and threats, the program can be more effective in encouraging changes in community hygienic behavior. The proposed strategies can serve as a guide to improve the quality of program implementation and achieve sustainable sanitation goals. Here a SWOT table that has been analyzed according to the results of the research obtained:

Tabel 2. The SWOT analysis suggests the following strategies

Analisys SWOT	Strengths (S)	Weaknesses (W)
	1. Active Involvement of Community Health Center: Community Health Center Tamban has comprehensive data on sanitation facilities, such as communal and individual WCs, which facilitates data-driven decision-making. Research by Istiana et al. (2021) also reveals that the success of sanitation planning hinges on accurate data from health facilities. 2. Support from the Office of the Public Works and Public Housing Service: Collaboration with the Barito Kuala District Public Works and Spatial Planning Office for the construction of a communal WC was an advantage. Similar to research Stiawati (2021), cross-sector support often accelerates the development of sanitation facilities. 3. Cadre Involvement: Community Empowerment Cadres receive specialized training that enables them	1. Lack of Written Policy: The absence of specific written policies on CBTS implementation at the village level is a barrier to strengthening program implementation . Research by Stiawati (2021) also found that the absence of formal policies at the local level often slows down the implementation process of sanitation programs. 2. Uneven Distribution of Communal WCs: Some areas still do not have access to a communal WC due to geographical constraints and budget limitations. This was also found in research by Safira (2022), which noted that the distribution of sanitation facilities is often uneven in rural areas with limited access. 3. Cadres with Dual Duties: Due to their involvement in other health programs, most cadres have limited time and resources to dedicate to CBTS. According to Bintari (2017), the presence of dual duties among cadres

	to carry out triggering methods directly at the community level. Research by Bintari (2017) emphasizes that cadre training is a key element for successful CBTS implementation. 4. Community-based Socialization: The community received effective information delivery through the use of Posyandu and direct meetings. This conclusion is similar to research findings Indriyani et al. (2016), which noted that community-based approaches are more effective than top-down methods. 5. Gradual Implementation of CBTS Pillars: Purwosari II village has started to implement some of the CBTS pillars, such as Stop BABS and Handwashing with Soap (CTPS), according to the phased approach recommended by Safira (2022).	can potentially diminish the effectiveness of program implementation. 4. Lack of Systematic Monitoring: The absence of a structured monitoring mechanism to evaluate the sustainability of post-triggering community behavior change. Research by Indriyani et al. (2016) emphasizes the importance of monitoring as a step to evaluate the impact of sanitation programs. 5. Limited Socialization in Remote Areas: The socialization program has not fully reached certain areas that are difficult to access. This finding is similar to research Istiana et al. (2021), which found similar challenges in remote areas of Parepare.
Opportunities (O) 1. Local Government Support: The commitment of local governments to reduce stunting and	**Strategy SO:** a. Utilize data owned by Community Health Center and support from the Office of the Public Works and Public	**Strategy WO:** a. Develop a written policy at the village level that supports CBTS implementation

improve access to sanitation can be used to expand CBTS programs. This is in line with the findings of Stiawati (2021), which mentioned the importance of synergy between sanitation and stunting prevention programs. 2. Cross-Sector Collaboration: Opportunities to engage the private sector, NGOs, and community organizations to support CBTS programs, both in the form of funding and provision of facilities. Research by Safira (2022) also recommends cross-sector collaboration to strengthen program sustainability. 3. Increased Public Awareness: Following the COVID-19 pandemic, there was a notable increase in public awareness, which catalyzed encouraging changes in hygiene behavior. This benefit was also noted in the study (Istiana et al., 2021). 4. Digital Technology: The use of technology for cadre training and sanitation information dissemination	Housing Service to identify priority areas for communal WC construction. b. Optimizing cadre and community involvement in program socialization through digital technology support. c. Establish partnerships with the private sector to support program financing and the provision of additional sanitation facilities.	n and involves cross-sectors. b. Expanding the scope of socialization by utilizing digital technology to reach remote areas. c. Train additional cadres who focus on CBTS to address the double duty that burdens current cadres.

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can help reach more people. Indriyani et al. (2016) mentioned that digital technology can increase the effectiveness of sanitation campaigns. 5. Global Support for Sanitation: As sanitation programs receive international attention, the opportunity for assistance from global donors increases. Research by Safira (2022) notes that global donors can be a potential source of funding for sanitation programs in remote areas.		
Threats (T) 1. Dependence on Government Assistance: Community dependence on government assistance can hinder independence in managing sanitation facilities. This type of dependency is also a concern in research (Bintari, 2017). 2. Geographical constraints: Hard-to-reach areas pose a major challenge for the distribution of sanitation facilities and the implementation of socialization. Safira (2022) noted geographical constraints as a major barrier to rural sanitation service provision. 3. Climate Change: Flood risk and environmental degradation can affect sanitation infrastructure. Research by Stiawati (2021) also emphasizes the importance of climate change mitigation in sanitation programs. 4. Behavior Change Resistance: Some people are still reluctant to change their sanitation behavior due to old habits or lack of awareness. Research by Istiana et al. (2021) notes that this resistance often arises from a lack of repeated education. 5. Budget Limitations: A limited budget may limit the scope of the program and the construction of sanitation facilities. Researchers also noted this (Indriyani et al., 2016).	Strategy ST: a. Leverage the power of cross-sector coordination to overcome geographical constraints and budget limitations through co-funding. b. Integrate climate change mitigation programs with sanitation infrastructure development to reduce the impact of flooding on sanitation facilities.	Strategy WT: a. Establish a monitoring and evaluation system that involves the community to ensure the sustainability of behavior change. b. Develop community empowerment programs to reduce dependence on government assistance.

CONCLUSION

The Community-Based Total Sanitation (CBTS) initiative in Purwosari II Village has demonstrated advancements and obstacles in enhancing sanitation practices and public health. Despite substantial efforts, the inequity in the distribution of sanitary facilities, especially communal toilets, continues to be a major obstacle. Geographic, cultural, and infrastructural variables intensify these issues. Moreover, inadequate community involvement in facility building and upkeep, together with

constrained government funding, limits the program's full potential.

From a policy standpoint, there is a distinct necessity for thorough, documented policies that facilitate CBTS adoption at the village level. These rules ought to promote continuous community engagement and guarantee the sustainability of sanitation enhancements. The lack of clear policies has impeded long-term planning and resource allocation, hence constraining the program's effectiveness. To rectify these deficiencies, it is imperative to enhance collaboration among diverse players, including local governments, health facilities, and the commercial sector.

The restricted range of socialization initiatives, particularly in remote regions, coupled with the absence of a rigorous monitoring framework to assess the effects of sanitation practices, underscores opportunities for enhancement. We must design policy frameworks that promote consistent community engagement and behavioral transformation across all stages of the CBTS program.

Notwithstanding these constraints, the initiative has made progress in enhancing awareness and instituting hygiene habits, including handwashing with soap (CTPS), as well as advancing food safety protocols. We mostly attribute these results to heightened public awareness, particularly in the aftermath of the COVID-19 outbreak. Nonetheless, maintaining these practices will necessitate persistent efforts, bolstered by continuing education, infrastructure enhancement, and community empowerment.

Although the CBTS program in Purwosari II has achieved significant progress, it necessitates a more systematic, policy-oriented strategy to rectify its deficiencies. This encompasses augmenting community engagement, guaranteeing fair access to sanitation amenities, and establishing a comprehensive monitoring system. By tackling these issues, the program may attain sustained success in enhancing public health and sanitation in the hamlet.

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