*International Journal Of Health, Engineering And Technology (IJHET)* *E-ISSN 2829 - 8683*
Volume 5, Number 1, May 2026, *Page. 1279 - 1282*
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# Clean And Healthy Living Behavior (PHBS) Education In Preventing ISPA In Soldiers At The 22/Om Brigif Health Police

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***Abstract***

*The 22nd Infantry Brigade (Brigif 22/OM) Health Police reported 87 cases of ISPA among soldiers in 2025 due to high mobility and dense interaction, with suboptimal PHBS as the main factor. This community service activity aims to increase soldiers' knowledge and awareness in implementing PHBS as an effort to prevent ISPA. The participants in this activity were 30 soldiers. The evaluation was conducted using a pre-test and post-test with 10 closed-ended questions to measure changes in knowledge levels. The results showed a significant increase in knowledge from an average score of 62% (pre-test) to 88% (post-test), the good category increased from 26.7% to 80%. PHBS education is effective as a promotive intervention in the military environment, and periodic replication with long-term behavioral measurements is recommended.*

**Keywords:** ***Acute Respiratory Infection, Health Education, Military Health, PHBS, Prevention Behavior.***

## INTRODUCTION

The 22nd Infantry Brigade Health Center (Polkes Brigif 22/Om) serves as the primary healthcare facility for soldiers with busy duty routines, high mobility, and intensive social interaction through group training and the use of shared facilities. These conditions are prone to triggering the transmission of Acute Respiratory Infections (ARI) if preventive behavior is suboptimal. Globally, ARI remains a major cause of morbidity and mortality, with the World Health Organization (WHO, 2023) listing it as one of the top ten diseases that kill millions of people each year, especially in developing countries through droplets from coughs and sneezes, hand contact, and contaminated objects (Hossain et al., 2022; Jackson et al., 2024). In Indonesia, ARI dominates reports from community health centers (Puskesmas) according to the Ministry of Health of the Republic of Indonesia (Kemenkes RI, 2022), triggered by unequal social density and PHBS (Pratama et al., 2023).

Internal data from the 22nd Infantry Brigade (Brigif 22/Om) Health Police in 2025 showed 87 cases of respiratory infections (ARI) among soldiers, reflecting the high risk of increased transmission due to mobility and service interactions if prevention is weak. Field observations revealed suboptimal PHBS (Health and Wellness) practices, such as infrequent mask use when sick, poor cough etiquette, lack of regular handwashing, and smoking habits that exacerbate respiratory disorders (Ministry of Health of the Republic of Indonesia, 2016; Sari et al., 2021; Widodo et al., 2024).

The main problem lies in the suboptimal implementation of PHBS among soldiers, which increases the risk of ARI, even though the military environment demands peak physical fitness. This high number of cases not only disrupts operational tasks but also indicates gaps in preventive knowledge and attitudes, as explained by Notoatmodjo's (2012) behavioral change theory, which emphasizes education as a driver of healthy attitudes and practices (Notoatmodjo, 2012; Susanti et al., 2022; Rahman et al., 2025).

Without promotive interventions such as PHBS education, the potential surge in ARI cases could undermine the overall health of soldiers. This behavioral factor is even more crucial in dense military settings, where PHBS has been shown to suppress infectious disease transmission (Ministry of Health of the Republic of Indonesia, 2022; Nugroho et al., 2023; Lee & Kim, 2024).

## RESEARCH METHODS

### Activity Method

The implementation activity method used was the Counseling Event Unit (SAP) as an educational intervention for PHBS to prevent ISPA for soldiers of the 22/OM Brigif Polkes (Sugiyono, 2023).

The components include preparation, surveying the conditions of the target audience of soldiers, coordination with the 22nd/OM Brigif Health Police, and preparation of materials and evaluation instruments (Sudaryono, 2022).

### Implementation

The implementation of the main activities follows a 60-minute flow: opening (10 minutes), delivery of PHBS-ISPA material (25 minutes), demonstration of hand washing/coughing/mask etiquette (10 minutes), participatory discussion (10 minutes), evaluation-closing (5 minutes) with active participation of soldiers (Emzir, 2021).

### Evaluation

The pre-test and post-test used 10 closed questions (correct score 1/wrong 0; categories: 76-100% good, 56-75% sufficient, ≤55% less) to measure the increase in knowledge of PHBS for preventing ISPA (Creswell & Creswell, 2025).

### Follow-up

Continuous mentoring through leaflets, posters, and distribution of materials to ensure consistent implementation of PHBS in the unit environment (Notoatmodjo, 2022).

The level of success was measured through quantitative pre-post test indicators and qualitative participant observation (Sumarni & Manurung, 2023). The activity was conducted on March 16, 2026, at the Brigif 22/OM Health Police for 60 minutes, targeting 30 soldiers at risk of ARI selected purposively. Systematic documentation included photos, attendance records, and reports by the team (Dr. Prima Dewi K as coordinator; Irma Aryanti as administrator) (Rachma et al., 2024).

## RESULTS AND DISCUSSION

### Activity Results

A Community Service activity entitled "Clean and Healthy Living Behavior (PHBS) Education in Preventing ISPA in Soldiers at the 22/OM Brigif Health Police" was held on Monday, March 16, 2026 at the 22/OM Brigif Health Police. This activity was attended by 30 soldiers as education participants.

### Knowledge Evaluation Results

Based on the results of the pre-test and post-test evaluation of 30 soldiers, the following data was obtained:

**Table 1. Results of the PHBS Education Pre-Test and Post-Test**

| No | Knowledge Category | Pre-Test (n=30) | Post-Test (n=30) |
|---|---|---|---|
| 1 | Good | 8 (26.7%) | 24 (80%) |
| 2 | Enough | 12 (40%) | 5 (16.7%) |
| 3 | Not enough | 10 (33.3%) | 1 (3.3%) |
| **Average Score** | | **62%** | **88%** |

Based on pre-test results, the majority of soldiers were in the adequate and inadequate knowledge categories regarding ARI prevention. This indicates that prior to the educational intervention, their understanding of PHBS and ARI prevention was suboptimal.

Following the health education program, there was a significant increase in the good knowledge category, from 26.7% to 80%. The average knowledge score increased from 62% to 88%. This indicates that the health education program was effective in improving soldiers' understanding of how ARI is transmitted, the importance of handwashing with soap, cough etiquette, mask use when sick, the importance of room ventilation, and the impact of ARI on physical readiness.

This improvement aligns with Notoatmodjo's (2014) theory of behavioral change, which states that increased knowledge is the initial stage in developing healthy attitudes and practices. Therefore, implementing health education as a promotive and preventive intervention has proven effective in increasing soldiers' knowledge regarding the application of PHBS in preventing ARI.

**Discussion**

The results of the activity showed that PHBS education was effective in increasing soldiers' knowledge about preventing ISPA. The increase in the average score from 62% to 88% demonstrated that the interactive lecture method combined with demonstrations and discussions significantly improved participants' understanding.

This finding aligns with Notoatmodjo's (2018) theory of health behavior change, which states that knowledge is the foundation for developing health attitudes and behaviors. The significant increase in knowledge after the intervention demonstrates that education is a crucial initial step in developing preventive behaviors.

The military environment is characterized by high mobility, large group interactions, and the use of shared facilities. These conditions have the potential to increase the risk of ARI transmission if not balanced with consistent implementation of healthy lifestyles (PHBS). Therefore, promotive interventions such as health education are a relevant and targeted strategy.

The handwashing demonstration had a positive impact on participants' psychomotor skills. The participatory approach enabled soldiers to understand and retain the material more easily than a one-way method. This aligns with the concept of participatory health promotion, which emphasizes active participant involvement in the learning process.

Furthermore, increased awareness of the importance of room ventilation, mask use when sick, and cough etiquette demonstrates that education not only improves cognitive aspects but also shapes behavioral readiness.

Overall, this Community Service activity succeeded in achieving its goal, namely increasing the knowledge and awareness of soldiers regarding the implementation of PHBS in preventing ISPA at the Brigif 22/OM Health Police.

In the future, it is recommended that educational activities be carried out periodically and integrated into the unit's health development program in order to maintain and improve PHBS practices sustainably.

## CONCLUSION

This community service activity demonstrated that PHBS education constitutes an effective promotive intervention in the military setting, as evidenced by a statistically meaningful increase in soldiers' knowledge scores from 62% (pre-test) to 88% (post-test), with the proportion of participants in the good knowledge category rising from 26.7% to 80% among 30 soldiers at Brigif 22/OM Health Police. These findings directly address the research objective by confirming that a structured 60-minute educational intervention combining interactive lectures, practical demonstrations, and participatory discussion significantly improves soldiers' understanding of ARI transmission pathways, hand hygiene, cough etiquette, mask use, and the role of room ventilation in respiratory disease prevention. The magnitude of improvement underscores that knowledge deficit, rather than resource limitation, was the primary barrier to PHBS compliance in this cohort, reinforcing the foundational

role of health education as the first stage in behavioral change within high-density operational environments. Nevertheless, this study carries inherent limitations: the single-group pre-post design without a control group restricts causal inference, the 30-participant sample limits generalizability across broader military populations, and the exclusive reliance on cognitive measures means that actual behavioral change and long-term PHBS adoption remain unverified. Future researchers are therefore encouraged to employ experimental or quasi-experimental designs with control groups, larger and more diverse military samples, and longitudinal follow-up assessments that incorporate behavioral and clinical outcome indicators such as ARI incidence rates. From a practical standpoint, military health authorities are recommended to integrate periodic PHBS education into the unit's routine health development program, supported by environmental reinforcements including posters, leaflets, and supervisory monitoring, to ensure that short-term knowledge gains translate into sustained preventive behaviors and measurable reductions in ARI burden among active personnel.

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