

## Original Research Article

## The Effects Of Audio Visual Information And Leaflets Towards Increasing Knowledge, Mother's Demeanour On Cervical Cancer And Visual Inspection With Acetic Acid (Via) In Sudiang Health Center, Makassar

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**Abstract:** The purpose of the study was to determine the effect of Audio Visual Information and Leaflets on increasing knowledge, maternal attitudes about cervical cancer and the inspection of Visual Acetate (IVA) at the Sudiang City Makassar Health Center. The research method used Quasi Experimental with a non-randomized pre-test post-test group design. The research subjects were married mothers and had never done IVA / Pap smear examinations in Sudiang City Makassar Health Center in 2019. The selection of samples used a purposive sampling technique with a sample of 25 respondents for each audio visual group and leaflet group. Health education uses audio visual media and leaflets. Data was processed using Wilcoxon, and Mann-Whitney test. The results showed that health education using audio visual and leaflet information was able to provide an increase in changes in knowledge levels ( $p = 0.00$  and  $0.00$ ), attitudes ( $p = 0.00$  and  $0.00$ ), and visual acetic acid inspection measures ( $p = 0.00$  and  $0.00$ ) both before and after treatment. There are differences in knowledge, attitudes, and actions between the audio visual group and the leaflet group ( $p$  value =  $0.00$  for knowledge,  $p$  value =  $0.00$  for attitude and  $p$  value =  $0.00$  for action). So this study proves the use of effective audio visual media for health education activities in increasing knowledge, maternal attitudes about cervical cancer and visual acetic acid (IVA) inspection measures.

**Keywords:** : Health education, Action, IVA.

### INTRODUCTION

Cervical cancer is a type of malignant tumor that affects the surface layer (epithelium) of the cervix. This cancer can occur on these surface cells that experience multiplication and change properties not like normal cells. This cancer occurs in the cervix or cervix, an area in the female reproductive organ which is the entrance to the uterus, located between the uterus and vaginal intercourse. The incidence of cancer in the world enters a critical period where each year the incidence of cancer increases. There are many types of cancer in the world, one of which is cervical cancer. This cancer ranks fourth of all malignancies in women in the world after breast, colorectal and lung cancer (Global Burden of Disease Cancer Collaboration, 2015).

According to data from the World Health Organization (WHO) in 2015, around the world there were 14.1 million new cancers and 8.2 million cancer deaths and 32.6 million people living with cancer (within 5 years of diagnosis) and almost 87 % occurs in developing countries. Whereas in 2016 nearly 9 million people died from cervical cancer. The incidence of cervical cancer in Southeast Asia is 30-44.9 per 100,000 women each year (Wulandari, 2017). Based on IARC (International Agency for Research on Cancer) in 2016, it was found that there were 14,067,894 new cases of cancer and 8,201,575 deaths from cancer throughout the world. In Asia there were 312,990 cervical cancer cases (59%) and 50% had deaths (Siegel *et al.*, 2016).

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Until now cervical cancer is the leading cause of death in cancer in developing countries. The incidence of this disease is low in women under the age of 25 years, but the incidence increases in women aged 35 years to 40 years and reaches the point at the age of 50 years. At least every year around the world more than 260,000 deaths occur due to cervical cancer and 87% of them occur in developing countries, including Indonesia. It is estimated that every day 40-45 new cases appear and around 20-25 people die from cervical cancer (Sumantari, 2018).

Indonesia itself the incidence of cancer is still quite high. According to WHO, in Indonesia cervical cancer ranks second after breast cancer. About 20,928 new cases of cervical cancer and deaths from cervical cancer with a percentage of 10.3%. The incidence of cervical cancer in Indonesia is based on 2015 Ministry of Health data, estimated at 100 / 100,000 women per year (Ministry of Health, 2015).

In South Sulawesi the prevalence of cervical cancer is 0.8% with an estimated 3400 cases of cervical cancer (Ministry of Health 2013). In 2015, out of 5,321 women aged 30-50 years examined, 127 positive cases of IVA (Visual Acetic Acid) were found (2.39%). And in 2015 IVI examination coverage in Makassar City was 826 cases with women aged 30-50 years (Ministry of Health, 2016).

Sudiang Health Center is one of the community health center that provides Visual Acetate Acid (IVA) Inspection services. Based on the inspection data of Visual Acetic Acid (IVA) inspection at the Sudiang City Health Center in Makassar City, it is far from the expected target of around 99.6% which means that in a year there are 665 fertile age couples who must be examined for IVA, but the data obtained does not meet the achievement of targets expected by the government. In 2015 there were 147 people, found 1 case of positive IVA, in 2016 there were 376 people found 19 cases of IVA positive and suspected of cervical cancer as many as 8 people. In 2017 as many as 222 people with positive IVA 6 people and suspected cervical cancer 19 people, while in 2018 as many as 107 with positive IVA 1 person and suspected cervical cancer 2 people.

IVA Examination method is an easy, inexpensive and practical method. This examination is available at local health centers so that it is easily accessible by the community. The government expects this program to facilitate the public in screening or early detection so that it can reduce the increase in cervical cancer cases and reduce the mortality rate due to cervical cancer. Audio Visual is a media that provides information by relying on the senses of sight and hearing in capturing information that is obtained. In audio visual media displays motion and sound images

so that, able to provide a clearer picture to improve understanding.

According to the results of the study (Oktira *et al.*, 2013) showed that the audio-visual media had succeeded in arousing students' interest in learning arts and culture. Interest has aroused a sense of student independence so that students' active participation in the learning process also increases on its own. Audio-visual media not only produce effective learning methods in a shorter time, but what is received through audio-visual media is longer and better lives in memory. Audio-visual media make it easier for people to convey and receive lessons or information and can avoid misunderstandings. Widespread attention in the use of audio visual media has led to the holding of many scientific investigations regarding the place and value of audio-visual media in education (Meidiana *et al.*, 2018).

Leaflets are a medium for delivering health messages in the form of leaflets in the form of writing and images using the senses of sight and can be read repeatedly. According to the results of the study (Hertanto, 2010) showed that there was a significant difference between the knowledge of the leaflet group with controls obtained p value = 0.003, the attitude obtained p = 0.001, and the action obtained p = 0.001, so based on the Mann-Whitney test we could conclude the group of leaflets have effectiveness in changing self-medication behavior in diarrhea in PKK women in Nglawisan hamlet. Using the right audio visual and leaflets will facilitate the delivery and reception of information so that it can stimulate the message obtained to others. This study aims to determine the effect of audio visual and leaflets on increasing knowledge, maternal attitudes about cervical cancer and visual acetic acid (IVA) inspection measures.

## **METHODOLOGY**

### **Research Design**

The type of research used is quasy experiment using a non-randomized pre-test posttest group design. This research was conducted at the Sudiang City Health Center in Makassar.

### **Population and Samples**

The population studied were married mothers and had never done IVA / pap smear examinations visiting the Sudiang City Makassar Health Center. The sampling technique in this study was purposive sampling with inclusion criteria, namely married women and had never done an IVA / Pap Smear examination that visited the Sudiang City Makassar Health Center, mothers who were willing to be respondents and participated in the overall research series. The number of samples was 50 people consisting of 25 people for the audio visual group and 25 people for the leaflet group. The intervention was carried out on audio visual groups by giving videos about cervical

cancer and examination of Visual Acetate Acid (IVA) inspection, while the leaflet group provided leaflets about cervical cancer and inspection of Visual Acetate IVA Inspection.

**Method of Collecting Data**

Pretest was done by giving questionnaires to see knowledge, attitudes of mothers about cervical cancer and IVA action before being given an intervention, after that the intervention was given to the audio visual group and the intervention of leaflet groups. The first post test was carried out 1 week after the provision of audio visual intervention and leaflets were assessed for knowledge, attitudes and actions of IVA, while the second post test was conducted 3 weeks

after giving audio visual and leaflet interventions to see knowledge, maternal attitudes about cervical cancer and IVA settles in mother's mind or not.

**Data Analysis**

Characteristic data of samples were processed using SPSS 21, while for each independent variable (audio visual and leaflet information) and dependent variables (increased knowledge, maternal attitudes about cervical cancer and IVA action) using the Wilcoxon Signed Ranks Test due to data not normal distribution and Mann Withney statistical test to see which is more effective between audio visual or leaflet information in increasing knowledge, mother's attitude about cervical cancer and IVA action.

**RESULTS**

**Sample Characteristics**

**Table1. Characteristics of Respondents**

Characteristics of Respondents	Audio Visual Group		Leaflet group	
	N	%	N	%
Age Group (Yr)				
<30 years	12	48	12	48
30-39 years	8	32	6	24
>= 40 years	5	20	7	28
Total	25	100	25	100
Last education				
Junior high school	7	28	5	20
High school	18	72	20	80
Total	25	100	25	100
Work				
Not Work	25	100	23	92
Work	0	0	2	8
Total	25	100	25	100
Parity				
Primipara	7	28	2	12
Multipara	18	72	20	76
Grandmultipara	0	0	3	8
Total	25	100	25	100
Family Income (BPS)				
High	9	36	8	32
moderate	16	64	17	68
Total	25	100	25	100

Source: Primary Data, 2019

Table1. Shows the characteristics of the audio visual group respondents and leaflet groups based on age group, recent education, employment, parity and income. Audio visual and leaflet group respondents were dominated by the same age group, which was <30 years old at 48%. The majority of education is high school which is equal to 72%, the most work is housewives which is equal to 100%, the majority of

respondents are dominated by mothers with multiparous parity of 72% and the majority of income is less than 64%. Whereas in the leaflet group involved 80% of respondents with a majority of high school education, the most jobs were housewives which amounted to 92%, the majority of respondents were dominated by mothers with multiparous parity of 76% and the majority were less income 68%.

**Descriptive Analysis of Knowledge, Attitudes and Behavior**

**Table2. Results of Descriptive Analysis of the Audio Visual Group**

<b>Variable</b>	<b>n</b>	<b>Mean</b>	<b>Std.Deviation</b>
Pre Test of Knowledge About Cervical Cancer	25	61.60	7.176
Post Test 1 Knowledge about Cervical Cancer	25	70.60	7.681
Knowledge Post Test 2 About Cervical Cancer	25	81.60	7.868
Pre Test Knowledge About IVA	25	61.85	8.307
Post Test 1 Knowledge About IVA	25	77.59	8.137
Post Test 2 Knowledge About IVA	25	86.13	7.179
Attitude Pre Test	25	68.03	6.029
Post Test 1 Attitude	25	76.51	5.379
Post Test 2 Attitude	25	81.08	4.521
Pre Test Action	25	69.60	10.198
Post Test 1 Actions	25	90.40	10.198
Post Test 2 Actions	25	100.00	.000
Change of Knowledge About Cervical Cancer	25	20.00	3.818
Knowledge Change About IVA	25	24.27	6.071
Change of attitude	25	13.04	3.689
Change of Action	25	30.40	10.198

Source: Primary Data, 2019

Table 2. shows the variables of knowledge, attitudes and behavior for the audio visual group, it is known that from pre-test, post-test 1 to post-test 2, the average knowledge, attitudes, and behavior of respondents experienced a very significant increase.

**Table3. Results of Descriptive Analysis of Leaflet Groups**

<b>Variabel</b>	<b>n</b>	<b>Mean</b>	<b>Std.Deviation</b>
Pre Test of Knowledge About Cervical Cancer	25	60.80	7.314
Post Test 1 Knowledge about Cervical Cancer	25	68.20	6.103
Knowledge Post Test 2 About Cervical Cancer	25	76.00	5.204
Pre Test Knowledge About IVA	25	69.59	11.400
Post Test 1 Knowledge About IVA	25	77.59	6.050
Post Test 2 Knowledge About IVA	25	81.32	5.772
Attitude Pre Test	25	71.69	4.477
Post Test 1 Attitude	25	74.17	4.396
Post Test 2 Attitude	25	75.12	4.740
Pre Test Action	25	60.80	4.000
Post Test 1 Actions	25	68.80	10.132
Post Test 2 Actions	25	72.80	14.000
Change of Knowledge About Cervical Cancer	25	15.20	5.299
Knowledge Change About IVA	25	11.73	7.014
Change of attitude	25	3.43	3.037
Change of Action	25	12.00	14.142

Source: Primary Data, 2019

Table 3. shows the variables of knowledge, attitudes and behavior for the leaflet group, it is known that from pre-test, post-test 1 to post-test 2, the average knowledge, attitudes, and behavior of respondents increased.

**Bivariate Analysis**

**Table4. Comparison of Average Knowledge, Mother's Attitudes About Cervical Cancer and Visual Acetate Acid (IVA) Inspection Before Intervention Between Audio Visual Groups and Leaflet Groups**

Variable	Group	Time	n	Mean	SD	P*
Average Comparison of Knowledge About Cervical Cancer Before After Intervention in Audio Visual Groups	Audio Visual	Sebelum	25	61,60	7,1	.000
		Sesudah	25	81,60	7,8	
Average Knowledge Comparison of IVA Examinations Before After Intervention with Audio Visual Groups	Audio Visual	Sebelum	25	61,85	8,3	.000
		Sesudah	25	86,13	7,1	
Comparison of the Average Attitudes About Cervical Cancer and IVA Examination Before After Intervention in the Audio Visual Group	Audio Visual	Sebelum	25	68,03	6,0	.000
		Sesudah	25	81,08	4,5	
Average Comparison of IVA Actions Before After Intervention in Audio Visual Groups	Audio Visual	Sebelum	25	69,60	10,1	.000
		Sesudah	25	100,00	,00	
Average Comparison of Knowledge About Cervical Cancer Before With Intervention in Leaflet Groups	Leaflet	Sebelum	25	60,80	7,3	.000
		Sesudah	25	76,00	5,2	
Average Knowledge Comparison of IVA Examinations Before After Intervention in Leaflet Groups	Leaflet	Sebelum	25	69,59	11,4	.000
		Sesudah	25	81,32	5,7	
Comparison of the Average Attitudes About Cervical Cancer and IVA Examination Before After Intervention in Leaflet Groups	Leaflet	Sebelum	25	71,69	4,4	.000
		Sesudah	25	75,12	4,7	
Average Comparison of IVA Actions Before After Intervention in Leaflet Groups	Leaflet	Sebelum	25	60,80	4,0	.001
		Sesudah	25	72,80	14,0	

Source: Primary Data, 2019

\* Test the Wilcoxon Signed Ranks Test

Table 4. Shows that health education using audio visual and leaflet information is able to provide an increase in changes in the level of knowledge (p =

0.00 and 0.00), attitudes (p = 0.00 and 0.00), and visual inspection of acid acetate (p = 0.00 and 0.00) both before and after treatment.

**Table5. Comparison of Average Changes in Knowledge, Attitudes of Mothers About Cervical Cancer and Visual Inspection of Acetic Acid (IVA) Between Audio Visual Groups and Leaflet Groups.**

Variable	Group	n	Mean	SD	P*
Average Comparison of Changes in Knowledge About Cervical Cancer Between Audio Visual Groups and Leaflet Groups	Audio Visual	25	20,00	3,8	.002
	Leaflet	25	15,20	5,2	
Average Comparison of Knowledge Changes About IVA Examination Between Audio Visual Groups and Leaflet Groups	Audio Visual	25	24,27	6,0	.000
	Leaflet	25	11,73	7,0	
Comparison of the Average Changes in Attitudes About Cervical Cancer and IVA Examination Between Audio Visual Groups and Leaflet Groups	Audio Visual	25	13,04	3,6	.000
	Leaflet	25	3,43	3,0	
Average Comparison of Changes in IVA Action Between Audio Visual Groups and Leaflet Groups	Audio Visual	25	30,40	10,1	.000
	Leaflet	25	12,00	14,1	

Source: Primary Data, 2019

\* Mann Whitney Test

Table 5. Shows there are differences in knowledge, attitudes, and actions between audio visual groups and leaflet groups (p value = 0.00 for knowledge, p value = 0.00 for attitudes and p values = 0.00 for action). So this study proves the use of effective audio visual media for health education activities in increasing knowledge, maternal attitudes about cervical cancer and visual acetic acid (IVA) inspection measures.

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**DISCUSSION**

In this study, it can be seen that there are significant differences before and after the provision of significant audio-visual and leaflet information on knowledge, attitudes and actions of IVA in the audio visual and leaflet groups, and also there are differences

Knowledge is the result of human sensation, or the result of knowing humans through their senses, both eyes, nose, ears and so on. The process of the emergence of knowledge from sensing is greatly influenced by the sense of hearing and sense of sight. Knowledge can increase or increase with the presence of information by using various kinds of media, namely print and electronic media. The print media included posters, leaflets, brochures, magazines, newspapers,

stickers and pamphlets, while electronic media for example: television, radio and tape recorders, vcd, videos (Fauziah *et al.*, 2017). In this study it can be seen that there is an influence of audio visual information and leaflets on knowledge of cervical cancer and Visual Acetate Acid (IVA) Inspection, and also there are differences in knowledge about cervical cancer and Visual Acetate (IVA) Inspection between audio visual groups and leaflet groups, so this study proves the use of audio visual media is effective compared to leaflets. Studies in the city of Kendari showed that there was an increase in respondents' knowledge before and after counseling with audio-visual media about the prevention of gastritis with a greater difference. This also happened in the leaflet group, where the results of the pre-test and post-test showed that there was an increase in respondents' knowledge before and after giving leaflet media counseling about the prevention of gastritis with smaller differences, while the results of differences in the level of knowledge between the audio visual group and leaflet groups showed differences in respondents' knowledge about the prevention of gastritis after counseling with audio-visual media and leaflet media meant that audio-visual media was effective compared to leaflet media (Putri *et al.*, 2017).

Attitude is a general evaluation made by humans of themselves, others, objects or issues (Azwar, 2010). The attitude is said to be an evaluative response, which will only arise if the individual is faced with a stimulus that requires a reaction. Attitudes can be a knowledge, but a tendency to act in accordance with that knowledge (Rahayu *et al.*, 2014). In this study it can be seen that there is influence of audio visual and leaflet information on attitudes about cervical cancer and Visual Acetate Acid (IVA) Inspection, and also there are differences in attitudes about cervical cancer and Visual Acetic Acid (IVA) Inspection between audio visual groups and leaflet groups, so this study proves the use of audio visual media is effective compared to leaflets.

Studies in the city of Kendari showed that there was an increase in respondents' attitudes before and after counseling with audio-visual media about prevention of gastritis. This also happened in the leaflet group, where the results of the pre-test and post-test showed that there was an increase in the attitude of respondents before and after counseling with leaflet media about the prevention of gastritis. Can be interpreted that the two media can increase the attitude of respondents. While the differences in the results of respondents' attitudes regarding the prevention of gastritis in the audio visual group and leaflets with  $p = 0.02$  or  $p$  value  $<0.05$ . This was statistically significant so that it was found that counseling of audio-visual media was effective against the respondent's attitude about the prevention of gastritis to improve health attitudes regarding prevention of gastritis disease compared to leaflet media (Putri *et al.*, 2017).

This is in line with previous research, namely the effectiveness of audio-visual media on the management of infants with diarrhea. The results of the study showed that there was a significant difference in knowledge and attitude after counseling between controls and interventions (knowledge:  $p = 0.01$ ;  $\alpha = 0.05$ ; attitude:  $p = 0.036$ ;  $\alpha = 0.05$ . Researchers recommended the use of audio visual media in activities counseling in an effort to improve maternal knowledge and attitudes (Kapti *et al.*, 2013; Gubrium *et al.*, 2014).

Another study that is in line is the effect of nutrition training on the level of knowledge and attitudes with independent sample t-test  $p = 0.013$  for knowledge and  $p = 0.001$  for attitudes ( $p < 0.05$ ). It can be concluded that there is an effect of nutrition training with Roleplay and audiovisual methods on the level of knowledge about nutrition (Hidayati & Jati, 2016). Behavior is an action or activity of the person himself who has a very broad range of meanings, among others: talking, walking, crying, laughing, working, studying, reading, writing and so on. From this description, human behavior is all human activities or activities, both directly observed, and which cannot be observed by outsiders (Notoatmodjo, 2014). In this study, it can be seen that there is the influence of audio visual and leaflet information on Visual Acetate Acid (IVA) Inspection, and there are also differences in Visual Acetate Acid (IVA) Inspection between audio visual groups and leaflet groups, so this study proves the use of audio visual media effective compared to leaflets.

Studies in the city of Kendari showed that there was an increase in respondents' attitudes before and after being given audio-visual media counseling about the prevention of gastritis with a greater difference. This also happened in the leaflet group, where the results of the pre-test and post-test showed that there was an increase in respondent's actions before and after giving leaflet media counseling about the prevention of gastritis with smaller differences, but both media could improve the behavior of respondents after counseling. While the differences in the results of respondent's actions regarding the prevention of gastritis in the audio visual group and leaflets with  $p = 0.04$  or  $p$  value  $<0.05$ . This was statistically significant so that it was found that counseling on audio-visual media was effective against respondent's actions about prevention of gastritis to improve health behavior regarding prevention of gastritis compared to leaflet media (Putri *et al.*, 2013).

This is in line with previous studies stating the results of this study can be concluded that there is an effect of health education with audio visual media on the knowledge, attitudes and actions of mothers in ARI treatment in infants in Lebijaga Village, Ngada Regency. This audio visual media can be used by nurses as a good media for counseling at Posyandu (Wea *et al.*, 2014).

The results of previous studies also showed that there were differences in the behavior of respondents before being given health education using audiovisual media with after being given health education using audiovisual media. After being given health education using audiovisual media the respondent's behavior towards preventing filariasis was higher than before being given health education using audiovisual media with a p value  $(0.00) < \alpha (0.05)$ , then  $H_0$  was rejected. It can be concluded that health education uses effective audiovisual media to increase knowledge, attitudes and actions of the community (Santri, 2014; Adi, *et al.*, 2018).

## CONCLUSION

We conclude that health education using audio visual and leaflet information is able to provide an increase in changes in the level of knowledge, attitudes, and actions of Visual Acetate Acid (IVA) Inspection both before and after intervention. And there are also differences in knowledge, attitudes, and actions between audio-visual groups and leaflet groups on knowledge, attitudes and actions. This study proves the use of effective audio visual media for health education activities in increasing knowledge, maternal attitudes about cervical cancer and visual acetic acid (IVA) inspection measures.

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