

Effectiveness of Child and Infant Airway Management Training for Midwifery Students in Jambi

Agus Pairi¹, Suryadi Imran²

¹ FKIK Universitas Jambi and aguspairi07@gmail.com

² FKIK Universitas Jambi and suryadiimran72@gmail.com

ABSTRACT

Choking often occurs in children and babies which causes airway obstruction, either partial airway obstruction or total airway obstruction. If help is not given immediately, it can result in death in children and babies. This research was conducted to determine the level of knowledge and skills of midwifery students in airway management in infants and children with airway obstruction due to choking. The research aims to determine students' knowledge and skills in airway management in infants and children with choking cases using a comparative research method, namely assessing knowledge before and after being given training, the sample used was 36 respondents, and the results showed an increase in students' knowledge after being given training with a value The pretest average for knowledge was 51.72% to 86.14%, while for skills there was an increase in knowledge after the test, with an average score of 93.31%. The conclusion is that this training can have an impact on increasing students' knowledge and skills so that when students practice and find cases of airway obstruction, they can do it as optimally as possible.

Keywords: *Airway Management, Child and Infant*

1. INTRODUCTION

Choking is when someone reviews airway obstruction due to an overseas item blockading the airway. This circumstance frequently takes place in infants and kids, especially in kids elderly 3 years and under, normally because of swallowing overseas items consisting of marbles, cash, or meals consisting of eating. rambutan fruit by swallowing the rambutan seeds and reformulating existing foods to avoid, [1].

Airway obstruction is normally divided into two, the first is partial airway obstruction, in this circumstance, the character experiencing it is far nevertheless aware, the affected person appears demanding seeking to ask for assistance through protecting the neck however inside the case of an infant this doesn't show up due to the fact the infant can not but react. like adults, toddlers nevertheless appear stressed seeking to cry however there may be no sound due to the fact the airway is blocked, and if it is no longer helped right away it could end up a complete blockage that's characterized by the kid or infant now no longer being aware anymore.

Many cases are reported about the number of deaths due to airway obstruction due to choking. as is the case in Malaysia A little girl died because she choked on rambutan seeds while eating the fruit. His seed was found stuck in his throat. In Malaysia, a 9-year-old girl met an unfortunate fate. It started when this 9-year-old child enjoyed a rambutan fruit. Then he accidentally swallowed rambutan seeds, causing him to choke [2]. The girl was immediately taken to the hospital. However, he could not be helped and was pronounced dead. [3]. Then on Tuesday, a case of a baby's death due to banana suffocation was circulated. It is known that a child's airway can close in seconds if suffocated. So, the child can no longer be helped. [4].

Trouble breathing is one of the foremost common reasons why children are brought to clinics (both crisis rooms and outpatients). Because of their special life structures and physiology,

children are more likely than grown-ups to endure aviation route hindrance characterized by loud breathing. Children's aviation routes have a few anatomical contrasts, which is why children are more likely to have hindrances. Children have a generally bigger and unmistakable occiput, which causes the neck to flex when lying down, and a moderately bigger tongue. The position of the throat, as well as the vertical, delicate and Omega-shaped position of the throat, makes the obstacle simple to deliver. Another impediment is that the tightest portion of the aviation route is at the unexpanded Rusko level of. Aviation route obstacles in children is one of the foremost common reasons children go to the crisis room. The specialist ought to be able to distinguish the conceivable location of blockage based on loud breathing and other respiratory indications. The pelvis is the foremost common intense obstruction of the upper aviation routes in children, whereas bronchitis and asthma are the foremost common hindrances of the lower aviation routes. In more youthful children, wheezing isn't continuous asthma, so other differential analyze ought to be considered [1]. Administration of aviation route obstacles is based on the conclusion, but the foremost vital thing is prompt treatment in life-threatening circumstances within the crisis room [5].

Choking happens particularly regularly in youthful children, but anybody of any age can choke. Choking happens when an outside body, such as a bit of nourishment or a little toy, in part or totally squares the aviation route; due to swelling of the mouth or throat; or with liquids such as upchuck or blood. A individual who is choking can respond rapidly and kick the bucket, so it is critical to act rapidly. Children under 5 are particularly at the chance of suffocation. Babies and little children investigate by putting things in their mouths and can effectively choke on them. Indeed a few common nourishments can pose a choking risk to youthful children [4], [6].

Crisis Strategies; the first step check area for security, set up to begin with an impression, get assent, and wear individual defensive hardware if conceivable, the Second check for signs and side effects; Frail or no hack, Boisterous wheezing or no sound, Pale or blue skin color, Incapable to hack or cry, Froze, confounded or startled appearance. Note: Signs and side effects are checked, and require prompt to begin with help. The third ask for assistance to call 119 and get hardware if the individual needs immediate help and the last step use caution. Meanwhile, for handling infant patients with cases of choking, namely the first step Position the infant face-down along your forearm using your thigh for support Keep the infant's head lower than their body, then Give 5 firm back blows and use the heel of the hand to strike between the shoulder blades, the next step Turn the infant face-up with their head lower than their body. Give 5 quick chest thrusts then chest thrusts should be about 1 ½ inches deep. Then Continue giving 5 back blows and 5 chest thrusts and continue until the infant can cough or cry or becomes unresponsive. And the last step If the infant becomes unresponsive, lower them to a firm, flat surface and begin CPR (starting with compressions) according to your level of training.

In research [7]. about knowledge and misconceptions of choking and first-aid procedures among Syrian adults: A cross-sectional study. A total of 406 responded to the survey, with 246 (60.6%) scoring less than 16 points, indicating a low level of knowledge. Gender and place of residency were not correlated with knowledge level $p=0.249$, $p=0.913$, respectively). Participants employed in the medical field, those who had received training in first aid, and individuals with higher levels of education exhibited higher levels of knowledge. However, the level of knowledge was below expectations for these groups. There should be an increase in the availability of first-aid courses to the public and improvements in hands-on training for physicians and medical trainees.

2. METHODS

after that material is given about airway management in general and handling. specifically for choking cases, after that they are given practical material about airway management skills, then in the second stage, a post-test is carried out by carrying out a written knowledge test about airway management and followed by a skills test about handling choking cases in babies and children. Each participant is tested one by one.

3. RESULTS AND DISCUSSION

Table 1. Frequency Distribution Pre-Test and Post-Test Training of Management Airway Infants and Children with Choking at Jambi City

No	RESPONDEN	VALUE				Amount	Average
		PRE TEST	POST TEST	REM	SKILL		
1	R01	42	91		90	181	90,50
2	R02	63	80		96	176	88,00
3	R03	56	91		98	189	94,50
4	R04	56	93		100	193	96,50
5	R05	49	84		96	180	90,00
6	R06	49	84		90	174	87,00
7	R07	35	91		90	181	90,50
8	R08	35	91		90	181	90,50
9	R09	49	91		80	171	85,50
10	R10	49	91		98	189	94,50
11	R11	28	84		93	177	88,50
12	R12	28	91		86	177	88,50
13	R13	56	84		83	167	83,50
14	R14	49	84		96	180	90,00
15	R15	56	91		98	189	94,50
16	R16	77	84		93	177	88,50
17	R17	49	84		90	174	87,00
18	R18	77	84		98	182	91,00
19	R19	63	84		90	174	87,00
20	R20	56	84		90	174	87,00
21	R21	56	84		93	177	88,50
22	R22	70	84		96	180	90,00
23	R23	21	84		100	184	92,00
24	R25	49	92		100	192	96,00
25	R26	56	80		93	173	86,50
26	R27	56	84		80	164	82,00
27	R28	49	84		86	170	85,00
28	R29	49	84		96	180	90,00
29	R30	35	91		100	191	95,50
30	R31	49	84		96	180	90,00
31	R32	35	90		100	190	95,00
32	R33	77	84		98	182	91,00
33	R34	63	80		93	173	86,50
34	R35	42	91		100	191	95,50
35	R35	56	80		90	170	85,00
36	R36	77	84		93	177	88,50
		1862	3101	0	3359	6460	3230
	TOTAL	51,72	86,14	0,00	93,31	179,44	89,72

Source: Processed Primary Data (2024)

The table above shows that the knowledge and skills of the respondents increased significantly with an average increase of 51.72% in the average or the score of the respondent before the training or pre-test, which means that the knowledge of the respondent is low, because the ability limit of the respondent proved to be good, if the score is at least an average was 80%, and with the airway management material after training, the rate of increase increased significantly to 86,14%. . of knowledge level and 93.31% of skills and the overall average was 89.72%.

Based on the results of this study, it can be explained that respiratory management training is very necessary to improve the knowledge and skills of health workers, especially for students who are ready to practice practical work in a hospital or health center later than students will do. be helped by a quick response to improve success and of course, it can help save some lives in the future, according to many experts, the need for oxygen is the most important need, because oxygen is the main source of human life, lack of oxygen in large quantities and quickly can lead to quick death, so in the explanation of several emergency theories, it is very important for the health worker to have the right and quick food to avoid death or injury due to lack of oxygen. situations, in which the most important procedure in stopping breathing is how the officer opens the airway, and if there is an obstruction, special techniques are necessary to overcome it, such as the Haemlich Manouver, which in adults involves abdominal thrusts and chest thrusts. children and babies, as well as robotic technique and foreign body removal techniques, when foreign bodies are detected with blockage due to swallowing objects, this can only be done with special emergency training, so the knowledge and skills of health workers must be constantly developed. and students, following the development of science or through training, workshops, or seminars organized by professional staff and emergency experts.

The training explained several techniques described in the basic training material to give special help in case of suffocation, starting with danger, responding to breathing control by looking, listening, and feeling, and exhalation of the victim or patient. Helper By bringing the rescuer closer to the victim, what can be seen is the movement of the victim's chest when breathing, listening to the breath, and feeling the breath with the palm of the helper's hand or the back of the palm of the rescuer's hand. then chest measurements. and then CPR 5 times in one push This is done when the child is unconscious and for babies, press with two fingers 5 times and blow back 5 times until the child coughs or is conscious and the swallowed object can be vomited or until help arrives. arrives with an ambulance or PSC 119 in Indonesia.

The training also includes briefings and discussions, so that the level of understanding of the respondents is measured both individually and in groups, then the skill material is given in a demonstration method and it is given again by the respondent until the participant knows how. do it correctly and correctly, if not correctly, repeat until everyone gets it and is considered competent enough, after the presentation, a post-test is done and the results are as seen in the results. in the table, some of the efforts made during the training process helped the training to be successful.

CONCLUSION

From the results of this study, it can be concluded that the implementation of airway management training in choking cases involving airway obstruction in children and infants has a great impact on improving students' knowledge and skills, so that the results prepare them to apply it later in training places such as hospitals or health centers and in the community.



ACKNOWLEDGEMENTS

The author would like to express his deep gratitude Especially my beloved family who have provided invaluable support, prayers, and materials in completing this research.

REFERENCES

- [1] S. Bond, "Training Zambian midwives in basic newborn care saves lives and is cost-effective.," *J. Midwifery Womens. Health*, vol. 56, no. 5, 2011.
- [2] M. Musa, F. F. Anis, and H. Hassan, "The efficacy of intensive simulation airway management training program on the final year nursing in one of health training institutions in Northern Borneo," *Effic. intensive Simul. Airw. Manag. Train. Progr. Final year Nurs. one Heal. Train. institutions North. Borneo*, 2020.
- [3] A. A. P. Pediatrics, "Prevention of choking among children," *Pediatrics*, vol. 125, no. 3, pp. 601–607, 2010.
- [4] R. Hatamleh, S. Abujilban, S. Abuhammad, D. M. A. Ariag, and R. A. Joseph, "Effect of the Helping Babies Breathe Training Program: An Experimental Study on Jordanian Midwives' Knowledge and Skills," *J. Perinat. Neonatal Nurs.*, vol. 35, no. 2, pp. E11–E17, 2021.
- [5] N. Kaswandani, "Airway Obstruction Management In Paediatric," in *24th International Meeting on Respiratory Care Indonesia "Respiratory Care: Facing the Challenges"*, THE SOCIETY OF RESPIRATORY CARE INDONESIA (RESPINA) Jakarta, Indonesia, 2023.
- [6] T. Hindriati, E. S. S. Nuraidah, and D. A. Kurniawan, "Development of interactive obstetric emergency learning media for midwifery students at Adiwangsa University, Jambi, Indonesia".
- [7] A. M. Salih, M. Alfaki, and D. M. Alam-Elhuda, "Airway foreign bodies: A critical review for a common pediatric emergency," *World J. Emerg. Med.*, vol. 7, no. 1, p. 5, 2016.

BIOGRAPHIES OF AUTHORS

	<p>Aguspairi, studied and granted degree of Bachelor of Science in Nursing at Padjadjaran University in 1999. Then the author continued and completed his study at University of Indonesia in 2003 and achieved degree of Master of Health Sciences. Email: Aguspairi07@gmail.com.</p>
	<p>Suryadi Imran, He completed his undergraduate education at Gadjah Mada University in 2003 as a professional nurse, then continued his Masters in Nursing Management, graduating in 2012. and is currently studying for a doctoral degree at Philipines Women's University. Works as a lecturer at two universities, Jambi University, and Adiwangsa Jambi University, apart from that he is active as an emergency training instructor and has published 3 books, namely a leadership management book, a health statistics book, and an anatomy and physiology book. Email: suryadiimran72@gmail.com</p>