



Effective strategies to enhance awareness and proficiency in open wound emergency management for students

Putra Agina Widyaswara Suwaryo ^{a,1,*}, Dadi Santoso ^{a,2}, Hendri Tamara Yuda ^{a,3}, Irmawan Andri Nugroho ^{a,4}, H. Hariyady ^{b,5}

^a Department of Nursing, Faculty of Health Science, Universitas Muhammadiyah Gombong, Jl Yos Sudarso 461 Gombong, Kebumen, Central Java 54412, Indonesia

^b Department of Informatics Engineering, Faculty of Engineering, Universitas Muhammadiyah Malang, Jl Raya Tlogomas No 246, Malang, East Java 65144, Indonesia

¹putra@unimugo.ac.id*; ²dadisantoso@unimugo.ac.id; ³hendritamara@unimugo.ac.id; ⁴andri@unimugo.ac.id; ⁵hariyady@umm.ac.id

* Corresponding author

ARTICLE INFO	ABSTRACT
<p>Article history Received: 2023-06-17 Revised: 2024-05-24 Accepted: 2024-06-03 Published: 2024-06-03</p> <p>Keywords Awareness Education Open Wound Emergency Transportation</p>	<p><i>Accidents can happen at home, school, day care center, or on the street at any time of the day. Children are prone to accidents or injuries because of their curiosity and vulnerability to accidents, especially at school. Accidents can include falls, choking on food, swallowing objects, electric shock, exposure to hot water, and drowning. The empowerment was carried out to increase the knowledge and skills of students in schools in providing first aid measures for open wounds. The activity was carried out at the Kota Kinabalu Indonesian School (SIKK) with 239 participants. The results of the activity showed an increase in knowledge and skills after being given education. Good knowledge and skills will improve health services and minimize the risk of injury. Similar activities can be carried out again with health topics and more diverse participants.</i></p>
<p>Kata Kunci Darurat luka terbuka Kesadaran Pendidikan Transportasi</p>	<p>Strategi efektif untuk meningkatkan kesadaran dan kemahiran dalam manajemen darurat luka terbuka bagi siswa. Kecelakaan dapat terjadi di rumah, sekolah, pusat penitipan anak, atau di jalan kapan saja sepanjang hari. Anak-anak rentan terhadap kecelakaan atau cedera karena rasa ingin tahunya dan kerentanannya terhadap kecelakaan, terutama di sekolah. Kecelakaan dapat berupa terjatuh, tersedak makanan, tertelan benda, sengatan listrik, terkena air panas, dan tenggelam. Kegiatan ini dilaksanakan untuk meningkatkan pengetahuan dan keterampilan siswa di sekolah dalam memberikan tindakan pertolongan pertama pada luka terbuka. Kegiatan dilaksanakan di Sekolah Indonesia Kota Kinabalu (SIKK) dengan peserta sebanyak 239 orang. Hasil kegiatan menunjukkan adanya peningkatan pengetahuan dan keterampilan setelah diberikan edukasi. Pengetahuan dan keterampilan yang baik akan meningkatkan pelayanan kesehatan dan meminimalkan risiko cedera. Kegiatan serupa dapat dilakukan kembali dengan topik kesehatan dan peserta yang lebih beragam.</p>

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INTRODUCTION

Accidents or injuries are events that occur around us. Accidents can happen at home, school, daycare centers, or on the road. Children are vulnerable to accidents or injuries due to their curiosity and their susceptibility to accidents, especially at school. Accidents can include falls, food choking, swallowing objects, electric shocks, exposure to hot water, and drowning (Alfred et al., 2015; Oktaviani et al., 2020).

Accidents can result in open wounds and serious injuries, which can even lead to death if not properly addressed (Suwaryo & Yuda, 2019). Accidents in children are not sudden, unpredictable events or due to bad luck. They can be prevented by adults around them. In schools or daycare centers, these accidents can be prevented by others such as friends or teachers, while at home, parents can prevent them (Nurlaela & Mamluaty, 2020). Accidents involving children not only threaten their safety and health but also have the potential to hinder the achievement of several Sustainable Development Goals (SDGs) (Fallah Shayan et al., 2022; Ma et al., 2021; Takian et al., 2022). This study primarily focuses on SDG 3 (Good Health and Well-being), which aims to ensure healthy lives and promote well-being for all at all ages. Preventing accidents and injuries in children also supports the targets of SDG 4 (Quality Education), as a safe learning environment is crucial for effective education. Additionally, this prevention and response program aligns with SDG 11 (Sustainable Cities and Communities), which advocates for inclusive, safe, resilient, and sustainable cities and human settlements. Therefore, preventive and educational efforts regarding child safety in schools and homes not only protect them from immediate dangers but also contribute to broader global goals for sustainable development (Barredo et al., 2015; WDT, 2023).

First aid accident prevention is crucially important to be implemented in schools, especially the process of transporting victims to the nearest healthcare facility for further treatment. This is supported by the World Health Organization (WHO) through the Safe Community program, which covers all ages in all environments and situations, with a focus on accident prevention and enhancing the community's capacity to prevent accidents. Health organizations play a vital role in implementing this program (Fujita et al., 2014; Suwaryo, 2021).

The broad implication is that by strengthening capacity, including increasing the knowledge of school children and teachers in accident prevention and first aid, it can be effectively implemented in schools and the surrounding community, as well as reviving the School Health Effort (SHE). Undesirable events such as wounds and bleeding can be minimized. Apart from that, if an accident occurs and there are injuries, then we already know what action you should take.

Indonesian School Kota Kinabalu (SIKK) is the largest Indonesian school abroad, established by the Indonesian government in Sabah, Malaysia. The school consists of a Playgroup, Kindergarten (TK), Elementary School (SD), Junior High School (SMP), and Senior High School (SMA). The newest addition, inaugurated in June 2022, is the Vocational High School (SMK) with a focus on the hospitality and aircraft industry.

Based on the discussion with the Indonesian School Kota Kinabalu (SIKK) in Sabah, Malaysia, it has been reported that there are frequent cases of open wounds among children in the school, particularly among teenagers. These accidents occur because children often play in a school environment with many trees. The wounds occur when students are running around the school premises. The school also faces difficulties in transporting injured children to healthcare facilities. The school authorities have also mentioned that they have never received any health education, and they are planning to invite speakers to share knowledge about health with the students, but it has not been realized yet. Based on this phenomenon, we conducted a community service activity focusing on education about managing open-wound emergencies and transportation.

METHOD

The activity took place at Indonesian Schools in Kinabalu City, Sabah, Malaysia, with a total of 239 student participants. The activity was conducted by a team of lecturers from Universitas Muhammadiyah Gombong and Universitas Muhammadiyah Malang, consisting of 5 people, with assistance from 7 accompanying teachers. Preparation was done on March 1, 2023, by coordinating with homeroom teachers to determine the time and location of the activity (shown in Figure 1). The materials and media used included triangular bandages, a drag bar or stretcher for transportation, and flip charts.



Figure 1. Discussion of preparatory activities & tool check preparation

The activity was carried out on March 3, 2023, in an open space with 239 student participants accompanied by 7 accompanying teachers. Before the activity, a pre-test consisting of 10 questions was conducted to assess the participants' initial level of knowledge before the education. Subsequently, education was provided through the delivery of materials on open-wound emergencies, transportation techniques, and techniques for managing open wounds. In the final stage, a demonstration was conducted, and participants were given the opportunity to practice several actions related to managing open wounds and transportation. In the evaluation stage, a post-test was conducted to assess the participants' knowledge level after the education. The collected data were subjected to descriptive analysis to examine the changes in participants' knowledge.

RESULTS AND DISCUSSION

Community service activities ran smoothly followed by 239 people. Active participants ask and want to do and try to help according to what is given (shown in Figure 2). Education on the management of open wounds and transportation plays a crucial role in the school environment, particularly considering the frequent occurrence of open wound cases in schools with limited healthcare facilities. Various journals and scientific articles have extensively discussed the importance of providing education to schools and involving children in understanding and managing open wounds. Educational activities on the emergency management of open wounds and transportation had a positive impact on participants and increased awareness of the importance of health and providing first aid before the victim arrived at a health facility. Increased knowledge and skills help improve emergency management and reduce deaths (shown in Figure 3).



Figure 2. Educational activities on emergency management of open wounds and transportation

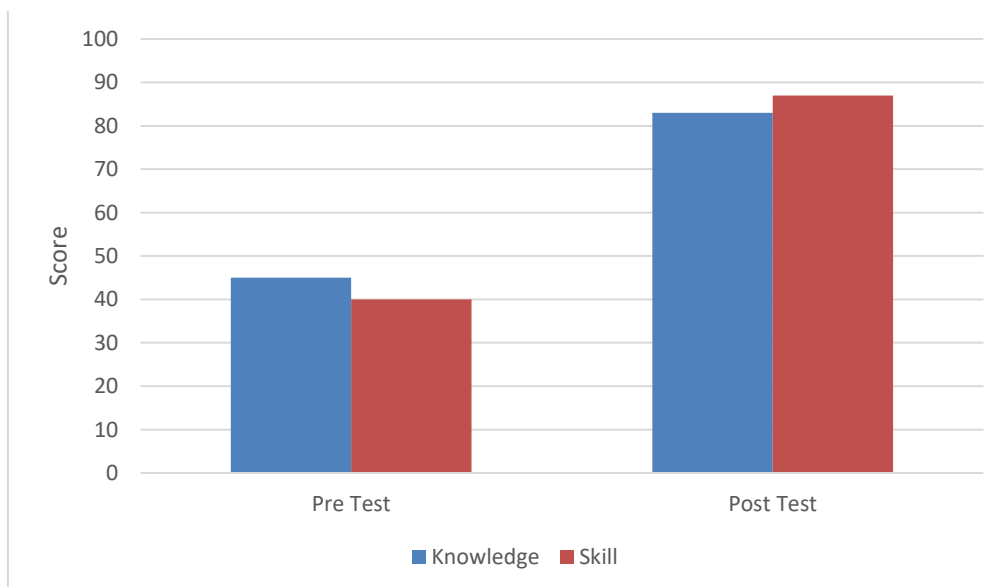


Figure 3. The average change in knowledge and skills before and after the activity

The finding that female respondents demonstrate a better increase in knowledge compared to males can be explained by gender differences in learning theory. Several studies indicate that females tend to be more responsive to collaborative and educative learning methods, and are more motivated in formal learning situations. Additionally, females often tend to

engage more in activities related to health and safety, thus they may be more interested and motivated to absorb the information conveyed.

Effective health education should start early and be conducted in relevant environments, such as schools. By involving children in understanding and handling open wounds, they not only learn practical skills but also develop an awareness of the importance of health and safety. This aligns with the principles of health promotion that encourage active community involvement in maintaining their own health.

One relevant journal is a study conducted by Smith, which highlights that open wounds are one of the common types of injuries that occur in the school environment. The research found that children are more vulnerable to open wounds due to physical activities and accidents that happen at school (Kim et al., 2016; Ranchhod et al., 2014). However, the study also discovered that a lack of knowledge and skills in managing open wounds among teachers and school staff is one of the barriers to effective treatment (Stafford et al., 2014).

Another article that can be referenced is the importance of education on the management of open wounds and transportation in schools with limited healthcare facilities (Suwardianto & Rimawati, 2018). They stress that with adequate knowledge and skills, both teachers and students can provide appropriate first aid when accidents resulting in open wounds occur (Xia et al., 2020). The article also demonstrates that proper education can enhance awareness and proficiency in managing open wounds, thus reducing the risk of complications, and expediting the recovery process. Good actions are supported by good knowledge and skills. All participants enthusiastic to do and try the actions that have been taught (Kim et al., 2016; Wilks et al., 2015).

Furthermore, the benefits of implementing an education program on the management of open wounds and transportation in schools with limited healthcare facilities (Ranchhod et al., 2014). The results of this study show a significant improvement in students' knowledge and skills in handling open wounds after receiving education.

CONCLUSION

Accidents or injuries are events that occur at any places. First aid accident prevention is crucially important to be implemented in schools, especially the process of transporting victims to the nearest healthcare facility for further treatment. The empowerment was carried out to increase the knowledge and skills of students in schools in providing first aid measures for open wounds. The activity was carried out at the Kota Kinabalu Indonesian School (SIKK) with 239 participants. Educational activities on the emergency management of open wounds and transportation had a positive impact on participants and increased awareness of the importance of health and providing first aid before the victim arrived at a health facility. Increased knowledge and skills help improve emergency management and reduce deaths. Similar activities can be carried out with other health problems to support health services. For the next activity, we recommend choosing the right time and a variety of participants, so that the target for the activity becomes wider.

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