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IMPROVING IMMIGRANTS' PREPAREDNESS: COMMUNITY-BASED INJURY PREVENTION AND FIRST AID EDUCATION

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ABSTRACT

Migrants represent a highly vulnerable population due to their limited access to health information, healthcare services, and emergency response mechanisms. These vulnerabilities are exacerbated by language barriers, cultural differences, socioeconomic constraints, and the unpredictability of their living environments in host countries. The absence of knowledge and basic skills in handling injuries significantly increases their risk of complications, disability, and preventable mortality. This community-engagement program aimed to strengthen the emergency preparedness of migrants under the coordination of the International Organization for Migration (IOM) by providing culturally adapted education on injury prevention and first aid. A total of 20 migrants participated in an interactive session consisting of counseling, demonstrations, and hands-on skill practice. Knowledge acquisition was assessed using pre-test and post-test questionnaires containing ten multiple-choice items. The results revealed a 38.8% improvement in average knowledge scores (pre-test: 45.2; post-test: 74.0), with a paired t-test showing statistical significance ($p = 0.0000$, $p < 0.05$). Participants also demonstrated enthusiasm and high engagement during the practical sessions. These findings indicate that community-based, participatory education is effective for increasing first-aid competence among vulnerable migrant groups. This initiative can serve as a replicable model for migrant shelters and humanitarian organizations seeking to strengthen public health resilience.

Keywords: Emergency Conditions; First Aid; Immigrants; Injury; IOM; Prevention.

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INTRODUCTION

Migration has become one of the most significant global movements of the 21st century, involving millions of individuals relocating due to conflict, economic hardship, political instability, or environmental disasters (Bhutta & Black, 2018). Migrants consistently face complex health vulnerabilities shaped by social, structural, and environmental determinants (Silove et al., 2017; Besevic et al., 2020). Limited health literacy, cultural differences, and financial barriers further impede their access to healthcare (Hargreaves et al., 2018). Moreover, many migrants reside in overcrowded shelters or temporary accommodations where injury risks are high, and timely medical support is often unavailable (Burkle, 2019).

Studies indicate that injuries—including falls, burns, wounds, and fractures—are common among displaced populations, and their outcomes worsen without immediate first aid (Abbenyi et al., 2020; Choi & Kim, 2019). For this reason, first-aid knowledge is essential for reducing morbidity and preventing complications. Basic first-aid skills allow individuals to stabilize conditions before professional help is accessible (American Red Cross, 2021). However, migrants frequently lack this knowledge due to limited access to formal training, low literacy, and language barriers (Gray & Stern, 2016; Carter et al., 2021).

The World Health Organization (2018) underscores that culturally tailored health education improves the effectiveness of learning among refugees and migrants. Visual learning tools, participatory approaches, and hands-on practice significantly enhance comprehension and retention (Carter et al., 2021; Iserson et al., 2020). Community-based first-aid programs have also shown strong evidence in reducing preventable deaths and increasing community resilience (Bayram et al., 2017; Gerdts et al., 2017).

Psychological factors also influence how migrants respond to first-aid situations. Trauma exposure, stress, and emotional distress may impair decision-making (Ertl et al., 2020). Therefore, interventions must strengthen self-efficacy, confidence, and readiness to act, as explained by Social Cognitive Theory (Bandura, 1986). Likewise, the Health Belief Model (Rosenstock, 1974) and Theory of Planned Behavior (Ajzen, 1991) help explain how beliefs, attitudes, and perceived control shape health behaviors.

Given these realities, structured first-aid education tailored to migrant communities is essential. This program—conducted with migrants under the International Organization for Migration (IOM)—sought to improve their knowledge, skills, and emergency readiness through culturally adapted, participatory learning methods.

OBJECTIVES

The objective of this community-based intervention was to enhance migrants' injury-prevention awareness and first-aid competencies through culturally tailored educational strategies that emphasize active participation, hands-on practice, and long-term behavior change. The program aimed to systematically increase understanding of common injury risks, build readiness to respond effectively to emergencies, and

empower migrants to act confidently as first responders within their living environments. The initiative also sought to measure knowledge improvement, reinforce self-efficacy, reduce health disparities in migrant settings, and support sustained community capacity building through peer-supported educational approaches.

PLAN OF ACTION

The program was implemented through three phases: preparation, implementation, and evaluation. During the preparation phase, coordination meetings were conducted with the International Organization for Migration (IOM) to identify participants' educational needs, cultural characteristics, and emergency preparedness gaps. Based on the assessment results, educational materials were developed using culturally appropriate content, simple language, visual illustrations, and practical demonstrations. The materials focused on injury prevention, basic first aid, wound management, fracture immobilization, choking response, and management of fainting episodes.

The implementation phase was conducted through a one-day workshop on 23 July 2025. The educational session consisted of a 60-minute interactive lecture and discussion on injury prevention and first-aid principles, followed by a 120-minute hands-on training session. Participants were divided into small groups and practiced first-aid procedures under facilitator supervision. Each participant was required to demonstrate key competencies, including wound dressing, fracture immobilization, choking management, and first aid for fainting, using a skills checklist developed by the training team.

The evaluation phase measured changes in participants' knowledge and skills. Knowledge was assessed using a standardized pre-test and post-test questionnaire administered before and immediately after the training. Program effectiveness was determined by comparing the mean pre-test and post-test scores and calculating the percentage increase in knowledge. Practical skills were evaluated using an observation checklist, with participants expected to correctly perform at least 80% of the required first-aid steps. Participant satisfaction was also assessed through a post-training evaluation form. As a sustainability strategy, follow-up monitoring was planned every three months, and participants with the highest competency scores were encouraged to serve as peer educators to support the dissemination of first-aid knowledge within the migrant community.

RESULTS AND DISCUSSION

The quantitative evaluation of the program demonstrated strong effectiveness. The average pre-test score of participants was 45.2, reflecting limited baseline knowledge of injury prevention and first-aid principles. After the intervention, the average post-test score increased to 74.0, representing a 38.8% improvement. The paired t-test showed a significant difference ($p = 0.0000$), validating that the educational program produced a measurable and statistically significant impact.

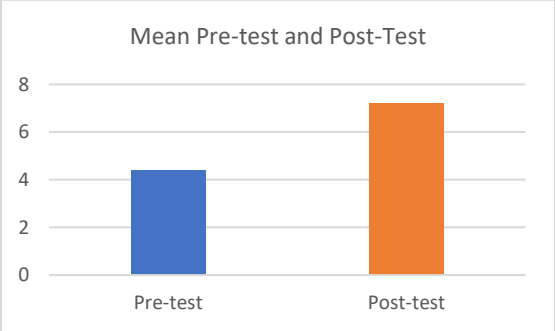

Figure 1. Mean of *Pre-test* and *Post-test*

These outcomes are consistent with findings by Eken et al. (2014), who

reported that practical, demonstration-based first-aid training significantly improved participants' knowledge and skill retention. The surge in post-test scores also aligns with studies suggesting that community-based programs that adopt a learner-centered pedagogy outperform traditional lecture-based formats (Bayram et al., 2017).

Figure 2. Community Service Activities

Participant Engagement and Learning Behaviors

Observation during the sessions revealed that participants were highly engaged, asked questions openly, shared personal experiences, and actively took notes. Many migrants expressed that this was their first exposure to structured first-aid training, highlighting a critical gap in emergency preparedness among migrant populations.

The hands-on practice was especially impactful. Participants practiced bandaging, splinting, and responding to choking and fainting scenarios with evident enthusiasm. Facilitators noted that the transition from observation to active practice significantly increased participants' confidence. This finding echoes Social Cognitive Theory (Bandura, 1986), which emphasizes that learning is strengthened when individuals can observe behaviors, attempt them, receive feedback, and gradually develop self-efficacy.

Cultural and Linguistic Adaptations

One of the major strengths of this program was its culturally adapted delivery. Facilitators used simple English supplemented with visual aids, demonstrations, and peer translation when necessary. Migrants from different countries supported each other during discussions, creating a learning environment that was cooperative rather than hierarchical. This form of mutual support is crucial because migrants often trust information more when it is reinforced by peers sharing similar experiences.

Studies by WHO (2018) and Iserson et al. (2020) emphasize that culturally sensitive health education improves uptake and comprehension. This was evident in the present program, where migrants reported that they found the content easy to understand due to its visual and practical nature.

Behavior Change Analysis Using Theoretical Frameworks

The program's success can be further interpreted through the lens of behavioral theories:

1. Health Belief Model (HBM)

Participants demonstrated increased perceived susceptibility after recognizing how common injuries occur in shelters. Their perceived severity increased through exposure to examples of untreated injuries leading to complications. The training enhanced participants' perceived benefits and reduced perceived barriers by offering simple, actionable steps. Thus, the HBM constructs collectively explain the participants' strong motivation to learn and apply first-aid skills.

2. Theory of Planned Behavior (TPB)

Attitudinal changes were observed as participants developed more positive perceptions of first-aid behaviors. Social norms shifted positively as peers supported one another, creating a collective mindset that valued emergency preparedness. Perceived behavioral control increased as participants practiced skills repeatedly, indicating that the intervention successfully enhanced self-efficacy.

3. Social Cognitive Theory (SCT)

The modeling provided by facilitators, coupled with hands-on practice, created a powerful environment for learning through observation and imitation. Participants who initially expressed doubt regarding their ability to perform first aid gradually showed increased confidence and accuracy after receiving supportive feedback.

Implications for Migrant Health Systems

The findings underscore the urgent need for continuous, sustainable first-aid education within migrant communities. The success of this program suggests that integrating participatory health education into routine migrant support services can substantially reduce risks associated with emergency situations. Migrants who master first-aid skills can serve as first responders within their shelters, potentially saving lives in situations where medical help may not be immediately available.

Furthermore, empowering migrants with health-related knowledge fosters resilience, autonomy, and psychological well-being. Health education of this kind supports not only individual capacity building but also community-strengthening outcomes, such as peer support networks and the dissemination of life-saving information.

CONCLUSION

The extended, culturally adapted community-based first-aid training program successfully enhanced migrants' knowledge, preparedness, and practical skills for responding to injuries and emergency situations. The significant improvement in test scores and the high level of engagement observed during the training underscore the effectiveness of participatory and hands-on educational methods. This program demonstrates that even short, intensive interventions can produce substantial benefits for vulnerable populations when delivered using culturally responsive and learner-centered approaches. To maximize long-term impact, similar programs should be expanded, conducted periodically, and integrated into broader migrant support systems, including the use of peer educators to sustain knowledge transfer.

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