Health Gate
Volume 2 Number 1 January 2024 ISSN 2986-1098
Homepage: https://healthgate.ppnikotablitar.com

DOI:https://doi.org/10.70111/hg2105
Submited : November,29 2023
Reviewed : December, 15 2023
Accepted : January, 15 2024

Impact of Animated Health Education on Mothers' Knowledge of Febrile Seizure Management in Toddlers

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ABSTRACT

Improper handling of children with febrile seizures has an impact on the occurrence of recurrent febrile seizures or complications can occur. Several factors influence a person's knowledge, namely the provision of health education. Supporting media is important in delivering health education. The purpose of this study was to analyze the effect of health education on the level of mother's knowledge about the cruel treatment of fever in toddlers. The research design was (one-group pre-post test design). The number of samples in this study were 54 mothers who came to Dahlia Integrated Healthcare Center, Kerjen Village. This research was conducted on May 10, 2023. The research instrument used animated videos and questionnaires. The results of this study show that based on the results of the Wilcoxon Signed Rank Test statistical test at the pretest and post-test a p-value of 0.000 or <0.05, which means that there is an influence in providing health education using animated videos on the level of mother's knowledge about handling febrile seizures in toddlers. It is hoped that the results of this study can be used as material for evaluation and information in supporting Pediatric Nursing regarding the management of febrile seizures in toddlers.

Keywords: Knowledge, Media, Febrile seizure

Background

Febrile convulsions are common seizures in children under the age of five. Fever seizures are associated with an increase in the child's body temperature above 38°C, not caused by central nervous system infection or metabolic disorders, and no previous history of seizures. When experiencing febrile seizures, the child's body usually shakes violently, and is accompanied by jerking movements in the arms, legs and loss of consciousness (1).

Improper handling of children with febrile seizures results in recurrent febrile seizures or complications. The long-term consequences of recurrent febrile seizures are unfortunately not widely realized, so that often the treatment of febrile seizures in children is not done properly. As many as 3% of children with febrile seizures will develop epilepsy in the future. Possible long-term consequences include epilepsy, neurological disorders, behavioral disorders, and psychiatric disorders (2).

The global incidence of febrile seizures is 2%-5% in the United States, South America, and Western Europe, 5%-10% in India, 8.3%-9.9% in Japan, and 14% in the US state of Guam (3). In East Java, 2-3% of 100 children under five had seizures in 2009-2010 (4). The right way to treat febrile seizures in children is an important issue that parents, especially mothers, should know. Mothers with low levels of knowledge have a 7-fold worse risk of handling febrile seizures than mothers with high levels of knowledge. Providing information to increase parental

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awareness of febrile seizures, management of febrile seizures, and prevention of febrile seizures is very important because it can reduce parental anxiety (5)

When a child has a febrile seizure at home, the mother is the first to provide first aid. Proper management of fever in children can prevent febrile seizures. Some mistakes in managing febrile seizures are due to lack of knowledge in the management of febrile seizures (6). In India, 77.9% of mothers with febrile seizure patients did not know febrile seizures and 90% believed that their children would die. Maternal knowledge was 80.0% in the poor category, experience was 77.8% in the inexperienced category, and behavior about dealing with febrile seizures for the first time was 85.7% in the negative category (7). The results of another study showed that 54.4% of mothers had never received information about the management of febrile seizures in children.

There are several things that can affect a person's knowledge. Some factors that affect a person's knowledge include internal factors and external factors. Internal factors include a person's age, intelligence which is defined as an ability to learn and think, education which is an activity or learning process to improve or develop certain abilities, education itself can be obtained from formal and informal education and personal experience. External factors include information, where information can have an influence on a person's knowledge which can be obtained through various media such as mass media and electronic media (8).

Supporting media is necessary in delivering health education. Videos are very effective in improving one's learning outcomes. This is because most videos involve the use of the sensory organs to receive and process information (9). The advantage of video as an educational media is that the information conveyed will be easier to understand and understand and will have a real impact on learning outcomes in the cognitive, affective and psychomotor domains (10). Audiovisual media can be accessed through various digital era tools such as computers, smartphones and other electronic media(11). In this study, researchers used video media by using animation in it. Video media, especially those that use animation, are more interesting, can display animation, are well colored, can be repeated, are easy to understand so that when someone sees the video, someone understands what is conveyed in the video much faster.

From the results of research, it shows that as many as 12 (40%) mothers have a low level of knowledge before getting an educational video about first aid for febrile seizures in children under five, this is because mothers have never received education about first aid for febrile seizures in children(12). The results of a preliminary study of 7 mothers of toddlers at Dahlia Integrated Healthcare Center, Kerjen Village found that 7 mothers of toddlers did not know how to handle if the child had a febrile seizure, obtained data on mothers who had experienced a febrile seizure in the child, the mother was hysterical while holding the child, then brought to the hospital, while the mother of toddlers said that if the child had a fever the action taken was given a thick blanket and compressed with cold water. 5 out of 7 mothers of toddlers also do not know that high fever can risk febrile seizures. Based on the description above, the researcher is interested in conducting research on the effect of health education on handling febrile seizures using animated video media on the knowledge of mothers of toddlers at Dahlia Integrated Healthcare Center, Kerjen Village

Methods

The design used in this study was (one-group pre-post test design). The independent variable in this study is the effect of health education using animated video media. The dependent variable in this study was the level of knowledge of mothers about the handling of febrile seizures in toddlers. The population in this study were 63 mothers who came to the Dahlia Integrated Healthcare Center, Kerjen Village. While the sample in this study were 54

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mothers who came to Dahlia Integrated Healthcare Center, Kerjen Village. The sampling technique used in this study was purposive sampling, which is a sampling technique with certain considerations. The instruments in this study were educational videos and questionnaires on the level of maternal knowledge.This study uses inclusion and exclusion criteria. Inclusion criteria are: mothers can read and write, willing to be respondents, members who have children aged 6 months-5 years, have never handled febrile seizures, take their children to the Dahlia Integrated Healthcare Center, Kerjen Village. While the exclusion criteria not participate in educational activities from start to finish, not complete the questionnaire. Data were analyzed using the Wlicoxon Signed Rank Test.

Results

Table 4.1 Characteristics of respondents based on education and age of mothers at Integrated Healthcare Center Dahlia

No	Characteristics	Frequency(f)	Percentage(%)
1	**Education**		
	Junior high school	15	28
	Senior High School	37	69
	Bachelor	2	4
	Total	54	100
2	**Age of mothers**		
	20-25 y	13	24
	26-30 y	17	31
	31-35 y	15	28
	36-40 y	9	17
	Total	54	100

Based on Table 4.1, it can be seen that the majority of respondents with the latest high school education were 37 people (69%) and the minority of respondents with the latest S1 education were 2 people (4%). In addition, it was found that the highest age of respondents aged 26-30 years was 17 people (31%), while the least aged 36-40 years was 9 people (17%).

Table 4.2 Level of knowledge of mothers before and after being given health education using animated videos

No	Level of knowledge	Frequency (f)	Percentage (%)
	Pretest		
1	Good	9	17
2	Enough	31	57
3	Less	14	26
	Total	54	100
	Postest		91
1	Good	49	9
2	Enough	5	
	Total	54	100

The results of research on the level of knowledge of mothers before and after being

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given health education can be seen in Table 4.2 that before being given health education, 14 people (26%) had poor knowledge, 31 people (57%) had sufficient knowledge and 9 people (17%) had good knowledge. After being given health education, 49 people (91%) had good knowledge, while 5 people (9%) had good knowledge sufficient knowledge about handling febrile seizures in toddlers.

Table 4.3 Wilcoxon Statistical Test Wilcoxon Prepost Test The Effect of Health Education Using Animated Video on the Level of Maternal Knowledge About Handling Febrile Seizures in Toddlers

Variable	Good	Enough	Less	Total	p-value Wlicoxon
Knowledge					
Pre-test	17%	57%	26%	100%	0,00
Post-test	91%	5%		100%	

Based on Table 4.3 above, it can be concluded that based on the results of statistical tests using the Wilcoxon Signed Rank Test on the pretest and post-test, the Z value found is -6,562 with a p-value of 0.00 or <0.05, which means that there is an influence in providing health education using animated videos on the level of maternal knowledge about handling febrile seizures in toddlers.

Discussion

Based on the results of the Wilcoxon Signed Rank Test statistical test on the pretest and post-test, it was found that the p-value was 0.000 or <0.05, so Ho was rejected and Ha was accepted, which means that there is an influence in providing health education using animated videos on the mother's level of knowledge about treating seizures. fever in toddlers. This research is in line with the pre-test and post-test scores obtained a significant value of 0.00 or p value <0.05, which means there are differences in the knowledge and attitudes of teenagers before and after being given education through audio media visual (13).

There are many advantages gained from using animated video media in providing health education. Understanding of material in a teaching and learning process depends on the method used, by hearing (audio) you can remember 20%, by seeing (visual) you can remember 30%, by hearing (audio) and seeing (visual) can remember 50%. This theory is in line with the research results obtained by researchers that there was an increase in knowledge between before and after being given health education using animated videos. This is because the use of videos in learning can provide a more complete, clear, interesting and enjoyable learning experience (14).

The factor that influences the change in the level of knowledge of respondents from the poor and sufficient categories to the good category is age. Respondents in early adulthood (26-30) years and (31-35) years are more receptive to information because early adulthood is in their productive age. This is in line with the opinion of which states that age will influence a person's ability to grasp and think about the information provided. Based on research conducted by researchers, it can be said that age is one of the factors that influences a person's level of knowledge (6).

Another factor that influences the level of knowledge is education. This research shows that respondents with a high school or bachelor's degree have a good level of knowledge after

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being given health education. Respondents with a good level of education receive more information and understand the material presented more easily. According to research result a person's level of education will influence acceptance and understanding of an object or material which is manifested in the form of knowledge.

Based on the results of the Wilcoxon Signed Rank Test statistical test on the pretest and post-test, it was found that the p-value was 0.000 or <0.05, so Ho was rejected and Ha was accepted, which means that there is an influence in providing health education using animated videos on the mother's level of knowledge about treating seizures. fever in toddlers. There are many advantages gained from using animated video media in providing health education. This is because the use of videos in learning can provide a more complete, clear, interesting and enjoyable learning experience. Another advantage gained from using animated videos as a health education medium is that it makes it easier to present information about quite complex processes, has more than one convergent media, for example combining audio and visual elements, and attracts attention so as to increase learning motivation and is easier to understand (15). If the video is uploaded to YouTube, it could be an effective health education method for the public because it can be accessed at any time (16).

In this study, the results also showed that providing health education using animated videos with a duration of ± 10 minutes was proven to be effective in increasing mothers' knowledge about treating febrile seizures in toddlers. This is in line with research which states that his research using booklets and audiovisual media with a duration of ± 10 minutes can change the level of parents' knowledge about toilet training where the results of this research show that health promotion with audio-visual media accompanied by booklets is a better media (17). Effective for increasing toilet training knowledge in mothers of toddlers. Health promotion using audio-visual media accompanied by a booklet on toilet training knowledge shows that the posttest score is higher than the pretest, thus this media is able to increase toilet training knowledge in mothers, so it can be applied to increase knowledge. The use of video media in this research is directly more effective because showing videos with sound and pictures can stimulate the senses of hearing and sight, so that the use of video media attracts more respondents' attention and makes respondents more focused in paying attention to the material being presented.

Factors that can influence the level of knowledge include age and education. This is because age is one of the factors that influences knowledge. The older you get, the more your understanding and thinking patterns will develop and you will be mature enough to obtain and absorb various information from outside, so that the knowledge you obtain will get better.

Another factor that can influence a person's level of knowledge is education. In this study, it was found that respondents with a junior high school education had a lower level of knowledge, compared to respondents with a high school or bachelor's degree who had a sufficient and good level of knowledge. This shows that respondents with high school and bachelor's degrees receive more information and understand the material presented more easily. This education is a factor that influences a person's level of knowledge. Education is one of the factors that influences the level of knowledge(18). Knowledge is also influenced by experience (19), especially the mother's experience in providing management for her baby who has seizures (20). Parents who have higher education will have broader knowledge than people with lower education, so parents with higher education will have better abilities in dealing with febrile seizure (8)

Conclusion and Recommendations

Based on the results of statistical tests using the Wilcoxon Test, a significant value of 0.000 or p value <0.05 was obtained, indicating that there was an influence before and after the provision

of health education using animated videos on the level of maternal knowledge about handling febrile seizures in toddlers. Educational media in the form of animated videos about the use of children with seizures can be used by health workers at community health centers to provide education to the public.

Acknowledgment

We would like to thank the director of Public health center who has provided the opportunity to carry out research.

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