



Strengthening Self-Efficacy in Personal Hygiene Among Children of Indonesian Migrant Workers in Malaysia

Nofi Susanti¹, Aulia Annisa², Putra Apriadi Siregar¹, Prima Yanti Siregar³, Apriliani⁴, Rani Suraya¹, Muhammad Rezebri¹, Hafsah⁵

¹Faculty of Public Health, Universitas Islam Negeri Sumatera Utara, Medan, Indonesia

²Institut Syekh Abdul Halim Hasan Binjai, Indonesia

³Akademi manajemen informatika komputer ITMI, Indonesia

⁴Sekolah Tinggi Ilmu Kesehatan Malahayati Medan, Indonesia

⁵Indonesian Community Centre, Negeri Sembilan, Malaysia

Email correspondence: dr.nofisusanti@uinsu.ac.id

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Abstract

Children of migrant workers often face limited access to basic services and health education, which can negatively affect their personal hygiene practices. This community engagement initiative aimed to enhance self-efficacy and improve hygiene knowledge and behaviors among migrant children through simple, enjoyable, and contextually relevant approaches. The program was implemented at Sanggar Belajar Negeri Sembilan, Malaysia, in July 2025, involving a total sample of 30 children aged 7–13 years. The intervention combined interactive lectures, demonstrations of the seven-step of proper handwashing, or what is commonly known as CTPS or Cuci Tangan Pakai Sabun, and toothbrushing techniques, as through a modified educational board game based on Snakes and Ladders. Monitoring was conducted descriptively through baseline and final observations, along with informal oral questioning (without formal questionnaires) to assess changes in knowledge, attitudes, participation, and signs of self-efficacy. The results indicated meaningful practical improvements: over 80% of participants could identify 3–5 correct hygiene practices; children showed increased confidence in demonstrating the seven CTPS steps and expressed commitment to brushing their teeth at least twice daily; and high levels of active participation were observed (≥25 children engaged in discussions, Q&A, and games until the end of the session). The program was well received by both participants and facilitators, suggesting that a combination of brief lectures, simulation, and gamification is practically effective for promoting hygiene in migrant community contexts

Keywords: *Personal Hygiene, Migrant Children, Indonesia, Self-Efficacy, Malaysia*

INTRODUCTION

International migration has become an increasingly prominent global phenomenon over the past several decades. The world is now witnessing the largest cross-border movement of people in human history, with over 272 million individuals residing outside their country of birth as of 2019, nearly four times the number recorded in 1960 (Chamie, 2020). Countries such as Thailand and Malaysia host substantial populations of migrant workers, many of whom are in irregular situations (WMO, 2024) According to Indonesia's National Agency for the Placement and Protection of Indonesian Migrant Workers (BNP2TKI), a total of 51,723 Indonesian migrant workers were placed in Malaysia in 2024, making it the third-largest destination after Hong Kong and Taiwan. This figure reflects a significant increase, particularly

in December 2024, when 7,890 placements were recorded representing a 151.43% rise compared to the previous month (BNP2TKI, 2025).

In this context, UNICEF (2023) uses the term “children affected by migration” to refer to children who relocate, either independently or with their parents, within or across national borders, whether temporarily or permanently. The challenges faced by migrant workers in destination countries, such as limited access to health and social services, have direct implications for their children (Al-Btoush & El-Bcheraoui, 2024) Indonesian children who migrate abroad are exposed to various risks, including restricted access to essential services such as birth registration (particularly for those born overseas), education, and healthcare (UNICEF, 2023). These limitations not only hinder formal access to basic services but also contribute to a lack of awareness among children regarding the importance of personal hygiene.

Limited access to essential services significantly reduces awareness of personal hygiene among children of migrant workers (Sukmawati et al., 2024). Hygiene practices such as handwashing, bathing, and maintaining a clean living environment play a crucial role in disease prevention (Anastasia, 2024). The World Health Organization (2021) emphasizes that proper hygiene behaviors can substantially lower the risk of infection, particularly among children. However, children of migrant workers often live in overcrowded and unsanitary conditions, with inadequate health education and limited access to proper sanitation facilities.

The challenge of personal hygiene is not limited to children of migrant workers; it represents a broader global health concern. In 2023, approximately 2.3 billion people worldwide lacked access to handwashing facilities with water and soap at home, and 462 million children faced similar deficiencies in school settings (Centers for Disease Control and Prevention, 2023). This lack of access significantly increases the risk of transmitting infectious diseases such as diarrhea and respiratory infections.

At the regional level, personal hygiene practices in Southeast Asia continue to face significant challenges. A systematic review by Behera et al., (2022) revealed that handwashing remains infrequent in Indonesia, even when facilities are available. In Vietnam, poor hygiene practices have been linked to severe cases of diarrhea caused by the consumption of unsafe food and water. These findings suggest that personal hygiene issues are not solely the result of inadequate infrastructure, but also stem from a lack of education and public awareness, particularly among vulnerable groups such as migrant children.

METHODS

This community engagement initiative employed an Asset-Based Community Development (ABCD) approach. Activities were conducted at a community learning center for children of Indonesian migrant workers in the Kuala Lumpur area, Malaysia, in July 2025. The target population consisted of children aged 10–15 years who lived or regularly participated in activities at the center. Given the limited population size, a total sampling technique was used; all children meeting the inclusion criteria were invited to participate (target $n = 30$). Inclusion criteria included: children of Indonesian migrant workers aged 10–15 years, present on the day of implementation, able to communicate in Bahasa Indonesia or Malay, and having obtained parental/guardian consent (informed consent) as well as child assent. Exclusion criteria included acute conditions that hindered participation (e.g., high fever) or inability to follow basic instructions.

The core focus of this initiative was to strengthen children's self-efficacy in practicing personal hygiene through interactive lectures, an educational board game (Snakes and Ladders), and hands-on simulations covering handwashing, toothbrushing, and environmental and bodily cleanliness. These activities were delivered directly by the community engagement team in the learning space of the Sanggar, which serves as an informal educational hub for migrant children. Participants were divided into small groups. Each group took turns rolling dice, moving their game pieces accordingly, and then reading and discussing the illustrated hygiene scenarios they landed on. The team also conducted monitoring and evaluation throughout the activity to ensure that the intended outcomes and targets were achieved.

RESULTS

This community engagement program was conducted at Sanggar Belajar Negeri Sembilan, Malaysia, targeting 30 Indonesian migrant children aged 7–13 years. Most of these children attend informal schooling and have limited access to health information. The program focused on strengthening self-efficacy in personal hygiene through two main methods: interactive lectures and an educational board game based on Snakes and Ladders. Activities took place in the sanggar's learning space, which serves as an informal educational setting for migrant children. Due to their parents' long working hours and limited access to formal health services, these children generally lack adequate health information. Participants were divided into small groups. Each group took turns rolling dice, moving their game pieces accordingly, and then reading and discussing the hygiene-related illustrations they landed on.

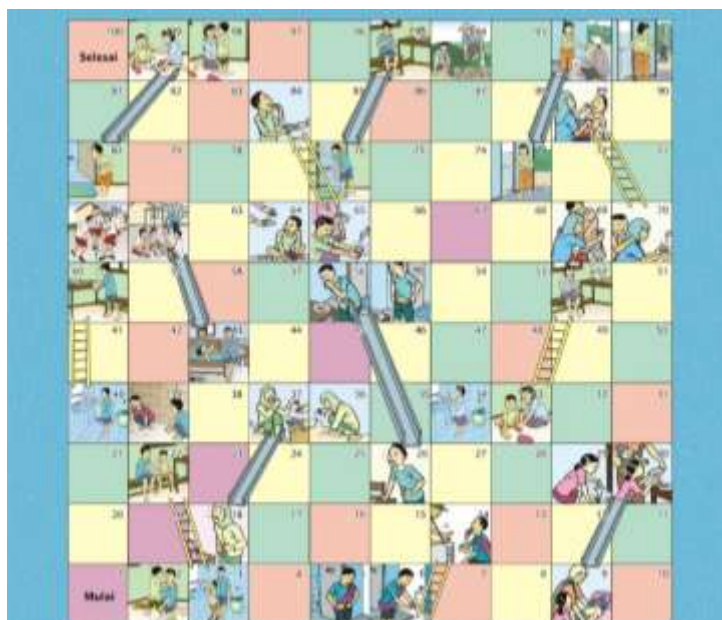


Figure 1 Snakes and Ladders As Media to Promote Personal Hygiene

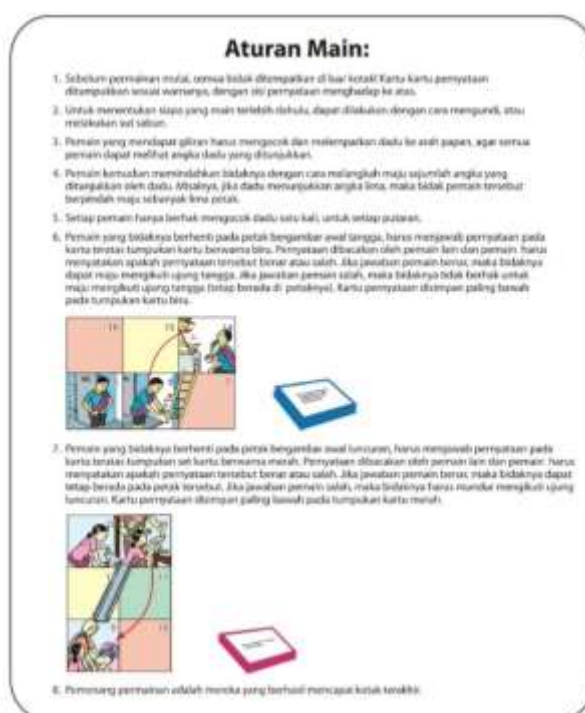


Figure 2. Instructions of Snake and Ladders Game

The community engagement activities were carried out in two main sessions:

1) Interactive Lecture

The material covered the importance of maintaining personal hygiene, emphasizing positive behaviors such as handwashing with soap, toothbrushing, covering food with a lid, disposing of waste properly, cleaning the home or surrounding environment, regular bathing, nail hygiene, and wearing clean clothes. Negative behaviors were also discussed,

including not washing hands before meals, consuming unhygienic street food, littering, neglecting oral hygiene or bathing, and playing in dirty environments. The interactive lecture lasted 45 minutes and was delivered using simple language and visual illustrations to ensure comprehension among children. Participants were encouraged to ask questions and share their personal experiences related to hygiene habits.



Figure 3. The Community Service Program – Educating Personal Hygiene Through Lecturing and Discussion

2) Educational Snakes and Ladders Game and Simulation

The community engagement activity incorporated a modified version of the Snakes and Ladders board game, enriched with questions and instructions related to personal hygiene practices. Children who answered questions correctly earned additional points, while incorrect answers resulted in returning to the starting square, reinforcing the learning process. This method fostered an enjoyable learning environment while simultaneously building children's confidence in applying personal hygiene behaviors.



Figure 4. Educational Game – Snake and Ladders to Strengthen Children's Personal Hygiene

The community engagement activities demonstrated notable improvements across several dimensions. In terms of knowledge, prior to the intervention, most children could identify only 1–2 basic hygiene practices, such as washing hands before meals. After the program, over 80% of participants were able to name 3–5 correct personal hygiene behaviors. Regarding attitudinal change, children showed increased enthusiasm in sharing their daily experiences, including commitments to brush their teeth at least twice a day and to wash their hands with soap. Through the Snakes and Ladders game, self-efficacy was visibly strengthened: children became more confident in naming the steps of proper handwashing and demonstrated a willingness to perform them in front of their peers. Active participation was also high, with more than 25 children engaging in answering questions, joining discussions, and playing the game until the session concluded.

This initiative had a positive impact on the understanding and self-efficacy of Indonesian migrant children in Negeri Sembilan. The combination of interactive lectures and educational games proved effective in enhancing knowledge while fostering confidence in practicing personal hygiene. Moreover, the children found the activities enjoyable and expressed interest in participating in similar sessions on other health-related and everyday life topics. The program also cultivated a sense of togetherness and solidarity among participants, as they learned and played in groups. This added a meaningful dimension to the intervention, highlighting that health is not solely an individual responsibility, but also a product of supportive social environments.



Figure 5. Introducing Personal Hygiene to Children of Immigrant Workers

Overall, education on healthy and hygienic living habits can offer substantial benefits for migrant children by improving their physical and mental well-being and supporting their adaptation to new environments. It is hoped that by providing such education to learners at the Sentul learning center, children will be able to implement and integrate these practices into their daily lives. This, in turn, is expected to enhance their physical health and fitness, contribute to a more conducive learning atmosphere, and help them become healthier and more active individuals.

The implementation and habituation of healthy and hygienic living practices can be achieved through various means, including: consuming nutritious and balanced meals while avoiding unhealthy foods such as fast food; taking vitamins and eating plenty of vegetables; engaging in regular physical activity to maintain bodily fitness; maintaining personal hygiene through regular bathing and handwashing; drinking sufficient water to support overall health; preserving mental well-being through positive activities; avoiding smoking and alcohol consumption; caring for oral health by brushing teeth regularly; and maintaining skin health through routine skincare practices.



Figure 6. Snapshot from the Community Service Program

DISCUSSION

Strengthening the Self-Efficacy of Indonesian Migrant Children in Practicing Personal Hygiene at Sanggar Negeri Sembilan, Malaysia

Community engagement is a highly appropriate intervention within community learning centers, especially given that many non-citizen children in Malaysia are unable to attend public schools. As a result, they rely heavily on community-based educational spaces. Refugee, migrant, and undocumented children face significant barriers to formal schooling, yet community learning centers have become vital gateways for accessing essential services, including health education. Therefore, utilizing Sanggar or learning centers as platforms for promoting personal hygiene is a strategic and responsive choice, well-suited to the needs of these children (Loganathan et al., 2023).

The combination of interactive lectures, handwashing demonstrations or what is known in Indonesia as CTPS - *cuci tangan pakai sabun*), and gamification through the Snakes and Ladders game provided meaningful repetition and immediate feedback, thereby enhancing children's understanding of personal hygiene concepts. Evidence from similar community engagement programs shows that proper handwashing demonstrations in primary schools consistently improves post-intervention knowledge scores, especially when delivered in concise, contextual formats accompanied by practical exercises. Comparable findings were observed in PHBS (Clean and Healthy Living Behavior) programs that utilized Snakes and Ladders and the ABCD approach, where the game served as a sustainable medium for health socialization (Wulandhani et al., 2024).

The Snakes and Ladders game encouraged active participation due to its competitive yet cooperative nature, its ability to provide immediate feedback, and its inclusive format that allowed children to engage both as players and observers. Evidence from similar community engagement programs on personal hygiene also indicates that game-based formats like this can enhance student engagement and attendance, while making it easier for facilitators to monitor learning progress. Accordingly, the high level of participation observed in this initiative aligns with these findings, affirming that utilizing Sanggar or learning centers as adaptive platforms for promoting personal hygiene is an effective strategy for strengthening knowledge among migrant children.

This community service program adopted a simple and enjoyable learning approach: brief explanations, direct demonstrations of proper handwashing with soap, and a hygiene-themed Snakes and Ladders game. As a result, children gained a clearer understanding of proper handwashing steps, showed greater willingness to brush their teeth twice daily, and

demonstrated confidence in practicing hygiene habits in front of their peers. The playful atmosphere helped children stay focused, reduced boredom, and supported longer retention of the material.

The effectiveness of this approach is evident. When children observe demonstrations, try the actions themselves, and receive encouragement from teachers and peers, their sense of “I can do this” increases. This boost in self-confidence fosters the adoption of new habits, not merely theoretical understanding. The game also serves as a natural “reminder” during each turn, prompting children to repeatedly engage with key messages such as washing hands before meals or trimming nails when dirty.

To sustain the impact of the program, each group should appoint a “hygiene ambassador” (peer leader) responsible for reminding others of simple routines: washing hands at key times, brushing teeth morning and night, and keeping nails trimmed. Posters illustrating the steps of proper handwashing should be placed near washing stations, reminder cards distributed, and short hygiene-themed games or classes scheduled monthly. In cases of skin or dental issues, children should be connected to nearby clinics or health partners.

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The results of this community engagement initiative align with findings by Sukesri et al., (2023), which reported significant differences in personal hygiene awareness among children at Sanggar Belajar (SB) Gombak Utara before and after intervention. Education plays a vital role in shaping self-awareness regarding personal health and in facilitating access to health services. By providing education on personal hygiene, children can develop a deeper understanding of health and make informed decisions about their well-being (Raghupathi & Raghupathi, 2020).

To ensure the long-term effectiveness of instilling good hygiene practices from an early age, it is essential to strengthen hygiene education within school environments. This can be achieved through informative workshops for caregivers and educators responsible for teaching young children (Pico et al., 2022). Hygiene education at an early age has been shown to produce lasting positive effects on students' health and academic performance. School-based hygiene programs also have the potential to reduce illness and absenteeism, ultimately contributing to improved academic achievement (Ghislaine et al., 2021). It is crucial that educational materials are delivered using language and methods appropriate to the child's developmental stage, so that the information is easily understood and applicable to daily life (Pradhan et al., 2020).

CONCLUSIONS

The community engagement initiative program generated positive outcomes in participants' knowledge, attitudes, and self-efficacy. Through interactive lectures, educational Snakes and Ladders games, and hygiene simulations, children demonstrated increased understanding of personal hygiene practices, progressing from knowing only 1–2 basic habits to being able to identify 3–5 correct hygiene behaviors. Attitudinal changes were evident in their commitment to maintaining personal cleanliness, such as brushing their teeth at least twice daily and washing hands with soap. Improvements in self-efficacy were reflected in their confidence to name the steps of proper handwashing and to model healthy habits in front of their peers. Active participation was also high, with over 80% of children engaging in discussions, Q&A sessions, and games, fostering a learning environment that was both joyful and deeply meaningful.

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