

## Health Education Demonstration Method On Mothers' Knowledge About First Aid For Choking In Early Childhood

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### ABSTRACT

**Background:** a total of 65 patients were diagnosed with foreign body aspiration at M. Djamil Padang Hospital during the 2017-2018 period. The age groups most frequently affected were 0-4 years (100%) in the larynx, 5-11 years (50%) in the trachea, and 0-4 years (50%) in the bronchi. Choking is a prevalent issue that can result in fatalities in some instances, necessitating a heightened level of attention. A dearth of information among parents, particularly mothers, results in a lack of awareness regarding the prevention and management of choking.

**Purpose:** to analyze the effect of a health education demonstration method on the level of knowledge of mothers about first aid for choking in early childhood at Cahaya Ummi 2 Kindergarten

**Methods:** this study used Quasi-Experiment with the design of one group pre-post with a sample size of 43 respondents, selected through purposive sampling. The data were collected using a questionnaire and Bivariate analysis using the Wilcoxon test.

**Results:** the findings of this study indicate that the mean knowledge score of respondents increased from 14.09 to 17.06. There is an effect health education demonstration method with the knowledge of mothers about first aid for choking in early childhood, with a p-value of 0.000.

**Conclusion:** it is hoped that mothers will be able to apply first aid for choking quickly and appropriately in the event of an emergency.

### Keywords:

Choking; demonstration; first aid

## BACKGROUND

Children aged 0 - 6 years are referred to as early childhood and are unique and have diverse characteristics so that a variety of knowledge and skills are needed to understand them. At the age of 1-3 years (toddler) children enter a period of high curiosity and the age of 4-6 years is the most active child. The uniqueness of these child characteristics allows for diverse child behaviors. As children develop and learn to crawl, hold objects and other skills, the risk of injury increases. One common injury in children under the age of six is choking. (Triwidiyantari, 2022). If there is no immediate treatment, there will be obstruction or blockage of the airway. Even if it is too late to provide help, it will cause death (Pro Emergency, 2021).

Choking incidents are often encountered in the community. However, most people do not pay much attention to these incidents. One of the factors that cause children to choke is the lack of knowledge of parents, especially mothers, in caring for their children. Knowledge or cognitive is a very important domain in shaping one's actions (Notoatmodjo, 2018). The role of a mother is to nurture and look after the child, which is important to prevent choking in children. If the mother's efforts to take care of the child are unsuccessful and the child chokes, then the mother must provide first aid. However, not all mothers are able and knowledgeable in performing first aid in handling choking in children.(Wulandini et al., 2018).

The actions that mothers can take for choking first aid are to perform the back blow, heimlich maneuver or abdominal thrust, and chest thrust techniques. However, in children less than one year old (infants), it is recommended to perform the chest thrust technique (Pro Emergency, 2021).

Choking is considered the fourth leading cause of death in children under the age of six years old (West et al., 2021). In Chang et al., (2021) study investigating choking events from 2001 to 2016 in the United States, there were a total of 305,814 nonfatal choking injuries and 2,347 choking deaths in children aged 0 to 19 years. Children under the age of six accounted for 73% of nonfatal choking injuries and 75% of choking deaths.

In Padang City, research conducted Muhammad, (2020) said there were around 561 patients with patients with foreign body blockage in the nose during the 2017-2019 period at Dr. M. Djamil Padang Hospital. Furthermore, the descriptive study researched by Nyimas, (2020) was taken from the Medical Record data of Dr. M. Djamil Padang Hospital in May 2019 - February 2020. The results of the study 56 patients with total sampling obtained age groups who often experience foreign bodies are 0-4 years (100%) in the larynx, 5-11 years (50%) and 12-16 years (50%) in the trachea, 0-4 years (50%) in the bronchi, and 5-11 years (34.7%) in the esophagus.

Health education with this demonstration method has proven to be effective, supported by previous research conducted by Hariyadi & Anastasia, (2022) which states that there is an effect of providing health education with demonstration methods on increasing the knowledge and skills of youth organization members in the initial management of snake bites. Suhartiningsih et al., (2022) research on the opinion that the provision of health education with demonstration methods is effective for improving maternal skills on

dietary regulation in stunted children in the working area of Widodaren Health Center, Ngawi Regency.

### OBJECTIVE

To analyze the effect of a health education demonstration method on the level of knowledge of mothers about first aid for choking in early childhood at Cahaya Umami 2 Kindergarten

### METHODS

This study used a One Group Pre-test and Post-test design using a quasi-experimental research method. This research was conducted at Cahaya Umami 2 Kindergarten in Padang City. The research time was from August 2023 - June 2024. Data collection was carried out on March 2, 2024. The population in this study were all mothers of students at Cahaya Umami 2 Kindergarten, totaling 76 people. The sample taken in this study using purposive sampling obtained a sample of 43 respondents. The research instrument used was a modified questionnaire from Sinaga, (2019) research.

The research was carried out by research conducted through stages: 1) Preparation, namely conducting an initial survey of teachers and pupils who will be used as respondents and preparing a research proposal. 2) Implementation, namely pre-test, conveying the basic concepts of choking and first aid for choking through PPT media, researchers demonstrating first aid for choking, respondents divided into 5 small groups and trying out all skills and post-test. 3) Evaluation, namely analyzing data, compiling results and discussion, drawing conclusions. If stages in data collection have been completed and data have been collected, the researcher analyzes the data using the Wilcoxon sign test statistical test.

### RESULTS

The average age of the respondents studied was 35.91 years, then most of the respondents had a senior high school / equivalent education as many as 20 respondents (46.5%), then almost all respondents were unemployed as many as 33 respondents (76.7%), and most respondents had received information about first aid for choking from an early age as many as 29 respondents (67.4%). These results are shown in table 1 and table 2.

**Table 1.** Respondent Characteristics by Age

Variable	Mean	Median	SD	Min	Max	95% CI
Mother's age (Year)	35.91	35	5.660	24	47	34.16 – 37.65

**Table 2.** Frequency Distribution of Respondents Based on Last Education, Occupation, Experience, and Source of Information

No	Characteristics of Respondents	F	%
1	Latest Education		
	Not in school	0	0

No	Characteristics of Respondents	F	%
	Elementary school/equivalent	3	7
	Junior high school/equivalent	4	9.3
	Senior school/equivalent	20	46.5
	University or college	16	37.2
2	Occupation		
	Work	10	23.3
	Unemployed	33	76.7
3	Experience		
	Ever	29	67.4
	Never	14	32.6
4	Source of Information		
	Posyandu cadre / Health center / Health office	10	34.5
	Television	2	6.9
	Social Media	17	58.6

Mother's Knowledge Level About First Aid for Choking in Early Childhood Before Intervention

**Table 3.** Average Maternal Knowledge of First Aid for Choking in Early Childhood Before Intervention

Knowledge	N	Mean	Median	Modus	SD	Min-Max	95% CI
Pre-Test	43	14.09	15	16	2.75	7-19	13.25-14.94

Based on Table 3, the score of respondents' knowledge about first aid for choking in early childhood before the intervention was 14.09. The minimum score was 7 and the maximum score was 19. Maternal Knowledge Level About First Aid for Choking in Early Childhood After Intervention

**Table 4.** Average Maternal Knowledge of First Aid for Choking in Early Childhood after Intervention

Knowledge	N	Mean	Median	Modus	SD	Min - Max	95% CI
Post- Test	43	17.06	17	19	1.661	12-19	16.65-17.67

Based on Table 4, the average score of respondents' knowledge about first aid for choking in early childhood before the intervention was 17.06. The minimum score was 12 and the maximum score was 19.

## Health Education Demonstration Method on the Level of Maternal Knowledge About First Aid for Choking in Early Childhood at Tk Cahaya Umami 2

**Table 5.** The Effect of Health Education Demonstration Method on the Level of Maternal Knowledge about First Aid for Choking in Early Childhood

Variabel	F	Mean Rank	Mean Difference	<i>p-Value</i>
Pre-Test - Post -Test	Negative Rank	0	.00	2.97 0.000
	Positive Rank	40	20.5	
	Ties	3		
	Total	43		

Based on table 5, the Wilcoxon Sign test statistical test obtained  $p$  value = 0.000 ( $p < 0.05$ ). This indicates that  $H_1$  is accepted, meaning that there is an influence between mothers' knowledge about first aid for choking in early childhood before and after being given health education using the demonstration method.

### DISCUSSION

Based on the results of the study, it shows that the level of maternal knowledge before the intervention is 14.09, which means it is in the sufficient category (Score 10-14). The minimum score was 7 and the maximum score was 19 with a standard deviation of 2.75. The results of the questionnaire answers, it is known that the questionnaire item that gets the least score is the 16th question item regarding actions taken on infants (0-1 Year). After being identified, the majority of respondents scoring in the less and sufficient knowledge categories did not understand the information regarding first aid measures for infant choking.

Some respondents who scored moderately said they had seen or heard about choking first aid from social media and from health cadres, but they only knew and had not received further education about choking first aid. However, there were also respondents who had received information about choking first aid in early childhood but had poor knowledge. This could be due to a lack of ability to remember or absorb information, especially if the information has been obtained over a long period of time.

The level of knowledge of first aid for choking in respondents before the intervention was given was generally sufficient. A person's knowledge can be divided into three, namely good (score 15-19), sufficient (score 10-14), and less (score <10) (Darsini et al., 2019). Liembers et al., (2023) in his research showed that before the health education demonstration method was carried out, the results showed that most of the mothers' knowledge of first aid for burns was sufficient, namely as much as 70%. This is also in line with research conducted by Suleman, (2023) which states that the intervention group before giving the demonstration method of choking management was in the sufficient category as much as 95%.

Neny Ludfi, (2019) argues about the factors that influence knowledge, one of which is information and social media. Information obtained from formal and non-formal

education will have a short-term impact that creates changes or increases in a person's knowledge.

Knowledge or cognitive is a very important domain in shaping a person's actions Notoatmodjo, (2018). Experience in obtaining information, one of which is through health education from an accurate source and experience in handling choking victims, can increase a person's knowledge in performing a procedure correctly. Experience is a source of knowledge that affects a person's skills. This is because a person tends to seek the truth of his knowledge, by repeating past experiences in solving choking problems in early childhood with good decision-making skills.

The researcher believes that the low level of maternal knowledge about first aid for choking in early childhood is influenced by the lack of maternal experience so that mothers do not have a real picture to be able to take quick and appropriate handling actions so that mistakes do not occur which actually worsen the condition of the choking victim.

The results of the study of 43 respondents after being given the intervention showed that almost all respondents had good knowledge as many as 40 respondents (97%). The questionnaire obtained an increase in the lowest score before and after the intervention, namely a score of 14.09 to a score of 17.06.

It can be seen that there is an increase in knowledge, which was originally mostly moderate knowledge (Score 10-14) to good knowledge (Score 15-19). Some respondents who previously did not know about the definition of choking first aid, the purpose of choking first aid, preventing choking, the causes of choking, and handling choking first aid became aware of the information correctly. Respondents also became aware of the benefits of choking first aid techniques in early childhood such as back patting, chest pounding and abdominal pounding. After the intervention, interviews were conducted, the respondents stated that they had a better understanding of choking first aid in early childhood.

This is in accordance with the research of Khoirunnisa et al., (2019) which states that the knowledge of research respondents about breastfeeding management after receiving health education with the demonstration method has increased where this can be seen from the results of the total pretest and posttest scores. Research conducted by Silitonga et al., (2022) also stated that there was an increase in the pre-test and post-test scores of the participants' knowledge of hepatitis mestirius prevention.

Changes that occur at the level of knowledge can be caused by the delivery of information in health education. The advantages of the demonstration method are that it can make the learning process clearer and more real, can avoid verbalism, participants more easily understand something, is more interesting, respondents are stimulated to observe and adjust the theory that is understood and explained by the researcher to reality, can do it themselves or redemonstrate (Aini et al., 2023).

Based on the description above, the researcher argues that there is a significant increase in mothers' knowledge about first aid for choking in early childhood, which initially had a majority of knowledge in the moderate category (Score 10-14) to good (Score 15-19). The researcher concluded that the demonstration method of health education can be accepted in the daily life of the mothers of students so that it can change the choking handling skills of the mothers of students of Cahaya Ummi 2 Kindergarten for the better.

#### The Effect of Health Education Demonstration Method on the Level of Maternal Knowledge About First Aid for Choking in Early Childhood at Tk Cahaya Ummi 2

From the results of this study, it was found that there was an increase after the intervention as evidenced by the significant p-value of 0.000 and the average value of 14.09 increased to 17.06. In the results of statistical tests it can be concluded that there is an effect of health education demonstration method on maternal knowledge about first aid for choking in early childhood.

The results of this study are in line with the research of Liembers et al.,(2023) showing the results of p-value  $0.000 < \alpha (0.05)$  which means that there is an effect of health education with the demonstration method on knowledge of first aid for burns in housewives. This research is in line with Khoirunnisa et al., (2019) showing that from the results of  $p = 0.012$  which means there is a statistically significant difference in the knowledge of respondents before and after obtaining health education with the demonstration method on the level of knowledge of breastfeeding management in pregnant women.

Based on the cone of experience theory proposed by Edgar Dale in his book entitled "Audio-visual Method in Teaching" describes the levels of experience and the media needed to shape that experience. explains that learning is divided into 2, namely active and passive. In passive learning, the reading method is 10%, listening is 20%, and demonstration is 50%. When seeing a demonstration, the ability gained is to show, apply, and practice because in this activity the learner gets more images and knowledge, especially in terms of a process. The method of seeing is divided into 2, namely through visual images that are seen in two-dimensional forms such as paintings, posters, portraits and others, while through demonstrations, namely experience through experiments or demonstrations about an issue or a process.

Researchers argue that providing health education using the demonstration method has an effect on increasing mothers' knowledge about first aid for choking in early childhood. This can happen because at the time of health education, respondents not only listen to educational materials but also observe demonstrations carried out by researchers, so that respondents can understand and remember the procedures that have been demonstrated by researchers and the demonstration method can minimize the possibility of misinterpretation by respondents compared to only reading and or hearing educational information to be memorized.

## CONCLUSION

The findings of this study indicate that the mean knowledge score of respondents increased from 14.09 to 17.06. There is an effect health education demonstration method with the knowledge of mothers about first aid for choking in early childhood, with a p-value of 0.000. It is hoped that further researchers will modify the research on the effect of health education demonstration method on mothers' knowledge about first aid for choking in early childhood. It is hoped that mothers will be able to apply first aid for choking quickly and appropriately in the event of an emergency.

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