International Journal of Research and Review
Vol. 10; Issue: 8; August 2023
Website: www.ijrrjournal.com
Original Research Article *E-ISSN: 2349-9788; P-ISSN: 2454-2237*

The Effectiveness of Education with Audio Visual Media on Mother's Knowledge and Attitudes About Acute Hepatitis of Unknown Aetiology

Usnal Aini[1], Joserizal Serudji[2], Nur Afrainin Syah[2]

[1]Master Student of Midwifery Study Program, Medicine Faculty, Andalas University, Padang, Indonesia
[2]Lecturer of Midwifery Study Program, Medicine Faculty, Andalas University, Padang, Indonesia

Corresponding Author: Usnal Aini

DOI: https://doi.org/10.52403/ijrr.20230844

ABSTRACT

Background: Hepatitis is a disease characterized by inflammation of the liver. It can cause liver failure. Health education plays an important role as one of the promotive and preventive efforts of acute hepatitis by increasing mother's knowledge and attitudes. This study aims to determine the effectiveness of education with audio visual media on mother's knowledge and attitudes about acute hepatitis of unknown aetiology in Ulak Karang Selatan Area, Padang City.
Methods: This is a quasi-experimental study with non-equivalent control group design. This study was conducted in two Posyandu namely Posyandu Cinta Sehat 11 and Posyandu Cinta Sehat 16 which began in June 2022 to June 2023. Sample selection was carried out using consecutive sampling technique. The total sample was 35 people in each group.
Results: The results showed that there was a difference in the mean posttest of mother's knowledge between intervention group and control group ($p<0.001$). Mean gain of mother's knowledge in intervention group was significantly different from control group ($p<0.001$). There was a difference in the mean posttest of mother's attitude between intervention group and control group ($p<0.001$). Mean gain of mother's attitude in intervention group was significantly different from control group ($p<0.001$).
Conclusion: Education with audio visual media was proven effective in improving mother's knowledge and attitudes about acute hepatitis of unknown aetiology. Health workers at Ulak Karang Health Center can use audio visual media as a tool in providing effective health education to improve mother's knowledge and attitudes about acute hepatitis of unknown aetiology in their working area.

Keywords: [Acute Hepatitis, Attitudes, Audio Visual, Knowledge]

INTRODUCTION

Hepatitis is a disease characterized by liver inflammation. It undergoes an inflammatory process or necrosis of liver tissue caused by viral infections, drugs, toxins, metabolic disorders, or abnormalities in antibody system. Hepatitis infection caused by viruses is the most common cause of hepatitis disease. Hepatitis that lasts for less than 6 months is called acute hepatitis. Meanwhile, hepatitis that lasts for more than 6 months is called chronic hepatitis.[1] Acute hepatitis that occurs at this time is an unknown cause of liver inflammation.[2] According to the Head of Central Board Public Relations of Indonesian General Practitioners Association, acute hepatitis of unknown aetiology is a liver infection whose cause, including its mechanism or pathophysiology, is unknown.[3]
Since being officially published as an extraordinary event by WHO on April 15, 2022, the number of reported cases of acute hepatitis of unknown aetiology continues to grow. As of April 21, 2022, 169 cases were reported from 12 countries. The range of

cases occurred in children aged 1 month to 16 years. Clinical symptoms in identified cases are acute hepatitis with elevated liver enzymes, acute jaundice syndrome, and gastrointestinal symptoms (abdominal pain, diarrhea and vomiting). Most of the cases had no symptoms of fever.[2,4,5] In Indonesia, the earliest cases have been found in three pediatric patients who were treated at Cipto Mangunkusumo Hospital in Jakarta with symptoms similar to those described by WHO. The three patients died in different periods of time spanning the last two weeks to April 30, 2022. Furthermore, on May 11, 2022, Health Ministry of Indonesian Republic reported that it had found 18 suspected cases of acute hepatitis of unknown aetiology. Seven of 18 patients have died, but it has not been confirmed whether the cause of death was due to acute hepatitis of unknown aetiology or other factors.[4]

Health Ministry of Indonesian Republic, especially Directorate General of Disease Prevention and Control has issued Circular Letter Number: HK.02.02/C/2515/2022 concerning Vigilance against the Discovery of Acute Hepatitis of Unknown Aetiology Cases on April 27, 2022. One of the things that is conveyed to be followed up as an effort of vigilance and anticipation is to provide communication, information and education to the public regarding prevention efforts against this hepatitis disease.[4,6] The importance of education about acute hepatitis disease as one of the promotive and preventive efforts by providing health counseling to the community, in this case the main target is mothers. Midwives as health workers who interact directly with mothers play an important role in providing information to increase mother's knowledge.[7-9] One of the ways that can be taken to improve knowledge is education. A factor that plays an important role in the success of health education is the communication channel, which is a medium that can be an intermediary in transferring important health-related information.[10-12] The educational media developed in this study is audio visual media in the form of videos.

The results of HBsAg testing for pregnant women in Padang City in 2021 showed that of the 23 health centers in Padang City, Ulak Karang Public Health Center had the highest rate of HBsAg reactive cases at 1.85%.[13] Mothers in that area had a high risk of hepatitis transmission. Therefore, this study was conducted in two integrated healthcare centers in Ulak Karang Selatan Area. This study aims to determine the effectiveness of education with audio visual media on mother's knowledge and attitudes about acute hepatitis of unknown aetiology in Ulak Karang Selatan Area, Padang City.

MATERIALS & METHODS

Study Design and Sample Size

This is a quasi-experimental study with a non-equivalent control group design. The intervention group was given education with audio visual media about acute hepatitis of unknown aetiology and the control group was not given education. It was conducted at two integrated healthcare centers in Ulak Karang Selatan Area of Padang City, namely Posyandu Cinta Sehat 11 and Posyandu Cinta Sehat 16. It started from June 2022 to June 2023. The study population was all mothers in Ulak Karang Selatan Area of Padang City. The study sample was mothers who visited the integrated healthcare center in Ulak Karang Selatan Area of Padang City. Selection of the integrated healthcare center using simple random sampling technique each for audio visual media group and control group. Meanwhile, the sample selection was carried out using consecutive sampling technique. The inclusion criteria were mothers with children underfive (0-59 months) who visited the integrated healthcare center and never been given education about acute hepatitis of unknown aetiology before. Meanwhile, the exclusion criteria were mothers who were not willing to be study respondents and could not read or write. The total sample taken in this

study was 35 people in each audio-visual media group and control group.

STATISTICAL ANALYSIS

Bivariate analysis was used to test the hypothesis. Normality test was carried out first using the Kolmogorov-Smirnov test. If data were normally distributed, the independent sample t-test was used to determine the mean difference of mother's knowledge and attitudes between intervention group and control group. If data was not normally distributed, the Mann-Whitney test was used. The statistical test decision used a significant level if the p-value <0.05 was obtained, then H^0 was rejected, which means there was a difference. A mean different test of gain score was conducted to see the effectiveness of the intervention on increasing mother's knowledge and attitudes. Gain score was obtained by calculating the change in posttest score minus pretest score in intervention group and control group.

RESULT

The mean of mother's age in intervention group was 30.37 years ranged from 26 years to 35 years. The mean of mother's age in control group was not much different from intervention group, 30.43 years ranged from 26 years to 35 years. The Mann-Whitney test showed that there was no significant difference in the mean of mother's age between intervention group and control group (p=0.962) (Table 1).

Table 1: Mother's Age in Intervention Group and Control Group

Group	Mean±SD	Median	Min-Max	p-value
Intervention	30.37±2.624	30.0	26~35	0.962
Control	30.43±2.768	30.0	26~35	

Most mothers had a high school education both in intervention group (60.0%) and control group (48.6%). Most mothers worked as housewives both in intervention group (94.3%) and control group (91.4%). The Chi-Square test showed a p-value=0.226 on the education variable and a p-value=0.209 on the occupation variable. It means that mother's education and occupation were equivalent between intervention group and control group (Table 2).

Table 2: Mother's Education and Occupation in Intervention Group and Control Group

Variable	Intervention Group		Control Group		p-value
	n	%	n	%	
Education					
Primary School	7	20.0	5	14.3	0.226
Middle School	5	14.3	5	14.3	
High School	21	60.0	17	48.6	
College	2	5.7	8	22.9	
Total	35	100.0	35	100.0	
Occupation					
Housewife	33	94.3	32	91.4	0.209
Civil Servant	0	0.0	2	5.7	
Entrepreneur	2	5.7	1	2.9	
Total	35	100.0	35	100.0	

Table 3: Mother's Knowledge in Pretest and Posttest of Intervention Group and Control Group

Test	Group	n	Mean±SD	Median	Min-Max	p-value
Pretest	Intervention	35	10.37±2.414	10.00	6~15	0.429
	Control	35	9.91±2.393	10.00	4~14	
	Total	70				
Posttest	Intervention	35	17.69±1.952	18.00	14~20	<0.001
	Control	35	10.06±2.376	10.00	4~14	
	Total	70				

The pretest mean of mother's knowledge in intervention group (10.37) was not much different from control group (9.91). The median value in intervention group (10.00) was the same as control group (10.00). The pretest score in intervention group ranged

from 6 to 15. Likewise, the control group was not much different ranged from 4 to 14. The Independent sample t-test showed that there was no significant difference in the pretest mean of mother's knowledge between intervention group and control group (p=0.429). Meanwhile, the posttest mean of mother's knowledge in intervention group (17.69) was much higher than control group (10.06). The median value in intervention group (18.00) was also much higher than control group (10.00). The posttest scores in intervention group ranged from 14 to 20. While in control group only ranged from 4 to 14. The Mann-Whitney test showed that there was a significant difference in the posttest mean of mother's knowledge between intervention group and control group (p<0.001). Mother's knowledge after being given education with audio visual media in intervention group was significantly different from control group (Table 3).

Table 4: Gain Score of Mother's Knowledge in Intervention Group and Control Group

Group	n	Mean±SD	Median	Min-Max	p-value
Intervention	35	7.31±2.598	7.00	5~14	<0.001
Control	35	0.14±2.341	1.00	(-6) ~ 3	
Total	70				

The gain mean of mother's knowledge in intervention group (7.31) was much higher than control group (0.14). The median value of gain score in intervention group (7.00) was also much higher than control group (1.00). The gain score in intervention group ranged from 5 to 14. While in control group was very low ranged from (-6) to 3. The Mann-Whitney test results showed that there was a significant difference in the gain mean of mother's knowledge between intervention group and control group (p<0.001). The increase of mother's knowledge after being given education with audio visual media in intervention group was significantly different from control group (Table 4).

Table 5: Mother's Attitude in Pretest and Posttest of Intervention Group and Control Group

Test	Group	n	Mean±SD	Median	Min-Max	p-value
Pretest	Intervention	35	72.77±4.486	73.00	62~84	0.740
	Control	35	72.43±4.104	72.00	60~81	
	Total	70				
Posttest	Intervention	35	89.63±4.935	91.00	78~96	<0.001
	Control	35	71.86±4.067	72.00	61~79	
	Total	70				

The pretest mean of mother's attitude in intervention group (72.77) was not much different from control group (72.43). The median value in intervention group (73.00) was also not much different from control group (72.00). The pretest score in intervention group ranged from 62 to 84. Likewise, in control group was not much different ranged from 60 to 81. The Independent sample t-test showed that there was no significant difference in the pretest mean of mother's attitude between intervention group and control group (p=0.740). Meanwhile, the posttest mean of mother's attitude in intervention group (89.63) was much higher than control group (71.86). The median value in intervention group (91.00) was also much higher than control group (72.00). The posttest scores in intervention group ranged from 78 to 96. While in control group only ranged from 61 to 79. The Independent sample t-test showed that there was a significant difference in the posttest mean of mother's attitude between intervention group and control group (p<0.001). Mother's attitude after being given education with audio visual media in intervention group was significantly different from control group (Table 5).

Table 6: Gain Score of Mother's Attitude in Intervention Group and Control Group

Group	n	Mean Gain±SD	Median	Min-Max	p-value
Intervention	35	16.86±6.353	17.00	4~31	<0.001
Control	35	-0.57±2.187	0.00	(-8) ~ 2	
Total	70				

The gain mean of mother's attitude in intervention group (16.86) was much higher than control group (-0.57). The median value of gain score in intervention group (17.00) was also much higher than control group (0.00). The gain score in intervention group ranged from 4 to 31. While in control group was very low ranged from (-8) to 2. The Mann-Whitney test showed that there was a significant difference in the gain mean of mother's attitude between intervention group and control group ($p<0.001$). The increase of mother's attitude after being given education with audio visual media in intervention group was significantly different from control group (Table 6).

DISCUSSION

Mother's Age, Education and Occupation

The results showed that there was no significant difference in the mean of mother's age between intervention group and control group ($p=0.962$). Equality of mother's age means that both groups had the same opportunity. It could be one of the factors that influence the outcome of the study. Age affects a person's ability to catch and think. The increase of age will develop a person's mindset and ability to think and obtain knowledge. Nawangsari's study (2021) found that there was a relationship between age and knowledge of Covid-19 prevention ($p=0.013$). In Kolodziej's study (2019), it was stated that increasing age affects knowledge in supplement consumption. It indicated that age affects knowledge and awareness of health. Other studies also concluded that age and knowledge had a relationship with healthy living behavior.[14-16] The analysis also showed a p-value=0.226 on the education variable and a p-value=0.209 on the occupation variable. It was interpreted that both groups had the same opportunity. Knowledge itself is strongly influenced by education. Education level is related to the ability to absorb and receive health information and the ability to play an active role in health development. People who have higher education generally also have broad knowledge and insight. They can participate in overcoming health problems for themselves and their families. Work is also one of the factors that influence knowledge.[17] The characteristics of mothers, such as age, education and occupation were found to be equal between intervention group and control group. It would not be a confounding factor that could affect the results of this study.

Mother's Knowledge in Intervention Group and Control Group

The posttest mean of mother's knowledge between intervention group and control group was found significantly different ($p<0.001$). There was also a significant difference in the gain mean of mother's knowledge between intervention group and control group ($p<0.001$). The results of this study were in accordance with Green's theory which explains that knowledge is the initial factor of an expected behavior. Health knowledge will affect behavior as an intermediate impact of health education. Knowledge is the result of knowing and it is produced after people have sensed a certain object. Sensing occurs through five human senses, namely sight, hearing, smell, taste and touch. Most human knowledge is obtained through the eyes and ears. 35-55% of knowledge is obtained through hearing and sight. Without knowledge, a person has no basis for making decisions and determining actions on problems. Health education or counseling has a major influence on knowledge which will then change one's behavior. This can encourage individuals to improve individual habits and behavior in applying understanding about disease prevention.[18-20] The study from

Novianti & Afriyani (2022) showed that health education with audio visual media had a significant effect on knowledge (p<0.001). Health education with audio visual media was effective in increasing respondents' knowledge related to hand washing with soap. Study conducted by Pratiwi et al (2019) also found that in health promotion using audio visual media, respondents will quickly understand and concentrate more on health promotion. Movement of audio-visual media made the eyes concentrate on paying attention. Health promotion with audio visual media was more effective than other media such as leaflets and pamphlets. Leaflet media has weaknesses when compared to audio visual media. It only contains images and writing while audio visual media contains sound and moving images. The use of audio visual media was more effective in increasing respondents' knowledge.[21-23]

Mother's Attitude in Intervention Group and Control Group

The posttest mean of mother's attitude between intervention group and control group was found significantly different (p<0.001). There was also a significant difference in the gain mean of mother's attitude between intervention group and control group (p<0.001). Attitude is a closed reaction or response from a person to a stimulus or object. It can be concluded that the manifestation of attitude cannot be directly seen, but can only be interpreted first from closed behavior. Attitude clearly shows the connotation of the suitability of reactions to certain stimuli which in everyday life are emotional reactions to social stimuli. An attitude is not automatically realized in an action. To realize an attitude into a real action, supporting factors or a possible condition are needed, including facilities, support from other parties, for example from family, parents, peers and others. The process of attitude to change in individuals is influenced by the reception of a message, and how important and relevant the message is to the individual itself. Personal beliefs are also important factors that influence attitudes. If they believe that the action to be taken have a positive impact, then they will tend to take that action. Likewise, on the contrary, if they believe that the action to be taken have a negative impact, they will refuse to take that action. It is called behavior belief. In addition to personal beliefs (behavior belief), group beliefs also determine a person's actions. If they believe that their action will be approved by group or social environment, then they will do it. Conversely, if they believe that social environment will not support them, they do not intend to take an action.[18-20] The study from Ezdha et al (2023) showed that there was a significant difference between attitudes before and after being given health education with audio visual media (p<0.001). Likewise, Idris's study (2019) found that audio visual media had a significant effect on the attitudes of pregnant women (p=0.023). Study by Setianingsih et al (2023) also showed that there was an increase in the mean of respondent's attitude between before and after being given health counseling (p<0.001). Audio visual media were effective in improving respondents' attitudes.[24-26]

CONCLUSION

Education with audio visual media was effective in increasing mother's knowledge and attitudes about acute hepatitis of unknown aetiology in Ulak Karang Selatan Area. There was a significant difference in the gain mean of mother's knowledge and attitudes between intervention group and control group. The increase of mother's knowledge and attitudes after being given education with audio visual media in intervention group was significantly different from control group. Health workers at Ulak Karang Health Center can use audio visual media as tools in providing effective health education to improve mother's knowledge and attitudes about acute hepatitis of unknown aetiology.

Meanwhile, the Head of Ulak Karang Health Center can use the results of this study as a basis for making internal policies and program planning to increase early vigilance efforts against acute hepatitis of unknown aetiology.

Declaration by Authors

Ethical Approval: Approved
Acknowledgement: None
Source of Funding: None
Conflict of Interest: The authors declare no conflict of interest.

REFERENCES

1. Siswanto. Epidemiology of Hepatitis Disease. Samarinda: Mulawarman University Press; 2020.
2. CDC. General Overview. Accessed on October 21, 2022 from https://www.cdc.gov/ncird/investigatsion/hepatitis-unknown-cause/overview-what-to-know.html.
3. Putri NA. Overview of Students' Knowledge and Attitudes about the Prevention of Acute Hepatitis at SDN 03 Alai Padang. Padang: Andalas University; 2022.
4. Ministry of Health. Emerging Infections: Cases of Acute Hepatitis of Unknown Aetiology. Accessed on June 05, 2022 from https://infeksiemerging.kemkes.go.id/situasi-infeksi-emerging/kasus-hepatitis-akut-yang-tidak-diketahui-etiologinya-acute-hepatitis-of-unknown-aetiology.
5. WHO. Acute hepatitis of unknown aetiology – the United Kingdom of Great Britain and Northern Ireland. Accessed on October 21, 2022 from https://www.who.int/emergencies/diseaseoutbreak-news/item/2022-DON368.
6. Ferawati AL, Masrofi MD, Anggraeni NR. Literature Review: Acute Hepatitis. Jember: University of Muhammadiyah Jember; 2022.
7. Farras ET. Analysis of Factors Affecting Interest in Reporting SPT through E-filling (at WPOP at KPP Sukoharjo). ADIMAS Journal. 2021; 2: 8-18.
8. Moerdjoko S, et al. Environmental Health and Management at Cahaya Madani Banten Boarding School, Pandeglang Regency, Banten. ADIMAS Journal. 2021; 2(1): 26-35.
9. Retnaningtyas E, et al. Efforts to Increase Pregnant Women's Knowledge through Education on Nutritional Needs of Pregnant Women. ADIMAS Journal. 2022; 2(2): 19-24.
10. Duhita F, et al. Calendar Development as a Health Education Media for Pregnant Women with a Family Approach. JMM (Journal of Independent Society). 2022; 6(5).
11. Liao CH, Bercea S. Success factors of health promotion: Evaluation by DEMATEL and M-DEMATEL methods — A case study in a non-profit organization. PLoS ONE. 2021; 16(12): 1-19.
12. Ruck K, et al. Effective messages and media for employee health campaigns. Journal of Communication in Healthcare. 2017; 10(3): 180-187.
13. Padang City Health Office. Recapitulation of Triple Elimination Results in Pregnant Women in Padang City in 2021. Padang: Padang City Health Office; 2021.
14. Nawangsari H. Relationship between Individual Characteristics and Knowledge about Prevention of Coronavirus Disease 2019 in Pungging Mojokerto Sub-district. Sentani Nursing Journal. 2021; 4(1): 46-51.
15. Kołodziej G, et al. Knowledge concerning dietary supplements among general public. BioMed Research International. 2019.
16. Prihanti GS, et al. Factors affecting the level of households healthy living behavior in Poned X Health Center. Saintika Medika. 2018; 1(1): 7-14.
17. Yuswantina RY, et al. Relationship between Age and Education Level on Knowledge of Antibiotic Use in Sidorejo Kidul Village. Indonesian Journal of Pharmacy and Natural Product. 2019; 2(1).
18. Pakpahan M, et al. Health Promotion and Behavior. Medan: Yayasan Kita Menulis; 2021.
19. Oktya T. The Effect of IEC (Educational Information Communication) about Contraceptives in Pregnant Women Trimester III on the Participation of IUD Usage in Andalas Health Center. Andalas University; 2020.
20. Irwan. Ethics and Health Behavior. Yogyakarta: CV. Absolute Media; 2017.
21. Novianti E, Afriyani LD. Effectiveness of Health Education with Audio Visual Media

on Knowledge about Handwashing with Soap as an Effort to Prevent Covid-19 at Amzar Molinow Kindergarten, Kotamobagu City. Journal of Holistics and Health Sciences (JHHS). 2022; 4(2): 209-219.
22. Janah NM, Timiyatun E. Comparison of the Effectiveness of Health Education with Leaflet and Audio Visual Media in Improving Adolescent Knowledge about Breast Self-Examination. Integrated Nursing Journal. 2020; 2(2): 80-90.
23. Pratiwi AWE, Afriyani LD, Zulkarnain A. Differences in the Effectiveness of Health Education on Breast Self Examination using Leaflet Media and Audio Visual Media for Adolescent at NU Ungaran High School. Journal of Holistics and Health Sciences (JHHS). 2019; 1(1): 1-10.
24. Ezdha AUA, et al. The Effect of Health Education with Audiovisual on Knowledge and Attitudes of Students about Scabies in Islamic Boarding School. Human Care Journal. 2023; 8(1): 71-80.
25. Setianingsih F, Lestari Y, Astuti LPSY. Effectiveness of Cervical Cancer Counseling using Leaflet and Video Media on Motivation and Attitude to perform VIA Screening on TP-PKK in Sumbawa Regency. Health Journal. 2023; 11(1): 80-88.
26. Idris FP. Effectiveness of Audio Visual Media in increasing Early Breastfeeding Initiation Behavior in Pregnant Women at Tinggimoncong Area in 2019. Proceedings of the 2019 National Seminar: Multidisciplinary Synergy of Science and Technology. 2019.

How to cite this article: Usnal Aini, Joserizal Serudji, Nur Afrainin Syah. The effectiveness of education with audio visual media on mother's knowledge and attitudes about acute hepatitis of unknown Aetiology. *International Journal of Research and Review*. 2023; 10(8): 358-365. DOI: *https://doi.org/10.52403/ijrr.20230844*

******