



Health promotion strategy for emergency choking at Elementary School Gisik Cemandi Sidoarjo

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ABSTRACT

Choking is the entry of a foreign object into the throat or respiratory tract. This is a dangerous condition that can happen to anyone. In cases of choking in children, the initial treatment that can be done is back blows and chest thrusts. This activity was carried out to provide Health Education to students and teachers at SDN Gisik Cemandi Sidoarjo, as well as to gain skills in helping children and the community in their environment if a child experiences a choking incident. The implementation method is carried out in the form of a lecture using power points, posters with pictures of signs of choking, and how to handle it independently and the Heimlich Manuever. The results of the activity were that participants received information and increased their knowledge regarding the signs of choking, and how to handle it independently as well as the Heimlich Manuever to students and teachers at SDN Gisik Cemandi Sidoarjo on November 11 2023. The results of the socialization on handling emergency choking carried out at SDN Gisik Cemandi Sidoarjo were considered effective so that students and teachers are able to provide first aid in cases of choking.

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1. INTRODUCTION

Medical emergencies can occur anywhere and any time (Siahaan, 2019). Choking is a blockage of the airway due to a foreign object that cannot come out, and the blockage can occur partially or completely. Choking can cause obstruction of air exchange in the respiratory tract. An emergency situation due to the entry of a foreign object (choking/choking) really requires immediate help, considering that the object will disrupt vital functions in the body such as disrupting the airway or air flow to the lungs (Nurjannah & Astuti, 2022). Lack of oxygen; if it is too late to help for 6-8 minutes, will result in long-term brain damage (Suartini & Kusniawati, 2020). The symptoms of this choking incident are often not recognized by people around the victim, because the victim cannot reveal his condition. The condition of choking can be recognized after the victim arrives at health services, and the signs and symptoms that appear can be recognized by health workers, however, the knowledge of the community around the victim does not yet recognize the signs and symptoms of choking properly. So that action is not given immediately. Mistakes when providing first aid in emergency cases can worsen the victim's condition, even causing death (Triwidiyantari, 2023).

According to WHO (2011), around 17,537 children experienced dangerous situations due to choking, 59.5% of the choking incidents were related to food, 31.4% were caused by choking on foreign objects, and 9.1% had other causes is known (Umar et al., 2022). In the United States, 23,000 people were admitted to the ER due to choking. Based on data from the Department of National Health Service, it shows that the cause of choking was foreign objects, grains, in 105 patients, 82 patients choked on foreign objects, nuts, vegetables, 79 patients, others choked on metal, food and fish bones (Aidah & Novianty, 2022). There are many incidents of choking, but there is no statistical information or research regarding choking incidents in Indonesia itself. Especially situations involving small children, such as the terrible one in Minahasa in 2019 where a 6 years old child died after choking on a meatball. On July 28 2019, it was reported that an 8-years -old child died suddenly due to meatball. According to Hopkins in 2014, as many as 57 children died every year due to a lack of understanding by the general public about first aid for choking patients (Alhidayat & Handayani, 2022). Based on the results of the researcher's observations and interviews with SDN Gisik Cemandi Sidoarjo teachers, it was found that SDN teachers and SDN students did not know how to provide first aid to choking victims. Based on information obtained by the teacher and 5 students, the students only gave them something to drink when a victim was choking. The rescuer does not know if the implementation of giving a drink when the child is choking is not appropriate. Thus, it can be concluded that the rescuer does not know how to handle the child if the child is choking properly and correctly.

Foreign body aspiration is an emergency that requires immediate treatment to prevent serious complications (Iswari, 2021). Foreign body aspiration is the entry of objects from outside the body or from within the body that are not normally present into the respiratory tract. The most common causes of choking in school-aged children are foods that most often cause choking, including hard candy, chewing gum, and marshmallows. Chewing gum and jelly types of food are hard and chewy, so they are not easy for children to chew. Apart from that, the shape of the food is also small and almost the same diameter as the child's airway. Signs and symptoms that appear in adults holding the neck area, further symptoms that can appear are decreased ability to breathe and cough, as well as cyanosis. Delay in treatment can increase the risk of complications and even death (Pangaribuan et al., 2023). Foreign objects in the respiratory tract are an emergency that requires immediate treatment. This choking case can be handled by anyone, especially teachers and students who are near the choking victim. First aid skills for children are the first step that must be taken by rescuers because quick treatment from rescuers greatly influences the safety of children (Simpson, 2019). When we first find someone suffering from this condition, we must take action to overcome the choking problem (Suleman, 2023). Knowledge of appropriate emergency management for choking children consists of three techniques namely chest compressions, abdominal thrusts (Heimlich maneuver) and back blows. So that cases of choking in schools can be overcome or reduced through increasing effective choking skills education programs (Ernawati et al., 2021). The aim of this community service is to know and apply first aid procedures for choking children.

2. METHODS

Location

This type of research is counseling carried out at SDN Gisik Cemandi Sidoarjo. Gisik Cemandi is located in the coastal area of Sedati sub-district. SDN Gisik Cemandi is located at Jl. Sekardadu No.83, Gisik Cemandi, Sedati District, Sidoarjo Regency, East Java. Gisik Cemandi is a village supported by STIKES Hang Tuah Surabaya, where the majority of the population are fishermen. The distance from STIKES Hang Tuah Surabaya to Gisik Cemandi, 13 km, is around 21 minutes. Locations with minimal travel times and distances are extremely beneficial to the community service program Team's ability to carry out the program, including continuing coaching and activity coordination.

Preparation Phase

The preparatory phase begins with a situation analysis, namely a survey of partners' needs for this activity. Discussion about the solutions we offer and what expectations are desired, so that common goals can be achieved (Table 1).

Table 1. Preparation stage

Description	<ul style="list-style-type: none"> • The team carried out preliminary supervision, and visited the elementary school principal and teachers of SDN Gisik Cemandi Sidoarjo. • Conduct situation analysis, discuss problems that arise, identify problems, and discuss solutions to problems. • Asking for approval of partners' willingness to be signed by the principal of SDN Gisik Cemandi Sedati on Stamp duty. • Carry out studies and field research, then prepare proposals for community service programs. • Divide tasks and assign them to several members. Dividing tasks regarding proposal preparation. • Make activity permits. • Prepare activity equipment.
Time	1st November 2022 Duration : 2 hours

Implementation Stage

At the implementation stage, we convey the plans and stages of activities that will be carried out. Partners are very cooperative in helping prepare the space and equipment needed. This The implementation stage includes collaboration between both parties, the implementation team and teachers. The methods used are material presentation, discussion, presentation and practice. The material will be delivered by two resource persons regarding the signs of choking symptoms in children and a simulation of handling a child who is choking. Demonstrations and practice of first aid for children with choking were carried out by all participants by practicing with fellow students. During practice, all participants are accompanied by an implementation team and guided at each stage of first aid for choking children (Table 2).

Table 2. Implementation stage

Description	<p>Program Opening and Outreach</p> <ul style="list-style-type: none"> • Opening of community service program activities • Socialization of offline activities with health programs. • Ice breaking and introduction of Team and Partners <p>Mentalization training</p> <ul style="list-style-type: none"> • Presentation of interactive PPT material using focus • Method: Training and Discussion <p>Training and assistance on how to provide first aid to a choking child</p> <ul style="list-style-type: none"> • Presented in language that is easy to understand accompanied by animation in the form of illustrative images and videos. • Delivered by the community service program team delivered interactive media to facilitate acceptance of material and participant enthusiasm participant. • Methods: reflection, direct practice, and video exposure
Time	11th November 2022 Duration : 2 hours

Evaluation Stage

The evaluation stage is carried out after the activity is completed. This activity is carried out using a discussion method with the principal and teachers of SDN Gisik Cemandi Sedati. This evaluation was carried out to see to what extent this program can be implemented, and what solutions can be made if there are problems with its implementation (Table 3).

Table 3. Evaluation stage

Description	<ul style="list-style-type: none"> • The evaluation was carried out with the aim of finding out first aid stimulation activities for choking in children • Evaluation is also carried out to determine whether there are any difficulties or questions arise when applying first aid to choking on a child. • Evaluation is carried out using the discussion method • This evaluation is used as a parameter for program success.
Time	11th November 2022 Duration : 1 hours

3. RESULTS AND DISCUSSION

Health education activities on first aid for choking victims will be held on Saturday, November 11, 2022, from 07.30 to 11.30 offline at SDN Gisik Cemandi Sidoarjo. There were 46 students who attended health education, consisting of grades 4, 5 and 6. This service activity in the form of socialization about first aid for choking victims was carried out after obtaining permission from the Principal of SDN Gisik Cemandi Sidoarjo.

Before implementing first aid health education for choking victims, the team coordinated with the school so that the service activity process could run smoothly. On the day of implementation, the team came to SDN Gisik Cemandi Sidoarjo at 06.30 and was received directly by the teacher assigned to accompany the socialization process. The entire team prepared the hall as a place for socialization and tools that would be used during the activity process. Health education on first aid for choking victims starts at 08.00 with an opening by the MC for introductions and continued by the moderator.

Education participants were given a pre-test on their knowledge of first aid for choking victims before the presenter explained the material. The speaker explains the material using the power point. In the process of explaining the material provided, students were enthusiastic about the explanation given. Students actively interact by asking questions to the extension team.



Figure 1. Choking emergency health education activities

Table 4. Results of students' knowledge level before being given first aid health education for choking victims

Variable	Categorical	Frequency	Percentage (%)
Knowledge level	Good	9	20
	Enough	36	78
	Not Enough	1	2
Total		46	100

Based on Table 4, the results show that the level of student knowledge regarding first aid for choking victims is 9 students (20%) have good knowledge. This means that only a small number of students know how to provide first aid to choking victims.

After the presentation of the material is complete, the team reviews the material that has been presented. There were several students who were able to re-understand the material that had been explained by the extension team. Next, the team held a question-and-answer session, in this session the participants were quite enthusiastic in asking questions. Before the extension team ended the activity, the socialization participants were given a post-test regarding first aid measures for choking victims. At the end of the activity process, the team distributed door prizes to students who were able to review the material and ask questions.

Table 5. Results of students' knowledge level after being given health education on first aid for choking victims

Variable	Categorical	Frequency	Percentage (%)
Knowledge level	Good	42	91
	Enough	4	9
	Not Enough	0	0
Total		46	100

Based on Table 5, after being given first aid health education to choking victims, the level of good knowledge increased from 9 students (20%) to 42 students (91%). Students increasingly understand and are expected to be able to apply first aid when a student is choking at school. This is possible because respondents develop their comprehension and memory skills in addition to listening. This is in accordance with Notoatmodjo's theory. 75-87% of all knowledge transmitted is captured through sight, 13% through hearing, and 12% through other senses (Triwidiyantari, 2023). The easier it is for educational targets to understand a message, the more senses are involved in capturing it. This research is in line with Mukrimah (2014), where before being given the demonstration method intervention, the majority of respondents had moderate knowledge and after being given the intervention, the average respondent experienced a significant increase in knowledge. This means that the demonstration method has influence on the helper's knowledge about choking management.

Information such as an understanding of choking management is very important for handling choking cases, which is one aspect that can influence a person's knowledge (Mukrimah, 2014). One learning approach is by demonstration; this kind of instruction involves telling, practicing, or doing directly (Rustini et al., 2022). Because participants are encouraged to actively see the fit between theory and reality and try to achieve it themselves, the demonstration approach has the advantage of making the learning process clear and real and significantly more entertaining. This is in accordance with Edgar Dale's cone theory, according to which direct experience can lead to knowledge, 90% of what we say

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Ninik Ambar Sari, Sri Anik Rustini, Merina Widyastuti, Dwi Priyantini, Ceria Nurhayati

and do is in the form of action, 70% of what we receive or follow, and 50% of what we hear and do. View or visual reception, and only 10% of what we read (Suleman, 2023). Theoretically, audiovisuals, conversations, and demonstrations are more successful than just oral or reading media (Musdalifah et al., 2021). Intervention efforts to convey information through demonstration techniques will intensify stimulation of the recipient's senses, especially vision during the presentation and hearing, so that the respondent's knowledge increases. The ability to perceive information is greatly influenced by the effectiveness of the sense function in capturing the given stimulus so that it can be properly digested into information. The greater the number of senses involved in the process of receiving information, the greater the capacity to perceive the stimulus (Iswari, 2021).



Figure 2. Participants are enthusiastic about participating in health education

When carrying out health education, researchers provide information or give orders in giving messages or information to students but also communicate effectively during activities in health education, according to ideas that include: observing responses, providing information, and discussing, giving examples, asking respondents to practice it and check understanding by asking the respondent to repeat the techniques that have been given and in their own words. Apart from that, in its implementation, researchers carried out health education using Google Form media, namely, when providing information and discussions, props in demonstrations which then asked respondents to practice it again (Suartini & Kusniawati, 2020).

4. CONCLUSION AND RECOMMENDATIONS

Community service activities for handling choking emergencies in children at SDN Gisik Cemandi Sidoarjo are going well and in accordance with the plans that have been prepared. The enthusiasm of the socialization participants was also very high. The conclusions from this activity are as follows: (1) The results of evaluating the level of student knowledge before being given socialization on choking emergency management were found to be good for 9 students. (2) The level of student knowledge after being given socialization on choking emergency management found that the level of good knowledge increased by 42 students. (3) The results of the socialization on handling choking emergencies carried out at SDN Gisik Cemandi Sidoarjo are considered effective so that students and teachers are able to provide first aid in cases of choking.

It is hoped that the next community service program can provide demonstrations of first aid for accidents to children, this aims to increase the survival rate. Accidents to children can happen anytime and anywhere. Knowledge of first aid can increase a child's chances of survival and reduce the risk of serious complications.

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REFERENCES

- Aidah, N., & Novianty, T. (2022). Pengaruh edukasi penanganan tersedak pada anak usia di bawah lima tahun (balita) terhadap pengetahuan orang tua. *Jurnal Ilmiah Wijaya*, 14(2), 74–82.
- Alhidayat, N. S., & Handayani, D. E. (2022). Pengetahuan dan keterampilan bantuan hidup dasar pada kasus choking di SMP Negeri 3 Parangloe Satap Jenemadinging Kab. Gowa. *Literasi: Jurnal Pengabdian Masyarakat dan Inovasi*, 2(1), 431-435.
- Ernawati, R., Muflihatin, S. K., & & Wahyuni, M. (2021). Tindakan untuk mengatasi masalah tersedak perlu dilakukan saat pertama kali menemukan korban. *Journal of Community Engagement in Health*, 4(1), 188-194. <https://doi.org/10.30994/jceh.v4i1.143>
- Iswari, M. F. (2021). Pengaruh pemberian booklet penatalaksanaan kegawatdaruratan chooking pada toodler terhadap pengetahuan ibu. *Jurnal Kesehatan: Jurnal Ilmiah Multi Sciences*, 11(02), 107-111. <https://doi.org/10.52395/jkjims.v11i02.331>
- Mukrimah. (2014). *Belajar dan pembelajaran*. Bandung: Universitas Pendidikan Indonesia.
- Musdalifah, M., Oka, I. A., & Marwanti, M. (2021). Efektivitas promosi kesehatan terhadap pengetahuan dan sikap tatalaksana diare pada balita di Kota Palopo. *Prepotif: Jurnal Kesehatan Masyarakat*, 5(1), 20–34. <https://doi.org/10.31004/prepotif.v5i1.1281>
- Nurjannah, M., & Astuti, Z. (2022). Penyuluhan kesehatan pertolongan tersedak untuk orang awam di era pandemi Covid-19. *Jurnal Kreativitas Pengabdian Kepada Masyarakat (PKM)*, 5(2), 607–614. <https://doi.org/10.33024/jkpm.v5i2.5530>
- Pangaribuan, R., Tarigan, J., Naibaho, I. G., & Siahaan, A. (2023). Penyuluhan dan simulasi pertolongan pertama pada anak dengan tersedak di Dusun II Desa Sei Mencirim Kab. Deliserdang. *Jurnal PEDAMAS (Pengabdian Kepada Masyarakat)*, 1(2), 8–15, 280-286.
- Rustini, S. A., Sari, N. A., Widyastuti, M., Nurhayati, C., & Faridah, F. (2022). The effect of basic life support health education with video learning method on motivation to help victims. *Jurnal Keperawatan Respati Yogyakarta*, 9(3), 187-190. <http://dx.doi.org/10.35842/jkry.v9i3.672>
- Siahaan, E. R. (2019). Hubungan pengetahuan Heimlich Manuver pada ibu dengan keterampilan penanganan Anak Toddler yang mengalami chocking. *Jurnal Skolastik Keperawatan*, 5(2), 165-176. <https://doi.org/10.35974/jsk.v5i2.2212>
- Simpson, S., & Yadav, R. (2019). A Study to assess the effectiveness of planned teaching programme on knowledge regarding first aid management of chocking among primary school teacher at selected school at Dehradun. *International Journal of Advances in Nursing Management*, 7(3), 271-274. <https://doi.org/10.5958/2454-2652.2019.00063.5>

Health promotion strategy for emergency choking at Elementary School Gisik Cemandi Sidoarjo

Ninik Ambar Sari, Sri Anik Rustini, Merina Widyastuti, Dwi Priyantini, Ceria Nurhayati

- Suartini, E., & Kusniawati, K. (2020). Pengaruh pendidikan kesehatan pertolongan pertama tersedak dengan mobile application dan phantom pada orang tua di TK Taman Sukaria terhadap kemampuan keluarga. *Jurnal Medikes (Media Informasi Kesehatan)*, 7(2), 411-422. <https://doi.org/10.36743/medikes.v7i2.231>
- Suleman, I. (2023). Pengaruh metode demonstrasi choking management terhadap pengetahuan guru di TK. *Jurnal Gawat Darurat*, 5(1), 19–28. <https://doi.org/10.32583/jgd.v5i1.1120>
- Triwidiyantari, D. (2023). Hubungan pengetahuan ibu tentang tersedak dengan penanganan pertama tersedak pada anak usia dini di Desa Jayamekar. *Usada Nusantara: Jurnal Kesehatan Tradisional*, 1(1), 57-65. <https://doi.org/10.47861/usd.v1i1.143>
- Umar, E., Fitriani, A., Fitriani, W., Agustin, A., Artyasfati, T., & Aini, N. (2022). Pertolongan pertama pada anak tersedak secara mandiri di rumah. *Jurnal Pengabdian Dan Pengembangan Masyarakat Indonesia*, 1(1), 27–29. <https://doi.org/10.56303/jppmi.v1i1.23>
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