RESEARCH
www.commprac.com
ISSN 1462 2815

THE EFFECT OF AUDIO-VISUAL MEDIA ON THE BEHAVIOR GIVING TUBERCULOSIS PREVENTION THERAPY TO TODDLERS IN MAJENE, INDONESIA

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DOI: 10.5281/zenodo.11635037

Abstract

Treatment of latent tuberculosis (TB) infection in children is necessary due to the heightened risk of progression from latent TB to active TB in children under the age of 5. The objective of this study is to examine the impact of health promotion using audio-visual media and pamphlets on the behavior of administering TPT to children in Majene Regency. This study used a quasi-experimental research design with a pre-test and post-test control group. The intervention group employed audio-visual media and counseling, whereas the control group utilized leaflet media. Significant disparities in knowledge, attitudes, and behaviors were seen before and after the intervention in the practice of administering TPT to toddlers, both among the intervention group and the control group ($p < 0.05$). There were significant disparities in knowledge and attitudes on the administration of TPT to toddlers between the experimental group and the control group ($p < 0.05$). However, there was no significant difference in the actual practice of administering TPT to toddlers between the intervention group and the control group ($p > 0.05$). The utilization of audio-visual mediums and booklets for health promotion has a significant impact on modifying the behavior of administering TPT to toddlers.

Keywords: TPT, Audiovisual, Leaflets, Knowledge, Attitude, Action.

1. INTRODUCTION

Every year, tens of millions of children are exposed to Mycobacterium [1,2,3,] and TB remains one of the main causes of illness and mortality in children [4]. Historically, childhood tuberculosis has occurred largely without adequate research, and its history remains poorly understood [5]. As a result, there is much doubt about how effective public health programs are at detecting and preventing tuberculosis in exposed children [6,7,8]. Geographically, in 2024 the majority of TB cases will be in the Southeast Asia region (45%). Eight countries including Indonesia accounted for two-thirds of the total TB cases, namely India (28%), Indonesia (9.2%), China (7.4%), Philippines (7.0%), Pakistan (5.8%), Nigeria (4.4%), Bangladesh (3.6%) and the Democratic Republic of Congo (2.9%). The highest burden is in adult men 56.5% of all TB cases, adult women 32.5% and children 11% [9]. Global TB Report data, from 2020 to 2022 there was an increase in the number of TB cases, where in 2020 there were 393,329 cases, in 2021 it increased to 443,235 cases and in 2022 it became 661,784 cases [10]. Children who come into contact with adult TB sufferers are at very high risk of contracting TB infection. Children become infected with TB after being exposed to adult TB sufferers who are often in the same room (home, school, daycare, etc.) [11]. This is in line with the 3.5 times higher risk of TB infection in children who are in contact with TB adults at home compared to those who are not in contact [12,13,14]. The source

of infection in children is mostly adults who transmit it in the immediate environment [15]. Research results by Halim [16] stated that children under 5 years old (toddlers) have a high risk of contracting TB due to immature cellular immunity in toddlers. This is what causes toddlers to be at greater risk of progression from infection or what is known as Latent Tuberculosis Infection to becoming TB disease. Therefore, toddlers who are in household contact with TB sufferers need to be given TPT [17]. Giving TPT for 6 (six) months or more has a high level of non-compliance [18]. The implementation of the TPT program in the Majene Regency is problematic. Apart from the fact that TPT achievement is still low, there is also a very large gap in the achievement of TPT provision in several health centers. One of the factors influencing the provision of tuberculosis prevention therapy is behavior [19]. The form of health promotion that can be carried out is through health education about preventing the transmission of pulmonary tuberculosis in families using effective health promotion media, namely through audio-visual media [20]. Audio Visual is a medium for conveying messages audio and visual [21,22]. Based on research conducted by Ruben [23], it was found that health education using audio-visual media was more effective in providing information on preventing pulmonary tuberculosis. In line with research conducted by Putri [24], it was found that leaflet and video media had an influence in increasing the knowledge and attitude of TOSS TB in the community, where video media was the most effective media. The fact that the majority of people reject TPT is proven by the gap in the achievement of providing TPT in each TPT recipient in Majene Regency [25], so it is necessary to conduct research on "the effect of audio-visual media on the behavior giving tuberculosis prevention therapy to toddlers in Majene, Indonesia.

2. METHODS

2.1 Research Types and Designs

The type of research used is quasi-experiment or quasi-experiment with a pre-test post-test control group design aimed at assessing the effect of a particular treatment on a variable. Researchers involved two groups of subjects who were tested pre-test and post-test. The first measurement (pre test) was carried out on the experimental group and control group, after that the experimental group was given treatment with an audio-visual explanation about giving TPT to toddlers and the control group was given leaflets. Then a second measurement (post test) was carried out in the fifth week for each group.

Table 1: Pre-test and post-test research design

Subject	Pretest	Intervention	Posttest
Intervention Group	O_1	X_1	O_2
Control Group	O_3	X_2	O_4

Information :

O_1 : Initial test of knowledge, attitudes and actions of the intervention group

O_2 : Final test of knowledge, attitudes and actions of the intervention group

O_3 : Initial test of knowledge, attitudes and actions of the control group

O_4 : Final test of knowledge, attitudes and actions of the control group

X_1 : Health education intervention using audio visual media intervention group

X_2 : Control group media leaflet distribution intervention

2.2 Ethical Aspects

Ethical permission has been obtained from the ethics committee of the Faculty of Public Health, Hasanuddin University. All subjects provided informed consent before being given treatment

2.3 Sampling Technique

Population estimation can be performed using the Lemeshow (1990) formula [23], as follows:

$$n = \frac{2\,\sigma^2\,(Z_{1-\alpha} + Z_{1-\beta})^2}{(\mu_1 - \mu_2)^2} \qquad (1)$$

Information :

n = Estimated sample size

σ = standard deviation (4.04)

$Z_{1-\alpha}$ = Z value at 95% confidence level (1.96)

$Z_{1-\beta}$ = Z value at 80% test strength (0.84)

$\mu_1 - \mu_2$ = difference in average attitude between the two interventions done.

Difference between the mean value of the experimental group and the mean of the control group in previous research [22] mean *post-test* value knowledge in the experimental group was 10.87, and the mean *pre-test* knowledge score in the experimental group was 8.07 (10,87 - 8,07 = 2,8).

So :

$$n = \frac{2\,(4{,}04)^2\,(1{,}96 + 0{,}84)^2}{(10{,}87 - 8{,}07)^2}$$

$$n = \frac{255{,}9227}{7{,}84}$$

$n = 32{,}6432$ rounded to 33 samples

A total of 33 individuals were the minimal number of samples obtained. To account for potential sample attrition, the researcher augmented the sample size by including additional subjects, employing the following formula [25] :

$$n' = \frac{n}{1-f} \qquad (2)$$

Information:

n: Number of samples calculated

f: Estimated *dropout proportion* (10%)

Is known :

Drop out proportion 10%

$$n' = \frac{n}{1-f} = \frac{33}{1-0{,}1} = \frac{33}{0{,}9} = 36{,}6 \text{ rounded up to } 37 \text{ samples}$$

In this study, the required number of samples was 37 respondents in the intervention group and 37 in the control group, resulting in a total sample size of 74.

The research employed a proportional stratified random sampling technique. Proportional stratified random sampling involves creating a sample that is made up of smaller sub-samples. The distribution of these sub-samples is based on the distribution of the smaller sub-populations. A proportionate sample refers to a population that is evenly distributed among sub-sub-populations or segments of a population or geographic area. In this case, each sub-sub-population must be represented by a sample [26].

The data were examined using the Excel software and the SPSS version 21 program. The data analysis was conducted using two methods: univariate analysis and bivariate analysis. The bivariate analysis involved the use of the *Wilcoxon Signed Ranks test* and the *Mann-Whitney U test* [27].

3. RESULT

Table 2: Frequency Distribution of Respondents Influence of Health Promotion Through Audio-visual Media and Leaflets Against Behavior of Giving TPT to Toddlers Based on Knowledge Level

Knowledge (Scor: 10)										
Group	n	*Pre-test*				*Post-test*				Mean Difference
		Min	Max	Mean	SD	Min	Max	Mean	SD	
Intervention	37	2	7	4.54	1.169	4	8	6.27	1.239	1.73
Control	37	2	7	4.32	1.156	2	7	5.08	1.320	0.76

Source: Primary Data, 2024

Table 2 shows the measurement results for the total knowledge variable score of 10. In the intervention group, the minimum score at the pretest was 2, the maximum was 7 with a mean score of 4.54, and at the posttest, the minimum score was 4, and the maximum score was 8 with a mean score of 6.27. The mean difference in the posttest-pretest knowledge variable is 1.73. Meanwhile, the measurement results in the control group had a minimum value at the pretest of 2, a maximum of 7 with a mean value of 4.32, and a minimum value of 2 at the posttest, a maximum of 7 with a mean value of 5.08. The mean difference in the posttest-pretest knowledge variable is 0.76.

Table 3: Frequency Distribution of Respondents Influence of Health Promotion Through Audio-visual Media and Leaflet Media Against Behavior of Giving TPT to Toddlers Based on Attitude

Attitude (Scor: 32)										
Group	n	*Pre-test*				*Post-test*				Mean Difference
		Min	Max	Mean	SD	Min	Max	Mean	SD	
Intervention	37	16	28	21.24	3.303	19	31	28.22	3.637	6.98
Control	37	15	27	20.95	2.808	18	31	24.51	3.885	3.56

Source: Primary Data, 2024

Table 3 shows that the measurement results for the attitude variable have a total score of 32. In the intervention group, the minimum score at the pretest is 16, the maximum is 28 with a mean value of 21.24, and at the posttest, the minimum score is 19, and the maximum is 31 with a mean value of 28.22. The mean difference in the posttest-pretest knowledge variable is 6.98. Meanwhile, the measurement results in the control group had a minimum score at the pretest of 15, a maximum of 27 with a mean score

of 20.95, and a minimum score of 18 for the posttest, a maximum of 31 with a mean score of 24.51. The mean difference in the posttest-pretest knowledge variable is 3.56.

Table 4: Frequency Distribution of Respondents Influence of Health Promotion Through Audio-visual Media and Leaflet Media Against Behavior of Giving TPT to Toddlers Based on Actions

Action (Scor: 8)										
Group	n	*Pre-test*				*Post-test*				Mean Difference
		Min	Max	Mean	SD	Min	Max	Mean	SD	
Intervention	37	2	7	4.32	1.355	3	7	6.03	1.280	1.71
Control	37	2	7	4.11	1.242	3	8	5.73	1.694	1.62

Source: Primary Data, 2024

Table 4 shows that the measurement results for the action variable have a total score of 8. In the intervention group, the minimum score at the pretest is 2, the maximum is 7 with a mean value of 4.32, and at the post-test, the minimum score is 3, and the maximum is 7 with a mean value of 6.03. The mean difference in the posttest-pretest knowledge variable is 1.71. Meanwhile, the measurement results in the control group had a minimum score at the pretest of 2, a maximum of 7 with a mean score of 4.11, and a minimum score of 3 for the posttest, a maximum of 8 with a mean score of 5.73. The mean difference in the posttest-pretest knowledge variable is 1.62.

Table 5: Analysis of Differences in Knowledge of Mothers of Toddlers Before and After Health Promotion Using Audio-visual Media

Audio-visual Media		n	*Mean Rank*	*Sum of Ranks*	*P*
Pos test – Pre test	*Negative Ranks*	0	0.00	0.00	0.000
	Positive Ranks	32	16.50	528.00	

Source: Primary Data, 2024

Table 5 shows that the negative ranks or the difference between the pre-test and post-test are 0 for both the N value, mean rank, and sum of ranks. This value of 0 indicates that there is no decrease (reduction) from the pre-test value to the post-test value. Positive ranks or the positive difference between the pre-test and post-test, there are 32 positive data, which means that 32 respondents experienced an increase from the pre-test score to the post-test score, the mean rank or average increase was 16.50, while the number of positive ranks or sum of ranks is 528.00. The results of the analysis show a p-value=0.000 (p-value<0.05), which means there is a difference in mothers' knowledge before and after health promotion using audio-visual media.

Table 6: Analysis of Differences in Knowledge of Mothers of Toddlers Before and After Health Promotion Using Leaflet Media

Leaflet Media		n	Mean Rank	Sum of Ranks	*p*
Pos test – Pre test	Negative Ranks	2	7.50	15.00	0.000
	Positive Ranks	21	12.43	261.00	

Source: Primary Data, 2024

The results of the analysis using the Wilcoxon Rank Test in Table 16 show that in negative ranks or the difference between the pre-test and post-test, there are 2 negative data, which means that 2 respondents experienced a decrease from the pre-test value to the post-test value, the mean rank or average - The average decrease was 7.50, while the sum of ranks was 15.00. Positive ranks or the positive difference

between the pre-test and post-test contained 21 positive data, which means that 21 respondents experienced an increase from the pre-test score to the post-test score, the mean rank or average increase was 12.43, while the sum of ranks was 261.00. The results of the analysis show a p-value=0.000 (p-value<0.05), which means there is a difference in mothers' knowledge before and after health promotion using leaflet media.

Table 7: Analysis of the Differences between Audio-visual Media and Leaflet Media on the Knowledge of Mothers of Toddlers

Variable	Mean Rank	*p*
Audio-visual	46.24	0.000
Leaflet	28.76	

Source: Primary Data, 2024

The results of the analysis using the Mann-Whitney U Test in Table 17 show a p-value = 0.000 (p-value <0.05) which means there is a difference between audio-visual media and leaflet media in increasing knowledge about the behavior of giving TPT to toddlers.

Table 8: Analysis of Differences in the Attitudes of Mothers of Toddlers Before and After Health Promotion Using Audio-visual Media

Audio-visual Media		n	Mean Rank	Sum Of Ranks	*p*
Pos test – Pre test	Negative Ranks	1	1.50	1.50	0.000
	Positive Ranks	35	18.99	664.50	

Source: Primary Data, 2024

The results of the analysis using the Wilcoxon Rank Test in Table 18 show that in negative ranks or the difference between the pre-test and post-test, there is 1 negative data, which means that 1 respondent experienced a decrease from the pre-test value to the post-test value, the mean rank or average - The average decrease was 1.50, while the sum of ranks was 1.50. Positive ranks or the positive difference between the pre-test and post-test, there are 35 positive data, which means that 35 respondents experienced an increase from the pre-test score to the post-test score, the mean rank or average increase was 18.99, while the sum of ranks was 18.99. 664.50. The results of the analysis show a p-value=0.000 (p-value<0.05), which means there is a difference in the mother's attitude before and after health promotion using audio-visual media.

Table 9: Analysis of Differences in the Attitudes of Mothers of Toddlers Before and After Health Promotion Using Leaflet Media

Media Leaflet		n	Mean Rank	Sum Of Ranks	*p*
Pos test – Pre test	Negative Ranks	4	4.88	19.50	0.000
	Positive Ranks	28	18.16	508.50	

Source: Primary Data, 2024

The results of the analysis using the Wilcoxon Rank Test in Table 19 show that in negative ranks or the difference between the pre-test and post-test, there are 4 negative data, which means that 4 respondents experienced a decrease from the pre-test value to the post-test value, the mean rank or average - The average decrease was 4.88, while the sum of ranks was 19.50. Positive ranks or the positive difference between the pre-test and post-test, there are 28 positive data, which means that 28

respondents experienced an increase from the pre-test score to the post-test score, the mean rank or average increase was 18.16, while the sum of ranks was 18.16. 508.00. The results of the analysis show a p-value=0.000 (p-value<0.05), which means there is a difference in the mother's attitude before and after health promotion using leaflet media.

Table 10: Analysis of the Differences between Audio-visual Media and Leaflet Media on the Attitudes of Mothers of Toddlers

Variable	Mean Rank	*p*
Audio-visual	47.59	0.000
Leaflet	27.41	

Source: Primary Data, 2024

The results of the analysis using the Mann-Whitney U Test in Table 20 show a p-value = 0.000 (p-value <0.05) which means there is a difference between audio-visual media and leaflet media in changing attitudes regarding the behavior of giving TPT to toddlers.

Table 11: Analysis of Differences in Actions of Mothers of Toddlers Before and After Health Promotion Using Audio-visual Media

Audio-visual Media		n	Mean Rank	Sum Of Ranks	*p*
Pos test – Pre test	Negative Ranks	2	9.50	19.00	0.000
	Positive Ranks	29	16.45	477.00	

Source: Primary Data, 2024

The results of the analysis using the Wilcoxon Rank Test in Table 21 show that in negative ranks or the difference between the pre-test and post-test, there are 2 negative data, which means that 2 respondents experienced a decrease from the pre-test value to the post-test value, the mean rank or average - The average decrease was 9.50, while the sum of ranks was 19.00. Positive ranks or the positive difference between the pre-test and post-test, there are 29 positive data, which means that 29 respondents experienced an increase from the pre-test score to the post-test score, the mean rank or average increase was 16.45, while the sum of ranks was 16.45. 477.00. The results of the analysis show a p-value=0.000 (p-value<0.05), which means there is a difference in mothers' actions before and after health promotion using audio-visual media.

Table 12: Analysis of Differences in Actions of Mothers of Toddlers Before and After Health Promotion Using Leaflet Media

Leaflet Media		n	Mean Rank	Sum Of Ranks	*p*
Pos test – Pre test	Negative Ranks	0	0.00	0.00	0.000
	Positive Ranks	27	14.00	378.00	

Source: Primary Data, 2024

The results of the analysis using the Wilcoxon Rank Test in Table 22 show that the negative ranks or the difference between the pre-test and post-test are 0 for both the N value, mean rank, and sum of ranks. This value of 0 indicates that there is no decrease (reduction) from the pre-test value to the post-test value. Positive ranks or the positive difference between the pre-test and post-test, there are 27 positive data, which means that 27 respondents experienced an increase from the pre-test score to the post-test score, the mean rank or average increase was 14.00, while the number

of positive ranks or sum of ranks is 378.00. The results of the analysis show a p-value=0.000 (p-value<0.05), which means there is a difference in mothers' knowledge before and after health promotion using leaflet media.

Table 13: Analysis of the Differences between Audio Visual Media and Leaflets on the Actions of Mothers of Toddlers

Variable	Mean Rank	*p*
Audio-visual	38.55	0.655
Leaflet	36.45	

Source: Primary Data, 2024

The results of the analysis using the Mann-Whitney U Test in Table 23 show a p-value = 0.655 (p-value> 0.05) which means there is no difference between audio-visual media and leaflet media in changing actions regarding the behavior of giving TPT to toddlers.

4. DISCUSSION

4.1 Knowledge

Advances in digital communication technology are very promising in changing the health education engineering system, one of which is using audio-visual media which involves the transmission of digital images and sounds so that they are easy to understand [28,29]. The use of audio-visual media in learning activities is not just as a tool, but as a carrier of information or messages to be conveyed, the use of audio-visual media is not only about hearing the material being delivered but also seeing directly and clearly the steps that are demonstrated through This audiovisual media can easily understand and change compliance behavior [30,31].

In the analysis of the Wilcoxon Signed Ranks Test in the experimental group, the value obtained was p=0.000 (p<0.05), which means there was a difference in respondents' knowledge in the pretest-posttest, while in the control group, the value obtained was p=0.003 (p<0.05), which was shown differences in respondents' knowledge in the pretest-posttest. This shows that health promotion through audiovisuals and leaflets will increase mothers' knowledge about giving TPT to toddlers.

According to Suswani [32], the results of the Cochrane test showed that there were differences in knowledge between the treatment group using lecture + module and the treatment group using leaflets (p1=0.004, p2= 0.026), differences in access to ARVs (p = 0.004) and differences in adherence in the group with lecture + module and treatment group using leaflets (p1=0.001, p2= 0.015) and there was no significant difference in group II for ARV access.

Research is also in line with that carried out by Asnidar [33]. The results of the Friedman test analysis show that there are differences in knowledge (p<0.001), differences in intake, and BMI (p<0.001) in the first group, given health education through lectures with booklets with the WhatsApp application, the second group was given health education through lectures with booklets accompanied by SMS and the third group was given health education through lectures accompanied by leaflets, but there were no differences in intake patterns (energy p=0.008 and carbohydrates p=0.027) and BMI (p=0.140) in the fourth group only given health education through the media without lectures.

Research conducted by Novalia [34] in Lhokseumawe shows that there is an influence of knowledge on preventing tuberculosis using audio-visual media with a p-value=0.000 (p<0.05). The research was also conducted by Nagaraj [35] in Bengaluru, India, which showed that the use of audio-visual-based education showed a better level of knowledge, proven to increase TB treatment compliance. This research is also supported by research by Misbach [36] that health education using audio-visual media can improve patient health behavior in implementing pulmonary tuberculosis treatment programs.

Research also conducted by Misbach [36] shows that there is a difference in people's knowledge before and after the distribution of leaflets and exercise activities carried out with a value of p=0.000 (p<0.005). In the group given the TB leaflet, there was a significant increase in the proportion of correct answers on the post-leaflet questionnaire for a number of questions relating to general knowledge about TB, including its ability to be cured which increased from 81% (46/57) to 100% (57/ 57) in the intervention group and from 68% (18/27) to 70% (19/27) in the control group (p = 0.002) [37].

The use of visual aids in health promotion will really help convey the message to a person or the community more clearly. The use of health education media in the form of leaflets will be very helpful in the process of conveying health information to the public [38]. The two media used in this research showed a significant influence on knowledge (p-value <0.05) and based on the results of the Mann-Whitney U test analysis, the value of p = 0.014 (p<0.05) was obtained, which means there is a difference between audio-visual and leaflets. in increasing knowledge about the behavior of giving TPT to toddlers. The research is in line with research conducted by Dameria [39] regarding increasing knowledge, attitudes and actions of TB treatment patients using videos and leaflets p=0.001 (p<0.05) so there is a significant difference.

Research conducted by Putri [24] on the influence of the effectiveness of leaflet health promotion media with TOSS TB videos on the level of knowledge and attitudes of the community in the Andalas Health Center working area shows that there were significant changes before and after the intervention was given with changes in the average knowledge in the leaflet group and video with p-value=0.000. Leaflet and video media have an influence in increasing the community's TOSS TB knowledge and attitudes where video media is the most effective media.

4.2 Attitude

In the analysis of the Wilcoxon Signed Ranks Test in the experimental group, the value obtained was p=0.000 (p<0.05), which means there was a difference in changes in respondents' attitudes in the pretest-posttest, while in the control group, the value obtained was p=0.003 (p<0.05). which shows differences in changes in respondents' attitudes in the pretest-posttest. This shows that health promotion through audiovisuals and leaflets will improve mothers' attitudes about giving TPT to toddlers. Research conducted by Ambarwati [40] showed that teenagers' attitudes improved after being given health promotion using audio-visual media. The Z value is -3.873b with a p-value of 0.000 or p<0.05, which means there is an influence on attitudes before and after being given health promotion using audio-visual media.

Research conducted by Madjid [41] where the results showed that there were differences in attitudes before and after the intervention where the p-value = 0.000 (p<0.05) which means there were differences in attitudes before and after being given

health promotion using flipchart media. In the comparison test between the experimental group and the control group using the Mann-Whitney U test on attitudes, a value of p=0.043 was obtained, where this value was smaller than 0.05, which means there was an influence on both the experimental group and the control group. Thus, both the experimental group and the control group had different attitudes.

Research conducted by Putri [24] on the influence of the effectiveness of leaflet health promotion media with the TOSS TB video on community attitudes in the Andalas Health Center working area showed that there were significant changes before and after the intervention was given with an average change in attitude in the leaflet and video groups with p – value 0.000. Leaflet and video media have an influence in changing people's TOSS TB attitudes where video media is the most effective media.

4.3 Action

In the analysis of the Wilcoxon Signed Ranks Test in the experimental group, the value obtained was p=0.003 (p<0.05), which means there was a difference in changes in respondents' behavior in the pretest-posttest, while in the control group, the value obtained was p=0.025 (p<0.05). which shows differences in changes in respondents' behavior in the pretest-posttest. This shows that health promotion through audiovisuals and leaflets will increase mothers' behavior regarding giving TPT to toddlers. Research conducted by Lucya [42] shows that health education videos have an effect on increasing self-efficacy in patients with mean square = 3360.017, f = 434.840, p-value < 0.001, which means there is an influence on self-efficacy before and after being given a promotion. health using video media. The video helps tuberculosis patients understand how to prevent transmission of tuberculosis [42].

This research is also in line with that conducted by Yanti [43], the results showed that the maximum score behavior increased (62) before treatment and the maximum score (86) after treatment. This research shows a significant difference in behavior after being given treatment (p<0.05), which means there is an influence on behavior before and after being given health promotion using audio-visual [43]. The results of a systematic review of several articles by Rumaolat [44] show that the average effect of providing health education using video media on increasing compliance with pulmonary TB treatment was (21.20%). Visual media using video is the most effective type of media used in learning activities because it involves hearing and sight at the same time in one process or activity, so the more five senses receive information, the more material can be absorbed [45].

In the comparison test between the experimental group and the control group using the Mann-Whitney U test on attitudes, the value p = 0.137 was obtained, where this value was greater than 0.05, which means there was no effect on either the experimental group or the control group. Thus, both the experimental group and the control group had no differences in behavior.

The results of this study are not in line with research conducted by Hartiningsih [46] which showed that in the intervention group, there was an increase in the TB prevention behavior score of 28.46. This figure was higher than in the control group, namely. The results of the comparative test showed that the value of p= 0.000 which means that health education with audiovisual media and booklets has an effect on caregiver behavior in preventing tuberculosis in family members.

5. CONCLUSION

There was no significant difference in the actual practice of administering TPT to toddlers between the intervention group and the control group The utilization of audio-visual mediums and booklets for health promotion has a significant impact on modifying the behavior of administering TPT to toddlers.

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