

EFFECTIVENESS OF EDUCATION USING EDUCATIONAL MEDIA ON PARENTS' KNOWLEDGE, ATTITUDES, AND SKILLS IN HANDLING CHOKING IN TODDLERS

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ABSTRACT

Background: Choking is a condition where the airway is blocked by a foreign object that can cause difficulty breathing and lack of oxygen. Toddlers are at risk of choking because they are in the oral and exploration stage.

Objective: To determine the effectiveness of education using educational media on parental knowledge, attitudes, and skills in handling choking in toddlers. **Methods:** This study used a pre-experimental design with a one-group pre-post test approach. The research location was Posyandu ILP Leo Klampok, Jl. Halmahera No. 111, Klampok Village, Blitar City. The population in this study were 35 parents who had toddlers during the 3-day study period. The sample consisted of 35 parents of toddlers using a total sampling technique. The research instruments were knowledge and attitude questionnaires and skill observation sheets. Data analysis used the Wilcoxon Signed Rank Test. **Results:** Before being given education, most parents had low levels of knowledge, attitudes, and skills in handling choking in toddlers. After being given education using educational media, there was a significant increase in parental knowledge, attitudes, and skills. The statistical test results showed that education using animated media was effective in improving parents' knowledge, attitudes, and skills in handling choking in toddlers, with a significance value of 0.000 (<0.05). **Conclusion:** Education using educational media was effective in improving parents' knowledge, attitudes, and skills in handling choking in toddlers.

Keywords: first Choking; parents of toddlers; knowledge; attitudes; skills; educational media

Background

Choking is a medical emergency that occurs due to a partial or total blockage of the airway by a foreign object, which prevents air from entering the lungs. This blockage causes the victim to experience difficulty breathing, ineffective coughing, and lack of oxygen (hypoxia). If not treated immediately, this condition can quickly progress to respiratory arrest and death within a short time (9). The first sign of someone choking is that the person is holding their neck, feeling suffocated and appearing panicked. Signs and symptoms include poor air exchange, difficulty breathing, silent coughing, bluish skin and an inability to speak or breathe (1).

Choking is the 4th leading cause of death due to injury in children under 5 years old. Data shows that children under 3 years old (toddlers) are the most vulnerable group. Based on WHO data, there were around 17,537 cases of choking in children aged <3 years, with the main causes being food (59.5%), foreign objects (31.4%), and choking of unknown cause (9.1%). The prevalence of choking in the United States in children under 4 years old was 710, children aged 1 year 11.6%, 1-2 years 36.2%, and 2-4 years 29.4% (2). According to the 2022 Indonesian Ministry of Health report, more than 60% of choking cases in toddlers occurred due to food or playing with small objects (4). Based on data from the National Health Service, the cause of choking was the entry of foreign objects such as grains in 105 patients. Nuts in 82 patients, vegetables in 79 patients. The prevalence of children aged < 3 years is 77.1% (1). According to data from Dr. Hajono Regional Hospital in East Java Province, there were 157 cases of choking caused by foreign objects (2).

Toddlers enter the oral and exploratory stage, often putting foreign objects into their mouths as they learn and become familiar with the world around them. At this stage, children lack motor control and awareness of the dangers around them, increasing the risk of choking or aspiration of foreign objects, especially when playing without parental supervision. When a child chokes, symptoms such as sudden coughing, shortness

of breath, a red or bluish face, and a complete airway obstruction can occur. Therefore, in this situation, the role of parents is very important in supervising children's play activities and having knowledge and skills regarding first aid when a child is choking (5).

Choking incidents often occur in domestic environments, the public's knowledge, especially parents and caregivers, regarding first aid is still relatively low. Many mothers do not know the correct techniques such as Back Blows for babies or the Heimlich Maneuver for children and adults (4). Research at Pusri Hospital Palembang (2025) showed that the majority of mothers have insufficient knowledge regarding handling choking, which contributes to the high risk of fatalities in the household. (1). According to research (5) Education on first aid for choking children has an important role as a form of non-pharmacological intervention that needs to be provided to parents, especially those with toddlers. Education aims to increase parental knowledge and skills in dealing with emergency choking conditions in children, can be done through live demonstrations, educational videos, leaflets, simulations using dolls, so that parents are able to understand visual and practical techniques that are proven to reduce the level of panic when dealing with choking children, as well as increase parental confidence in providing first aid. Several recent studies also show that health education is very effective in increasing community preparedness. The use of varied media, such as audio-visual videos, Self-Directed Learning (SDL) methods, and the use of props (phantoms), has been proven to significantly increase mothers' self-confidence (self-efficacy) and skills in handling choking (7).

Therefore, further efforts are needed to provide literacy and training in handling choking to the general public in order to reduce morbidity and mortality due to airway obstruction, especially in the family environment as the first line of aid (6). With sufficient knowledge, parents can act quickly and be calmer in making decisions, so that the risk of complications due to choking can be minimized (5). Therefore, researchers want to conduct research on the effectiveness of education using educational media on parental knowledge, attitudes, and skills in handling choking in toddlers.

Methods

The research design used in this study is descriptive quantitative with a pre-experimental design using a one group pretest–posttest approach . The population in this study were 35 parents who had toddlers when the study lasted for 3 days. The sample in this study were all parents who met the inclusion criteria and were willing to participate in the entire series of research activities. This research was conducted at Posyandu ILP Leo Klampok, Jl. Halmahera No. 111, Klampok Village, Blitar City. This research was conducted in April 2026. The dependent variables in this study were knowledge, attitudes, and skills of parents in handling choking in toddlers. The independent variable in this study was Education Using Educational Media. The data collection method in this study was using a questionnaire and observation sheet. Data analysis used in this study was univariate analysis and bivariate analysis using the Wilcoxon Signed Rank Test .

Results

Table 1 Data on the characteristics of parents of toddlers at the ILP Leo Klampok Posyandu, Blitar City, April 2026 (n=35).

No	Character		f	%
1	Age	21 years - 30 years	22	62.9
		31 years - 40 years	10	28.6
		41 years - 50 years	3	8.6
2	Education	Junior high school	5	14.3
		High School/Vocational School	26	74.3
		S1	3	8.6
		S2	1	2.9
3	Gender	Woman	35	100

Based on Table 1, it can be interpreted that the age of the toddler's parents is almost entirely 62.9% (22 parents) aged 21-30 years, the education of the toddler's parents is almost entirely high school, 74.3% (26 parents) are high school or vocational school, the gender of the toddler's parents is entirely 100% (35 parents) female.

Table 2 Special Data on Pretest and Posttest of Toddler Parents at Posyandu ILP Leo Klampok, Blitar City, April 2026 (n=35).

No	INDICATOR		PRETEST		POST TEST	
			f	%	f	%
1	Knowledge	Good	0	0	32	91.4
		Enough	10	28.6	3	8.6
		Not enough	25	71.4	0	0
2	Attitude	Good	0	0	34	97.1
		Enough	11	31.4	1	2.9
		Not enough	24	68.6	0	0
3	Skills	Good	0	0	30	85.7
		Enough	8	22.9	5	14.3
		Not enough	27	77.1	0	0

Based on table 2, it can be interpreted that before being given education, the knowledge of parents of toddlers about handling choking was mostly 71.4% (25 parents) was lacking, the attitude of parents of toddlers was mostly 68.6% (24 parents) was lacking, and the skills of parents of toddlers were mostly 77.1% (27 parents) were lacking. After being given education, there was an increase in parents' knowledge, almost all of which were good, 91.4% (32 parents), the attitude of parents was almost all of which were good, 97.1% (34 parents), and the skills of parents of toddlers were almost all of which were good, 85.7% (30 parents).

Table 3 results of the Shapiro Wilk normality test (n=35)

Indicator		Statistics	Sig (2 tailed)
Knowledge	Before	0.567	0.00
	After	0.317	
Attitude	Before	0.586	0.00
	After	0.161	
Skills	Before	0.521	0.00
	After	0.418	

Based on Table 3, it can be interpreted that the results of the normality test for the variables of knowledge, attitudes, and skills, before and after education, have a significance value of 0.000, $p < 0.05$. Therefore, the data is not normally distributed. Therefore, the analysis used is the Wilcoxon Signed Rank Test to assess the difference in scores.

Table 4 Results of the Wilcoxon Signed Rank Test

Indicator		Mean	Standard Deviation	p-value
Knowledge	Before	2.7143	0.45835	0,000
	After	1.0857	0.28403	
Attitude	Before	2.6857	0.47101	0,000
	After	1.0286	0.16903	
Skills	Before	2.7714	0.42604	0,000
	After	1.1429	0.35504	

Based on Table 4, it can be interpreted that the results of the Wilcoxon Signed Rank Test show a significance value of $p = [0.000]$, because the p value < 0.05 means there is a difference between before and after education is given. Therefore, education using educational media is effective in improving parents' knowledge, attitudes, and skills in handling choking in toddlers.

Discussion

1. Knowledge, attitudes and skills of parents before and after being given education using educational media

The research results showed that before receiving education, most parents of toddlers had inadequate knowledge, attitudes, and skills regarding handling choking in toddlers. However, after receiving education using educational media, almost all parents had good knowledge, attitudes, and skills.

In the pretest phase, most parents had insufficient knowledge regarding handling choking in toddlers, due to a lack of information and health education received by parents regarding the signs, symptoms, and first aid steps when a child is choking. Most parents' attitudes toward handling choking were still lacking, due to low self-confidence, anxiety, and unpreparedness in dealing with emergency situations in toddlers. Parents' skills in handling choking were largely lacking, due to a lack of practical experience and a lack of previous training or simulations on handling choking.

In the posttest stage, there was an increase in knowledge, almost all parents were in the good category, because the use of visual and audio elements in the educational video helped parents understand the steps for handling choking concretely so that the material was easier to remember. Almost all parents showed a good attitude towards handling choking, the educational media provided a real picture of the condition of choking and how to handle it so that parents became more confident and prepared to perform first aid measures. Almost all parents had good skills in handling choking in toddlers, because the presentation of repetitive movements in the educational video also helped parents remember the sequence of actions better, so that skills improved.

A person with good knowledge will also have good preventative measures. The more knowledge an individual has, the better their understanding of potential hazards or disasters, thereby minimizing the risk. Attitude is a key determinant of behavior because it is related to perception, personality, and motivation (Sari et al., 2025). Skills are influenced by training, experience, and psychological factors such as self-confidence and anxiety (8).

According to researchers, low levels of knowledge, attitudes, and skills before education indicate parents' limited information regarding choking management. This situation potentially increases the risk of inappropriate treatment in emergencies in toddlers. However, the improvement after education reinforces that knowledge is a crucial foundation for developing attitudes and skills. When parents have a good understanding, they develop a more positive attitude and are prepared to act, enabling them to provide appropriate treatment.

2. The effectiveness of education using educational media on parents' knowledge, attitudes and skills.

The research results show that education using educational media is effective in improving parents' knowledge, attitudes, and skills in handling choking in toddlers. Education using educational media is effective in improving parents' knowledge, attitudes, and skills because it is able to present information visually and auditorily simultaneously. The delivery of interesting, clear, and easy-to-understand material helps parents understand the steps for handling choking more concretely. In addition, the visualization of movements in educational media makes it easier for parents to remember and practice first aid actions, resulting in increased knowledge, the formation of positive attitudes, and skills after being provided with education.

The use of animated videos theoretically supports constructivism theory, which views learning as an active process where respondents construct their own knowledge based on prior experience and knowledge. Educational videos are an effective medium because they present information in both visual and auditory formats, thereby strengthening respondents' overall understanding. Educational videos can also help researchers convey material more easily and more easily understood by respondents (3).

According to researchers, the effectiveness of educational videos is inextricably linked to their ability to present information simultaneously visually and audibly, making it easier for respondents to understand the material more thoroughly. Furthermore, the use of educational media is considered

more engaging and interactive, thereby increasing respondents' attention and interest in learning. This makes the information more easily understood and remembered, and can increase parental preparedness in emergency situations such as choking in toddlers.

Conclusion

Based on the research results, before receiving education, most parents had low levels of knowledge, attitudes, and skills in handling choking in toddlers. After receiving education using educational media, there was a significant increase in parental knowledge, attitudes, and skills. Statistical results using the Wilcoxon Signed Rank Test showed that education using educational media was effective in improving parental knowledge, attitudes, and skills in handling choking in toddlers.

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