

THE EFFECT OF THE IMPLEMENTATION OF AUDITORY VERBAL THERAPY (AVT) ON VOCABULARY OF CHILDREN WITH HEARING IMPAIRMENT IN AURICA FOUNDATION SURABAYA

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Abstract: Due to the lack of listening skills, vocabulary of children with hearing impairment is not improved. They had difficulty in labeling an object due to the limited vocabulary that they have both oral and written. Auditory Verbal Therapy (AVT) is a therapy that trains children with hearing impairment to optimize the function of hearing which has been provided by hearing aids or cochlear implant in receiving information from the environment. The purpose of this study was to determine the effect of the implementation of Auditory Verbal Therapy (AVT) on vocabulary of children with hearing impairment in Aurica Foundation Surabaya. This study used a quantitative approach which is pre-experimental research type. The design used one-group pretest-posttest design. The research subjects in this study were 12 children with hearing impairment with 9-12 months of age hearing. Data collection techniques used performance test (practice). Data analysis techniques used Wilcoxon Sign Rank Test with a significance level (α) of 5%. The results showed that $Z = -3066$ with $P = 0.002$ with a significance level (α) 5%. The results are smaller than 0,005, so it can be concluded that the application of Auditory Verbal Therapy (AVT) effected the vocabulary of children with hearing impairment in Aurica Foundation Surabaya.

Keywords: *Auditory Verbal Therapy (AVT), Vocabulary of Children with Hearing Impairment*

INTRODUCTION

Language is the media used to convey one's thoughts. Language is also a media to get information obtained from the environment through the five senses. In acquiring information, the five senses work together to distribute information perfectly. So if one senses impaired or not functioning, it will impact the delivery of information. The information submitted can be incomplete, missing or even get the wrong information because of lack of proper interpretation.

In acquiring information, the sense that have greatest role is the sense of sight and hearing. As noted Myklebust in Bunawan and Yuwati (2000: 5) states that the five human senses, sight and hearing are the senses that most advanced because it can receive information remotely, in contrast to the three senses other is tactile, taste and smell that can only receive short distance information.

Seeing the importance of the sense of hearing in acquiring information in everyday life, it would be in trouble if it is impaired. Children with hearing impairment are children who experience lack or loss of ability to hear are caused by the malfunction of some or all of hearing that experience obstacles in language development, emotional and social (Somad and Hernawati, 1996: 27).

Due to limited listening skills, vocabulary of children with hearing impairment is limited. They had difficulty in naming an object (labeling) due to limited vocabulary they have. It is also revealed by Allen in Sunardi and Sunaryo (2007: 30) states that children with hearing impairment have lacking vocabulary, both oral

and written. This is due to lack of vocabulary entry due to hearing impairment that they experienced.

This is confirmed by Sastrawinata in Efendi (2005: 77) states that in children with hearing impairment, everything was recorded in the brain through visual perception is like the silent movies because children with hearing silent can only capture visual only. One of the problems faced by children with hearing impairment is language aspect which is poor vocabulary.

Vocabulary becomes important to be taught to children with hearing impairment because the vocabulary is the beginning skills in developing language. One important reason is to develop a vocabulary is for understanding the world and for proficiency in both oral and written. The importance of vocabulary is also supported by Tarin stating that the quality of a person speaks clearly depend on the quantity and quality of its vocabulary. The richer vocabulary that we have, the greater the likelihood we are skilled language (Tarin, 2011: 2).

Auditory Verbal Therapy (AVT) is a therapy that train children to be able to optimize the auditory function that has been provided through the hearing aids or cochlear implant as tools in receiving information from the environment. Lim and Simser (2005) adds that with early detection, early use of hearing aids and Auditory Verbal Therapy (AVT) individually with the Participation of parents, 80% of children with hearing impairment can potentially succeed in the regular school and community life. Based on the findings of a number of graduates (output) program Auditory Verbal Therapy (AVT) in the United States and Canada indicate that the

majority of respondents is integrated into the learning environment and the "regular" environment. Most of them attend regular school in the neighborhood, go to institute post-secondary education that are not designed specifically for hearing impairment, and engage in community activities (Robertson & Flexer, 1993, Goldberg, 1997 in Sari, 2010).

This is confirmed by the results of the interview on August 27, 2016 to the Head of the Aurica Foundation, data showed that $\pm 90\%$ of graduates (output) of the Aurica Foundation can be integrated in regular schools. While $\pm 10\%$ longer go to special school because of many factors, such as the low child intelligence, late detection and amplification that is not fit with the child hearing, the lack of participation of parents in the application of AVT and other factors.

Based on the statistics of infant hearing program in Canada indicates that the majority of parents of children with hearing impairment preferring Auditory Verbal Therapy (AVT) in teaching communication to their children. Of the 120 infants with hearing impairment in the early intervention program, 80 select AVT, 7 choose sign language, 9 selecting a total communication and 22 again choose other communications approach (Robinson: 125).

Based on those explanations, the researchers took the "the effect of the implementation of Auditory Verbal Therapy (AVT) on vocabulary of children with hearing impairment in Aurica Foundation Surabaya" as the title of the study. With the implementation of AVT to children with hearing impairment, it is expected that their vocabulary can be increased so that the other language skills may also increase. With good language skills, they are also expected to be able to communicate verbally like other people.

RESEARCH METHODOLOGY

This research used a quantitative approach which is pre-experimental research type. The design used one-group pretest-posttest design. Treatment was given to the same subject group. The subject group was given treatment for a certain period of time. Measurements were performed before and after treatment, and try to look for the difference between the results of pretest (T1) with the results of posttest (T2). The design of this study can be seen in Table 1 as follows.

Table 1: One Group Pre test – Post test Design

Pre-test	Treatment	Post test
T ₁	X	T ₂

Information:

T1 : Pre-test result

X : Treatments (the implementation of AVT)

T2 : Post-test result

The research subjects in this study were 12 children with hearing impairment with 9-12 months of age hearing. They have hearing aids or cochlear implat

as tools to hear. They choose AVT as habilitation. They do the AVT at Aurica Foundation Surabaya. This study took place in Aurica Foundation Surabaya. It is located at Bendul Merisi Utara VIII No.8, Bendul Merisi, Wonocolo, Surabaya. Aurica Foundation is an institute of habilitation of hearing (auditory habilitation center) specifically for children with hearing impairment.

Data collection techniques used performance test (practice). Tests were instructed verbally, the subject's research was asked to appoint one (of three selection picture) referred to by researchers. Subject's research were being assed their receptive vocabulary (choose) without having to pronounce the name of the object in question. Data analysis techniques used Wilcoxon Sign Rank Test with a significance level (α) of 5%.

DATA ANALYSIS

Pre-test is given before the intervention through test performance (practice). Tests carried out for ± 30 minutes. Then, the subjects' researches are given the intervention which is AVT. AVT was held for 15 sessions with (3x60 minutes) duration for each meeting. Implementation of the intervention carried out individually. The materials can be seen on Table 2 as follows.

Table 2: Vocabolaries

Group	Vocabulary
Vehicle	Plane
	Car
	Boat
	Train
Animal	Cow
	Cat
	Bird
	Dog
	Sheep
	Frog
	Fish
	Monkey
Things	Duck
	Bag
	TV
	HP
	Clock
	Book
	Pencil
	Shirt
	Phants
	House
Ball	
Amount	24

After the intervention, then it performed the post-test to measure the effec of AVT. Post-test was conducted for ± 30 minutes.

DISCUSSION, RECOMMENDATIONS AND IMPLICATIONS

Based on the study topic, it is important to know the vocabularies of subject research before and after treatment. The results of pre test and post test can be seen in Table 3 as follows.

Table 3 : Pre-test and Post-test result

Subject	Pre-test result	Post-test result
AN	34	54
AT	54	67
AZ	50	77
MT	50	77
NT	30	54
SS	40	67
SW	67	87
RD	54	67
RS	44	54
ST	34	67
DN	44	67
DW	57	87
Mean	46,5	68,75

Then the data been analyzed by the Wilcoxon signed rank test. It is permormed by Wilcoxon signed rank test SPSS 21. The analysis can be seen on Table 4 as follows.

Table 4: Data Analysis NPar Tests Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
pretest	1	46.50	10.90038	30.0	67.00
	2	00			
posttest	1	68.75	11.56110	54.0	87.00
	2	00			

Wilcoxon Signed Ranks Test Ranks

		N	Mean Rank	Sum of Ranks
posttest - pretest	Negative Ranks	0 ^a	.00	.00
	Positive Ranks	12 ^b	6.50	78.00
	Ties	0 ^c		
	Total	12		

a. posttest < pretest

b. posttest > pretest

Test Statistics^a

	posttest - pretest
Z	-3.066 ^b
Asymp. Sig. (2-tailed)	.002

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

According to the table ranks known that obtaining negative rank was 0, gained positive rank was 12 and the same rank was 0. The results of hypothesis testing calculation of the value pretest and posttest regarding the implementation of AVT resulting value of Z count = -3066 with P = 0.002 by significance level (α) 5%.

After the data is analyzed then performed concluding whether AVT is affected on vabolary of children with hearing impairment. The rule used in this study was to compare Asymp. Sig. (2-tailed) with a significance level (α) it can be seen the decision null hypothesis is rejected or receipt. Based on the analysis values obtained Asymp. Sig. (2-tailed) = 0.002 < 0.05 then Ho is rejected and Ha accepted. It can be concluded that AVT is affected on vabolary of children with hearing impairment Aurica foundation Surabaya.

Auditory Verbal Therapy (AVT) is a therapy that train children to be able to optimize the auditory function that has been provided through the hearing aids or cochlear implant as tools in receiving information from the environment. Lim and Simser (2005) adds that with early detection, early use of hearing aids and Auditory Verbal Therapy (AVT) individually with the Participation of parents, 80% of children with hearing impairment can potentially succeed in the regular school and community life.

Auditory Verbal Therapy (AVT) make children with hearing impairment be grown in regular schools and live in the general environment, which allows them to become independent, participating citizens contribute into the social environment. Philosophy Auditory Verbal Therapy (AVT) supports the existence of human rights that people with hearing impairment deserve the opportunity to develop the ability to listen and to use verbal communication within their families and communities (Estabrooks: 4).

Develop spoken language through listening requires commitment and dedication of all involved. Parents/caregivers and family is key in the development of their child. Parents should be actively involved in developing the language skills of children with hearing impairment. McDonald's and Gillette in Sunardi and Sunaryo (2007: 193) states that the delays in the development of language and speech of children with hearing impairment tend caused by the inability of parents and others significant to the child with hearing obstacle to function as an excellent communication partner.

Kretschmer (1978), Ling (1990) and Ross (1990) in Estabrooks (1994: 20) states that children with hearing impairment easier to learn the language if the activity being close to parents and caregivers. It is the

duty of parents to provide a wealth of spoken language interaction in children because their parents were beside the child from waking to sleep again.

As a key player, parents need to develop an understanding of the various stages include stages of listening, speech, language, and cognition. Auditory Verbal Therapy (AVT) includes education, counseling, advocacy and family support. Each auditory-verbal therapy sessions are part of ongoing advances, the individual, the diagnostic evaluation of children and parents. Therapy sessions are usually performed by auditory-verbal therapist and parents. The child learns to listen to his own voice, the voices of other people and the environment sound to communicate effectively and naturally through spoken language.

The success of therapy depends on many variables. Parents and caregivers who need to implement the targets of each session with the language throughout the day. Through motivation and guidance, parents gain the confidence to apply the techniques and strategies to achieve certain goals in listening, speech, language, cognition and communication development, follow the hierarchy of listening skills (Estabrooks: 13).

Based on the findings of a number of graduates (output) program Auditory Verbal Therapy (AVT) in the United States and Canada indicate that the majority of respondents is integrated into the learning environment and the regular environment. Most of them attend regular school in the neighborhood, go to institute post-secondary education that are not designed specifically for the hearing impairment, and engage in community activities (Robertson & Flexer, 1993, Goldberg, 1997 in Sari, 2010).

Based on the result, it is shown that the application of the AVT effected on the vocabulary of children with hearing impairment. The vocabularie were increased. With this, It can help their children to learn the other language skills, namely listening, speaking, reading and writing. With the development of language, children with hearing impairment no longer isolated and can obtain information and communicate like other people.

CONCLUSION

The results of this study shown that the $Z = -3066$ with $P = 0.002$ with a significance level (α) 5%. Based on these results, $P = 0.002$ was smaller than 0,005, so it can be concluded that the implementation of Auditory verbal Therapy (AVT) was effeted on the vocabulary of children with hearing impairment in Aurica Foundation Surabaya.

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