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Social Media-Based Education Increases Tourists' Awareness of First Aid For Emergencies at Tourist Attractions

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ABSTRACT

The increasing number of tourists in various tourist destinations also increases the risk of emergency incidents such as injuries, fainting, drowning, or minor to serious accidents. Tourists' lack of knowledge regarding first aid in emergency situations often worsens the victim's condition before professional medical assistance arrives. This study aims to analyze the effectiveness of social media-based education in improving tourists' knowledge about first aid in emergency situations at tourist attractions. The research method used a quantitative approach with a pre-experimental one-group pre-test and post-test design for respondents who received educational interventions through social media platforms, namely Instagram, TikTok, and YouTube. Educational materials were presented in the form of infographics, short videos, and simple, easy-to-understand simulations. The results showed a significant increase in respondents' level of knowledge after receiving social media-based education with a ρ-value of 0.002. These results indicate that social media is an effective, easily accessible, and relevant means of conveying health information to tourists. Utilizing social media as an educational medium can be an innovative strategy in increasing tourists' preparedness for emergency incidents at tourist attractions, thereby minimizing the risk of complications and improving tourist safety.

Keywords: *Social media based education, first aid, tourists, tourist attractions*

1. INTRODUCTION

The development of the tourism sector in Indonesia has shown significant improvement in recent years [1]. Tourist destinations, both natural and man-made, are increasingly visited by domestic and foreign tourists [2]. The increasing number of tourist visits is also accompanied by an increased potential for emergency incidents [3]. Emergencies that frequently occur at tourist attractions include accidents, injuries, drowning, dehydration, and sudden medical conditions such as fainting, even strokes and heart attacks.

A preliminary study found that tourists' knowledge of first aid in emergency situations is still relatively low. Many tourists don't know the proper initial steps to take in an emergency situation, which can worsen the victim's condition before they receive further medical treatment. Prompt and appropriate first aid is crucial for saving lives and preventing further complications.

The development of information and communication technology, particularly social media, has changed the way people access information [4]. Social media such as Instagram, TikTok, and YouTube have become effective tools for disseminating information widely, quickly, and engagingly [5]. Educational content packaged visually and interactively has been shown to increase public understanding and awareness of various health issues, including first aid [6].

Utilizing social media as an educational tool has great potential to increase tourists' knowledge about initial emergency response at tourist attractions. A creative and easy-to-understand approach can deliver first aid information more effectively than conventional methods. Social media can also enable the continuous dissemination of information that can be accessed anytime and anywhere [7], [8].

The use of social media as a health education tool, particularly in the context of first aid in tourist settings, is still suboptimal and has not received much in-depth research. Therefore, researchers examined the effectiveness of social media-based education in increasing tourists' knowledge of first aid in emergency situations at tourist sites.

Based on this description, this research is crucial to determine the extent to which social media-based education can improve tourists' knowledge of first aid in emergency situations at tourist attractions. The results are expected to serve as a basis for developing more effective and innovative health education strategies in the tourism sector.

2. LITERATURE REVIEW

a. First aid education for emergency incidents at tourist destinations

Emergency first aid at tourist attractions (PPGD) is a temporary, fast, and appropriate rescue action to prevent death or disability before medical personnel arrive [9]. The main principles are to keep oneself or the environment safe (DRSABCD), stop bleeding, treat shock, and evacuate immediately to a health post.

Before helping, the first responder must ensure his own safety first, so that he does not become the next victim [10]. The steps for first aid at tourist attractions are as follows:

1. D - Danger
   Inspect the scene. Ensure it is safe for rescuers and the victim. Keep the victim away from currents, cliffs, or traffic.
2. R - Response (Respons)
   Check for consciousness by tapping the victim's shoulder, calling out loudly ("Sir/Madam, are you conscious?").
3. S – Shout or Send for help
   Shout for help or ask someone nearby to call the emergency number (Ambulance 118/119, or tourist attraction staff).
4. A - Airway
   Ensure the airway is clear by tilting the head slightly and lifting the chin if the victim is unconscious. Ensure there are no neck fractures by looking for wounds, blood, or abnormal protruding bones.
5. B - Breathing
   Check for normal breathing by looking at chest movement, then listening for breath sounds for 5-10 seconds.
6. C - Circulation
   Check for pulse and signs of severe bleeding by looking all over the victim's body.
7. D - Defibrillator/AED
   Use an AED if available.

Handling fainting in tourists at tourist attractions due to fatigue or heatstroke with signs of temporary unconsciousness, the skin feels cold or hot, dry and not sweating, accompanied by dizziness, then the rescuer's action is to lay the victim in a shady and safe place, then elevate the legs higher than the heart (around 30 cm) so that blood flows to the brain, loosen tight clothing (collar, belt), give perfume (eucalyptus oil) to stimulate consciousness, and if conscious, give a warm sweet drink.

Treating burns from the sun or fire is done by pouring or soaking the wound with plain water, if possible, running water for 10-20 minutes. Do not use ice, toothpaste, or butter. Treating open wounds and bleeding is done by applying direct pressure to the source of bleeding with a clean cloth or gauze, elevating

the injured area above the chest, and cleaning the wound with running water if necessary.

Treatment for sprains or strains (sprains) is carried out using the RICE technique. Rest or rest the injured part. Ice is done by compressing the injured part to reduce swelling. Compression is done by wrapping the injured area with an elastic bandage. Elevation or raising the injured part. Treatment of fractures with signs of severe pain, abnormal limb shape, swelling, perform a splint to limit movement of the broken bone before evacuation. It is best not to move the victim if a neck or back fracture is suspected.

Emergency first aid for a drowning tourist includes checking for consciousness, calling for medical assistance, and checking for breathing for a maximum of 10 seconds. If the victim is conscious and breathing, they can be placed in the recovery position (on their side) to allow any remaining water or vomit to escape. Warm the victim by removing wet clothing and covering them. Stay with them until medical assistance arrives.

If the drowning victim is unconscious, perform cardiopulmonary resuscitation (CPR) with 30 chest compressions (pressures in the center of the chest) followed by 2 rescue breaths. Respiratory priority for drowning victims, rescue breaths, is crucial because the primary cause is oxygen deprivation. Repeat the cycle (30 compressions: 2 breaths) until the victim is conscious, breathing, or medical assistance takes over.

b. Social media-based education

Social media-based health education is the use of digital platforms such as Instagram, TikTok, YouTube, and WhatsApp to disseminate information, raise awareness, and change public health behaviors quickly, interactively, and broadly. This is a modern health promotion method that is effective in targeting various age groups, especially adolescents and students [11].

Social media-based health education aims to improve digital health literacy, helping people understand relevant and reliable health information amidst the digital information flow. It encourages positive behavioral changes, such as healthy lifestyles, disease prevention, and medication adherence. It disseminates health information quickly and widely [12].

Social media-based health education also aims to strengthen the role of communities as agents of change and disseminators of accurate health information. It provides a platform for support groups for patients to share experiences and manage health conditions. It also improves communication between healthcare professionals and patients. [13]

The pillars of effective educational content require creative visuals using engaging infographics, animated videos, or aesthetic content. Use simple language that is easily understood by all ages or communities, and avoid using complicated medical terms [14]. Ensure content refers to official sources such as the WHO, the Ministry of Health, and expert research results, and verify them.

Social media-based health education will be effective if delivered regularly, with at least 2-3 meetings or interactions, not just one. Health education through digital platforms (such as Instagram/TikTok) is more effective if conducted consistently, with daily or weekly educational posts to build high engagement over a long period of time.

3. METHOD

This study used a pre-experimental design with a one-group pretest–posttest design approach. This study was conducted at Parangtritis Beach, so the study population was tourists who visited during the study period with sample inclusion criteria being adult tourists (over 18 years old), having sufficient or insufficient knowledge about first aid in emergency situations at tourist attractions, having a smartphone and social media, and being willing to voluntarily participate in the research series. The sample consisted of 39 respondents selected using an accidental sampling technique, namely sampling based on anyone the researcher met and met the criteria. The level of knowledge was measured using a questionnaire on knowledge of first aid in emergency situations at tourist attractions developed by the researcher and has been tested for validity and reliability. Data analysis used a marginal homogeneity test.

4. FINDINGS AND DISCUSSION

The research results can be seen in tables 1 below.

Table 1 Tourist knowledge before and after being given social media-based education

No	Knowladge level	Pre		Post		ρ-value
		f	%	f	%	
1	Good level	0	0,0	20	51,3	0,002
2	Sufficient level	15	38,5	14	35,9	
3	Poor level	24	61,5	5	12,8	
	mean	59,8		86,2		26,4

The results of the study showed a significant increase in tourists' knowledge levels after being given social media-based education about emergency first aid at tourist attractions, as seen from the increase in the average value of 26.4, and can be seen from the ρ-value of 0.002. Tourists who initially had less knowledge after receiving education.

Prior to the education, the majority of respondents' knowledge levels were between insufficient and sufficient. This could be due to a lack of access to specific information regarding first aid at tourist sites, as well as a lack of prior experience or training. This indicates that tourists are still not optimally prepared to face emergency situations.

Following the social media-based educational intervention, there was a significant increase in respondents' knowledge, with the majority ranking in the good and sufficient categories. This improvement demonstrates that social media is an effective means of conveying health information, particularly regarding first aid in emergencies.

The effectiveness of social media in this study was likely influenced by several factors, including ease of access, presentation of interesting material (visual and interactive), and flexibility of time in accessing information [5]. Social media also allows for the rapid and widespread dissemination of information, making it easier for respondents to understand the material provided [15].

The results of this study align with the theory that digital health education can significantly improve individual knowledge. Furthermore, this approach is also relevant to the characteristics of tourists who tend to actively use digital devices during their travels [8].

Proper use of social media can have positive impacts, including building good character in teenagers, such as honest behavior, creativity, self-confidence, politeness, and caring. Proper use of social media can also be used to find useful information, make new friends and acquaintances, have discussions with others, or share positive and beneficial things for many people. Social media can also be a platform for channeling talents and creativity that teenagers have, such as making videos, writing, stories, pictures, and so on [16].

Social media platforms like TikTok and Instagram are more effective in conveying information due to their ability to present educational content multimodally, combining text, sound, music, animation, and visual expression in a single display. This multimodal combination has been shown to increase cognitive activation and facilitate the process of encoding information into long-term memory [17].

Social media is more “friendly” for learning, because the content is easily accessible, not boring, and can be rewatched at any time. This creates a continuous, self-directed learning environment. Interaction between researchers and respondents in question-and-answer sessions also strengthened participants' understanding of the material presented through TikTok content [17].

Social media allows users to comment, like videos, or share content, creating social engagement that strengthens the learning process. This social interaction aligns with social constructivism theory, which states that knowledge is more easily understood through discussion and information exchange. Using TikTok as an educational medium not only enhances understanding but also fosters a more active learning community [18].

Motivational factors also play a role in the effectiveness of education through social media. People are more likely to be interested and motivated to watch health content when it is presented in a format that is relevant to digital

culture and appealing to current health needs [19].

Increasing health knowledge through social media-based education at tourist destinations is influenced by a combination of message content, media used, user characteristics, and supportive tourist environments. The more engaging, credible, and accessible the health information, the greater the likelihood of increased knowledge among tourists.

5. CONCLUSIONS

It was concluded that social media-based education was effective in increasing tourists' knowledge of first aid in emergency situations at tourist attractions. This demonstrates the importance of developing digital education programs as a preventative measure to increase community preparedness, particularly in the tourism sector.

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