

Research Report

Using Website as a Source of Information on the Management of Health and Emergency Situations in Early Childhood

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ABSTRACT

Background: Currently online health promotion can be found on various sites and social media. Health promotion in the form of health education using the internet is considered easier, faster, and cheaper. However, not many websites provide information about health and emergency management in children. **Purpose:** The implementation of community empowerment aims to increase the knowledge of parents and teachers in managing the health and emergencies of children aged 2-6 years online using the media website. **Methods:** Online health education is provided to participants as a form of community empowerment. Participants receive a website address that contains material on child health and emergency management. Furthermore, participants received an explanation of the material using the zoom application. The level of participant knowledge was evaluated by pre-test and post-test using Google form. The evaluation results were analyzed descriptively. **Results:** Online health education activities with website media showed an increase in teachers' knowledge about health and emergency management in children (87.5%). This program also shows a decrease in the number of parents and teachers with low level knowledge (12.5%). **Conclusion:** The website can be used as an effective medium to provide health education for parents and teachers.

Keywords: health management; child emergency; child health; internet usage

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INTRODUCTION

The internet is a fundamental medium in exchanging information because it connects people regardless their physical distance.¹ People use the internet for reasons of easy, fast, and cheap access.¹ For example, online health education is now a fairly effective strategy in presenting information and increasing public knowledge.² The internet is functioned as a platform for the delivery of public health interventions regardless of regional conditions and types of community.³ One of the information that can be shared is about health and emergency conditions in children, especially on dental and oral health.

Children are vulnerable to becoming victims in a variety of situations, such as: natural disasters, family violence, and diseases that can cause death.⁴ Emergency conditions in children are a specific challenge for health workers because of the wide spectrum of diseases, the wide range of children's ages, and various kinds of emotional responses.⁵ Children who are exposed to trauma tend to have a higher

risk of experiencing psychological disorders.⁶ Prolonged psychological disorders make it easier for children to have health problems.⁷ In addition, the increase in cases of trauma to children's teeth has received attention from health workers.^{8,9} This case causes the issues in the dental and oral physiological functions.¹⁰

Injury to the teeth is an emergency that results in impaired physical, psychological and social development in children.¹¹⁻¹³ Dental injury can also damage the condition of the tooth supporting tissue and soft tissue around the tooth.¹³ Children will experience problems in growth, appearance, speaking, swallowing, tasting, and disturbances in communicating with the social setting.^{11,12,14}

Children often experience emergency conditions in locations where they do activities such as school and home.^{15,16} The most common causes of dental injuries in children are hard knocks during sports and falls.^{17,18} Parents and teachers serve the first-responder for such emergency cases before the children could receive professional medical treatment.^{19,20} Therefore, parental knowledge is an important

factor in case of managing dental emergencies in children.²¹ Proper and quick management by first-responder can reduce the risk of infection and problems in tooth growth.²² Proper first-aid measures can increase the effectiveness of the dental treatment process later on.²³ Lack of knowledge and parental attention to dental health and emergencies can cause on the high incidence of dental injuries in children.¹⁶ An epidemiological study on parents and teachers at Tahfidz Early Childhood Ashabul Qur'an (TAUD Sa-Qu) Surabaya, Indonesia showed that around 60% of parents and teachers had poor understanding on health management and emergencies in children. Therefore, this activity aimed to increase parents' and teachers' knowledge in the management of health and emergency situations for children aged 2–6 years using a website.

MATERIALS AND METHODS

This online community empowerment program involved 32 parents and teachers of students aged 2–6 years in Ashabul Qur'an Early Childhood Tahfidz teacher (TAUD Sa-Qu) Surabaya, Indonesia. The objective of this online program was to improve the understanding of the subject matter in parents and teachers.

The materials were delivered using Zoom application. The speakers delivered the materials with title "The Management of Emergency Situations of Children at Home and School" and "Dental and Oral Trauma in Children". This program was also available at <https://gigikeluarga.com/> and the module "The Management of Emergency Situations in Children" as learning materials. We assessed the participants' level of understanding before and after the intervention using online form. The collected data were then analysed descriptively.

RESULTS

The online health empowerment program showed an increase in the knowledge of parents and teachers about the management of health and emergency situations in children (Table 1). The number of participants with excellent understanding of the subject matter after the intervention doubled to 87.5%. The pre-test results showed show that there was 40% of parents and teachers with excellent understanding of the subject matter. Meanwhile, 60% of parents and teachers had poor understanding on the subject matter. However, this percentage decreased to 12.5% after intervention.

Providing online health education shows a significant increase in the participants' level of understanding. Even so, there are several evaluation questions with insignificant percentage differences. For example, questions about the symptoms of tartar in children only had 56.3% correct answers and 43.7% incorrect answers (Table 2.).

DISCUSSION

Website as a means to promote the management of health and emergency situations in children aged 2–6 years. As much as 87.5% of participants demonstrated an excellent understanding of the subject matter. This shows that the use of the website is quite effective to promote health activities to the public. However, one study stated that the use of the internet for health promotion had little impact on participants.²⁴ On the other hand, the internet provides an opportunity to communicate related to health from anywhere without face to face meeting.²⁵ The internet helps people to find information on health problems so that they can increase awareness and increase preventive action.²⁶

Table 1. Parents and teachers' level of understanding

Evaluation	Number of respondents	
	Excellent understanding	Poor understanding
Pre-test	40%	60%
Post-test	87.5%	12.5%

Table 2. Questions on to assess parents and teachers' level of understanding

Question	Correct	Incorrect
First aid measures for children choking on foreign objects	84.4%	15.6%
Precautions for burn infection in children	68.8%	31.2%
Measures to reduce nail biting	84.4%	15.6%
Symptoms of tartar	56.3%	43.7%
Late period to provide toothpaste to children	62.5%	37.5%
Examples of emergencies in children	90.6%	9.4%
Perfect time to brush children's teeth	75%	25%
Definition of bleeding gums	90.6%	9.4%
Precautions for food leftover on teeth	96.9%	3.1%
First aid measures for children who experience tooth pain	87.5%	12.5%

Therefore, many health workers maximize the use of social media to disseminate health information.²⁷

Website media with a design and choice of words that are easily understood by activity participants facilitate their learning. In addition, the website content which is quite complete in adding the knowledge of health education participants. The website is highly accessible due to simple domain name, and the use of website has eliminated the use of papers. On the other hand, previous study states that websites are considered unable to facilitate increase knowledge, attitudes, and behaviours to improve health status.²⁸ In addition, the materials were delivered by expert speakers in the field of child health. This is considered attractive for parents and teachers to learn new things, especially in children health. Parents and teachers were more confident as the materials were delivered by persons who are competent and experts in their respective fields, namely paediatricians and paediatric dentists.

There are not enough complete, reliable, and interesting reading sources related to the management of health and emergencies in children. This is a factor that made participants felt enthusiastic about the materials delivered by the speakers. Website is also useful in terms of coverage as it eliminated the physical distance barrier. However, the materials were a lot, and it made parents and teachers felt tired when reading the materials. In addition, radiation from computer screens and cell phones can cause eyestrain. It might cause some participants fail to understand the materials as evidenced that some participants still had poor understanding of the subject material.

CONCLUSION

The use of website to disseminate information has demonstrated positive results in the form of improved understanding on the subject matter. The significant increase in participants with excellent understanding suggest the success of website-mediated health promotion. Internet-based community empowerment activities can be carried out in a sustainable manner by compiling material content and selecting a more attractive website layout. This aimed to interest the parents and teachers in exploring information related to early childhood health and emergencies.

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