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Improvement of clean and healthy family living behavior through a home visit approach by community nurses

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ABSTRACT
Clean and Healthy Living Behavior (CHLB) is a critical indicator in improving public health status. However, many families have yet to fully implement CHLB practices in their daily lives, particularly in areas with limited education and access to health information. This community service program aimed to enhance family-level CHLB through a home visit approach conducted by community nurses. The method employed was an educational and participatory approach, where community nurses conducted regular home visits over three months. Each visit included direct health education, environmental observation, discussions with family members, and distribution of educational materials on CHLB. Topics included handwashing with soap, clean drinking water management, environmental sanitation, and prevention of infectious diseases. Based on local health data, the program targeted 30 households in a designated community. The results showed a significant improvement in both knowledge and practice of CHLB among the targeted families. Approximately 85% of the families demonstrated increased scores in the CHLB evaluation post-intervention. Positive behavioural changes were also observed, such as consistent handwashing before meals and after using the toilet, as well as better household waste management practices. These outcomes indicate that the home visit strategy by community nurses is an effective method for promoting health behavior change at the family level. This initiative is expected to serve as a replicable model for other communities, with the support of cross-sector collaboration. It emphasises the importance of family-based empowerment in health promotion and disease prevention efforts.

Keywords: Clean and Healthy Living Behavior, Community Nurse, Family Empowerment, Health Behavior, Home Visit.

INTRODUCTION

Health is a fundamental human right and a key component of human development. One of the most effective ways to achieve optimal health is by promoting Clean and Healthy Living Behavior (CHLB) at the individual, family, and community levels. CHLB, also known as Perilaku Hidup Bersih dan Sehat (PHBS) in Indonesia, comprises a set of health-promoting behaviours that aim to reduce disease risk, improve environmental sanitation, and encourage responsible health practices [1]. These behaviors include proper handwashing, clean water consumption, sanitation facilities, waste management, regular physical activity, and early health-seeking behaviour [2]. Despite ongoing national health campaigns, the implementation of CHLB at the household level remains inconsistent, particularly in low-income and rural areas. Many families lack access to accurate health information or do not fully understand the importance of daily health routines. The COVID-19 pandemic has further highlighted the urgent need to strengthen basic hygiene practices, such as hand hygiene and environmental cleanliness, which are central to CHLB principles. It has also exposed the limitations of health communication when it relies solely on mass media or digital platforms, especially in underserved communities [3].

Community nurses play a crucial role in bridging this gap. As frontliners in public health services, they are uniquely positioned to deliver personalised, culturally appropriate, and continuous health education directly to families [4]. Community nurse home visits are particularly effective because they provide the opportunity to observe household conditions firsthand, offer tailored advice, and build trust with community members. This face-to-face approach allows for real-time interaction, clarification of misconceptions, and reinforcement of behaviour change in a supportive setting. Studies have shown that home visits can significantly impact various health outcomes, such as improving maternal and child health, increasing immunisation rates, and enhancing chronic disease management [5]. In the context of CHLB, home visits allow nurses to assess key environmental factors such as waste disposal practices, access to clean water, and use of toilets that directly influence a family's health status. Additionally, home visits can address the social determinants of health by identifying economic or cultural barriers that hinder behaviour change [6].

In Indonesia, the Ministry of Health advocates for community-based health strategies through programs such as Posyandu, Mobile Health Centre, and the Family Approach initiative [7]. These programs align with Sustainable Development Goals (SDGs) principles, particularly Goal 3: "Ensure healthy lives and promote well-being for all ages." However, implementation often faces challenges due to limited human resources, inadequate health education tools, and a lack of community participation. Therefore, empowering community nurses to conduct structured and focused home visits can complement existing public health infrastructure. This community service program seeks to strengthen family-based CHLB practices through trained community nurses' regular and structured home visits. The primary objectives are to increase families' knowledge, awareness, and practical application of CHLB principles and to encourage sustained behaviour change. The approach is participatory and empowering, aiming to educate and motivate families to take ownership of their health.

In summary, improving Clean and Healthy Living Behaviour through home visits by community nurses represents a strategic, evidence-based, and human-centred intervention. It addresses not only the "what" and "how" of health behaviours but also

the “why” by fostering understanding, motivation, and commitment at the family level. With growing recognition of the role of preventive health in reducing the burden of disease and health care costs, initiatives such as this are more critical than ever in shaping a resilient and health-literate society.

METHOD

Implementing this community service activity uses an educational, participatory, and family-based approach, which is carried out systematically through home visits by community nurses. The activity is designed in several main stages as follows:

Identify Problems and Activity Goals

The activity began with an initial survey and coordination with the local Health Center to obtain data on families with low levels of PHBS implementation. The target was set for 30 households in the target area, which were selected based on criteria such as occupancy density, access to basic sanitation facilities, and history of environment-based diseases.

Planning and Preparation of Educational Materials

The implementation team, consisting of community nursing lecturers and students, compiled educational materials about PHBS in accordance with the standards of the Ministry of Health of the Republic of Indonesia. The material includes: Proper handwashing practices with soap, Management of drinking water and clean food, Use of healthy latrines, Household waste management, Prevention of infectious diseases, Healthy habits in the family (adequate rest, exercise, no smoking in the house). This material is compiled in leaflets, posters, and digital media, easily understood by various levels of society.

Implementation of Home Visits

Home visits were carried out 3 times for each family for 3 months. Each visit is carried out by a team of one community nurse and one student. The series of activities during the visit includes home environmental observation, which identifies the house's physical condition, sanitation facilities, and environmental cleanliness. Interviews and Discussions: Interactive dialogue with family members to explore PHBS-related knowledge, attitudes, and practices. Health Counselling: Direct education using educational media and demonstration of PHBS practices. Provision of Props: These include handwashing posters or reminder labels in the handwashing area. Recording and Evaluation: Recording of PHBS scores based on indicators observed and reported at each visit.

Monitoring and Evaluation

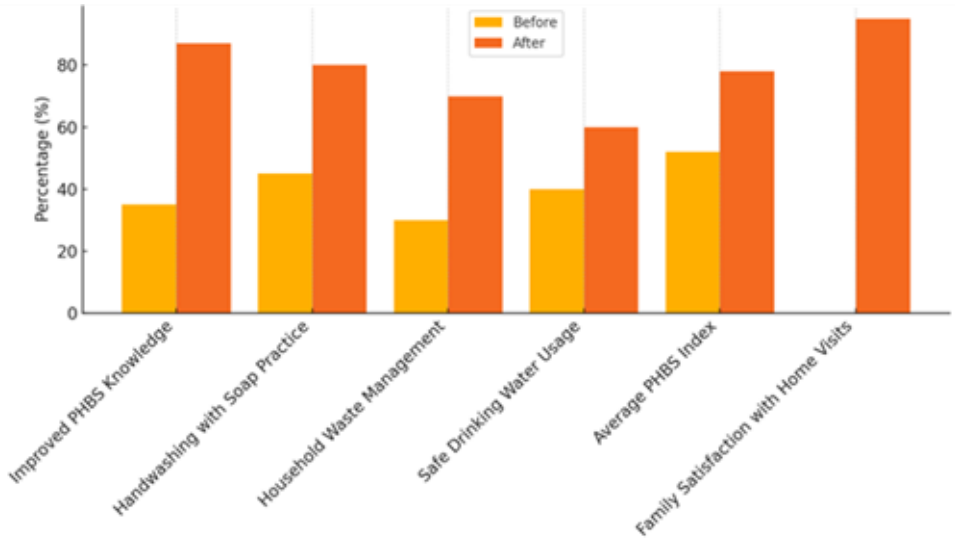
Evaluation was carried out quantitatively and qualitatively. Evaluation indicators include improving household PHBS indicator scores (before and after intervention). Observed noticeable behavioural changes (e.g., availability of soap in the handwashing area, use of healthy latrines). The level of family understanding is based on pretest and posttest questionnaires, as well as the response and satisfaction of the family to the visits and education provided. In addition, the implementation team carried out an internal evaluation to assess the success of the home visit method and the potential for replication of the program in other regions.

Reporting and Dissemination of Results

All activities are documented in activity reports, scientific articles, and presentation materials. The results of dissemination activities through community forums, campus publications, and discussions with village officials and local health workers encourage the program's sustainability.

RESULT

Community service activities through a home visit approach by community nurses showed significant results in improving family knowledge, attitudes, and behaviours towards implementing Clean and Healthy Living Behaviours (PHBS). The following are the results obtained based on the stages of the implementation method.



Grafik 1. Pre-test and post-test results of community service activity participants

Increasing Family Knowledge about PHBS. Before the visit, most families (about 65%) had low knowledge of the basic principles of PHBS. After three home visits accompanied by education and interactive discussions, 87% of families experienced increased knowledge scores based on simple post-test results. The topics that have increased their understanding are the practice of washing hands with soap, toilet sanitation, and household drinking water management. Changes in Everyday Behaviour. Direct observation and measurement of household PHBS indicators showed positive changes in healthy habits and behaviours: 80% of families started providing soap in the handwashing area and used it regularly before meals and after defecation. 70% of previously littered families have now sorted and disposed of litter in a closed place. 60% of families who initially used water without treatment have now routinely boiled or used safe, refillable water.

Increased participation of family members. During the activity, it was found that the involvement of all family members, including children and older people, increased in supporting the practice of PHBS. Interactive discussions in home visits encourage children's participation in education (e.g., through educational games). The husband/father in the family also began to be involved in maintaining the cleanliness of the home environment: satisfaction and Positive Response of Residents. The results of the evaluation questionnaire on the implementation of activities show that. 95% of families are satisfied with the home visit method because of its personalised and communicative approach. They stated that visits by nurses felt more comfortable and motivating because they were carried out in their environment. The family hopes this activity can be carried out continuously with a fixed schedule.

Increase in the Household PHBS Index. Based on the household PHBS assessment instrument from the Ministry of Health. The average PHBS index before intervention was

52% (a relatively low category). After the intervention, the index increased to 78%, which indicates a good category. The results of this activity show that the home visit method by community nurses has proven effective in significantly improving PHBS practices at the family level. Direct interaction, emotional engagement, and a dialogue-based approach are key to sustainably building clean and healthy habits.

DISCUSSION

The findings of this community engagement program highlight the significant impact of structured home visits conducted by community nurses on the improvement of Clean and Healthy Living Behaviour (CHLB) at the family level. The intervention resulted in positive changes in knowledge, attitudes, and daily health practices among the participating households. These outcomes are consistent with existing literature that supports the effectiveness of home-based health education in promoting sustainable behavioural change.

Effectiveness of Home Visit-Based Education. The increase in knowledge scores from an initial 35% to 87% after the intervention demonstrates the critical role of personalised education in health promotion. Unlike mass campaigns or digital media outreach, home visits allow nurses to provide direct, tailored health messages contextualised within families' daily lives. The intimate setting of the household fosters trust, open dialogue, and better comprehension of health information. This aligns with recent global findings, such as those published by the WHO (2023), which emphasise the importance of community-based approaches in addressing health inequities. Moreover, the observable behavioural improvements, such as regular handwashing, better waste disposal, and safe water consumption, underscore how home visits go beyond knowledge transfer into real-life habit formation [8]. Community nurses can model behaviours, demonstrate tools, and actively engage multiple family members, reinforcing healthy routines collaboratively [9].

Family Participation and Empowerment. Another notable outcome was the increased participation of entire families in health-promoting behaviours. Engaging all household members, including men and children, was pivotal in creating a supportive environment for behaviour change [10]. This aligns with modern health promotion principles emphasising empowerment and shared responsibility, as the Ottawa Charter for Health Promotion reflects. Involving fathers and male heads of households, often underrepresented in health education, proved especially effective in influencing household sanitation practices and resource allocation [11]. Children also responded well to interactive activities during visits, reinforcing CHLB messages through school-home synergy [12]. This holistic approach reflects a shift from individual-based interventions toward family-centred public health strategies [13].

Barriers and Facilitators Identified. While the results were largely positive, several challenges were identified. Some families faced limitations such as irregular access to clean water, lack of sanitation infrastructure, or long-standing cultural practices that conflicted with CHLB principles [14]. These structural barriers highlight the importance of integrating environmental and socio-economic assessments into health promotion activities [15]. However, the presence of a consistent and empathetic nurse proved to be a strong facilitator [16]. Families reported high satisfaction (95%) with the personalised nature of the visits, indicating that trust in health workers can significantly enhance message retention and motivation [17]. Visual aids, participatory discussions, and respect

for local customs were also cited as factors that helped families feel heard and involved, rather than being passive recipients of advice [18].

Relevance in the Post-Pandemic Context. The COVID-19 pandemic emphasised the vital role of basic hygiene behaviours such as handwashing and respiratory etiquette. This project's success in reinforcing those behaviours in vulnerable households remains relevant as communities recover and prepare for future public health threats [19]. The pandemic also demonstrated top-down, technology-heavy communication limitations, especially in low-resource settings [20]. Home visits by trained community health workers represent a resilient, low-tech, and high-impact model for health communication and prevention. Furthermore, these findings support the global call for stronger community health systems as part of universal health coverage (UHC) and the Sustainable Development Goals (SDG 3: Good Health and Well-being). By working directly with families, community nurses are disseminating knowledge and building local health literacy and capacity foundations for long-term health resilience [21].

Implications for Policy and Practice. The positive outcomes from this intervention indicate that home visit-based programs can be scaled up with the support of local health departments and integrated into existing public health infrastructure, such as Puskesmas and Posyandu in Indonesia [22]. For effective replication, the program should include standard operating procedures (SOPs), training modules for nurses, and a simple monitoring and evaluation framework to measure behavioural change. In addition, collaboration with village authorities and health cadres can help identify at-risk households, mobilise community resources, and ensure program sustainability [23]. Integrating digital tools such as mobile reporting apps or WhatsApp groups may enhance data tracking and follow-up support, especially in more remote areas. This discussion demonstrates that empowering families through personalised, respectful, and consistent home visits can be transformative in improving Clean and Healthy Living Behaviour. Community nurses play a vital role in translating health promotion theory into practical, measurable change right at the heart of where health begins: the home.

CONCLUSIONS

This program proved that structured home visits by community nurses are a practical, person-centred approach to enhancing Clean and Healthy Living Behaviour (CHLB) at the household level. By combining education, participation, and direct family engagement, the intervention led to tangible improvements in hygiene practices, sanitation, safe water use, and overall CHLB scores. The active involvement of all family members fostered a supportive environment for lasting change, while high satisfaction reflected strong trust between families and nurses. In resource-limited settings, this approach offers a scalable model for strengthening health literacy and advancing public health goals, particularly in prevention and universal health coverage. Ultimately, home visits bridge the gap between knowledge and action, empowering families as agents of their health.

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