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THE EFFECTIVENESS OF ARTICULATION THERAPY THROUGH TELEPRACTICE FOR CHILDREN WITH CEREBRAL PALSY INCLUSIVE SCHOOLS

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ABSTRACT

The purpose of this study is providing information on the effectiveness of articulation therapy through telepractice for children with cerebral palsy at inclusive schools in Surakarta. This study uses the survey method, aiming to find information that will be used to solve problems and not to test hypotheses. The subjects of this study were all children with cerebral palsy in inclusive schools in Surakarta. The instrument in this study is in the form of Articulation Test Guidelines on the consonant /r/ followed by vowel sounds [/a/, /i/, /u/e/, /e/ and /o] initial, middle and final positions in the form of words with the help of pictures. Therapeutic tools used in intervening with children are computers, cellphones with video calls. This research is required to be one of the models of Intervention/Management of Articulation Therapy through Telepractice for Children with Cerebral Palsy in Inclusive Schools. Based on the results of the analysis using the marginal homogeneity test, a p value of 0.031 (p < 0.05) statistically showed that there was a difference between before and after telepractice articulation therapy for cerebral palsy students in inclusive schools in Surakarta.

KEYWORDS

Effectiveness, Articulation Therapy, Telepractice, Cerebral Palsy

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INTRODUCTION

To respond to the health crisis related to access, distance and human resources of speech therapists in Indonesia, we need a way that can overcome these problems effectively and efficiently. In the 21st century, the world is faced with the emergence of new technology in the health sector that allows speech therapists to practice in a virtual space, without compromising the essence of health care itself, namely through Speech Therapy Telemedicine. The strategy adopted is an unusual model of health care, in which between speech therapists and patients, and speech therapists and the speech therapist profession can not meet directly but are connected with information and communication technology called Speech Therapy Telemedicine.

The Telemedicine program has been planned in the Strategic Plan of the Ministry of Health of the Republic of Indonesia related to the legal basis as stipulated in the Law of the Republic of Indonesia No. 8 of 2016 concerning Persons with Disabilities Article 63 Paragraph 4. Referral as referred to in paragraph (3) can be made in the form of sending patients and specimens, and via telemedicine. Regulation of the Minister of Health of the Republic of Indonesia No. 20 of 2019 concerning Telemedicine Services in Health Service Facilities. Telepractice is defined as a management, coordination and delivery of care and services provided through information technology and telecommunications (Mang-Benza & Hunsberger, 2020). The media used in telepractice therapy are: cell phone, WA, internet, video and audio conferencing and computer information systems.

In accordance with the Ministry of Health's plan to implement e-Health which includes Telemedicine, Nursing telepractice is a form of management, coordination and delivery in providing care and services through information technology and telecommunications as well as helping clients and families to actively participate in speech therapy, especially for mild and moderate conditions. accelerate the success of therapy. This system allows therapists to provide accurate information and support online (Stoll, Kubendran, & Cohen, 2018). One of the steps in supporting the smooth implementation in Indonesia with the characteristics of the archipelago and to be able to facilitate and improve the quality of speech therapy services.

In this study, researchers will provide information on one of the management services in emergency conditions and human resources. The number of cases of communication disorders whose competence must be from a graduate of higher education, namely diploma 4 or a bachelor of speech therapy, as well as disaster emergencies and minimal human resources, approximately 1400 people throughout Indonesia, not all provinces has speech therapists. Researchers are interested in taking the title "Effectiveness of Articulation Therapy through Telepractice for Children with Cerebral Palsy Inclusive Schools in Surakarta".

RESEARCH METHOD

This study uses the survey method, aiming to find information that will be used to solve problems and not to test hypotheses. The study was conducted from March to September 2021 at the Surakarta Inclusion School (Al Majid Surakarta Foundation) as follows: Cerebral Palsy Children aged 6-12 years boys and girls

Meanwhile, the research process carried out by researchers can be completed in 9 months, starting from February to October 2021. Research conducted using samples to represent the existing population. Population refers to the whole group of Cerebral Palsy aged 6 to 12 years, events/things of interest to the researcher.

The population is the entire research subject or object under study (Notoatmodjo, 2012). The population of this study was all children with cerebral palsy in inclusive schools in Surakarta (Al Majid Foundation Surakarta). The sample is part of the overall object under study and is considered to represent the entire population (Damayanti, 2022). In this study, the determination of the sample used a purposive sampling technique, which means it was determined by considering the research objectives based on predetermined criteria. The criteria applied to the sample of this study include:

1. Cerebral Palsy Boys and Girls
2. 6-12 years old because normal children aged 4-8 years are able to pronounce the consonant /r/: Templin 1978, and Gunawan, HS. 2021.

In this study, the researcher determined the research sample as many as 4 students. male 3 students and female 1 student, because the items for therapy are 18 items/instruments

The variables of this study consisted of variables consisting of independent variables and dependent variables.

A. Independent variable: Articulation Therapy

B. Dependent variable: Telepractice Children with Cerebral Palsy Age 6-12 Years

To test young children, a picture has been prepared to elicit spontaneous speech if possible from the desired stimulus word. In testing a young child, tell him that you have several pictures and you want him to name each one. Show and point to each picture in its order. Most children will continue to name the pictures with some encouragement. Sometimes there are children who need to be asked about each picture. In addition to using the question "What is this?", for some pictures use the questions printed below the picture.

For the most part, test materials consist of simple pictures of common words so that they can elicit spontaneous responses. However, it must be acknowledged that sometimes it is necessary for the tester to say a word and ask the child to repeat it if all the sounds of the speech being tested are to be obtained. If the tester has limited time or if he wants all the utterances tested from preschoolers, it may be better for him to ask the child to repeat the word. -word test and use the object pictures as motivation. If all pictures are used, this procedure may use both spontaneous and artificial responses because many children will quickly spontaneously name pictures.

RESULT AND DISCUSSION

1. Univariate Analysis

The univariate analysis aims to describe the character of each research variable. The univariate analysis in this study was for the research variable of the articulation ability of children with cerebral palsy at the Inclusive School in Surakarta. The data of this study were analyzed using analytic statistics to report research results in the form of frequency distribution or percentage (%) in each item or variable, both pre-test and post-test. The results of the univariate analysis of each variable are as follows:

a. Pretest

The pretest was held on September 6, 2021, which aims to determine the articulation ability of cerebral palsy students at inclusive schools in Surakarta City. The test is done by asking children with cerebral palsy to articulate the letter /r/ which is at the beginning, middle, and end of the letter. The results of the pretest are presented in the following table:

Table 1 Articulation Ability Level of Cerebral Palsy Students before the experiment

No	Articulation Ability	**Total**	**Persentase**
1	Not enough	1	25,00%
2	Enough	3	75,00%
3	Well	0	0,00%
	Amount	4	100,00%

Table 1 above shows that the articulation ability of cerebral palsy students in inclusive schools in Surakarta City shows that the articulation ability is less than 1 student (25.00%), the articulation ability is sufficient for 3 students (75.00%) and there are no cerebral palsy students who have good articulation skills (0.00%). The average articulation ability of cerebral palsy students before the experiment was 6.25 which was included in the less category. So, in general it can be stated that the articulation ability of cerebral palsy students before the experiment was still low.

b. Posttest

The posttest value was obtained from the total score during the implementation of 6 (six) experiments on cerebral palsy students at inclusive schools in Surakarta City. Articulation therapy experiments with telepractice were carried out from September 6, 2021 to September 17, 2021. Telepractice articulation therapy was carried out remotely by asking children with cerebral palsy to articulate the letter /r/ at the beginning, middle, and end of the letter. The results of the posttest are presented in the following table:

Table 2 Articulation Ability Level of Cerebral Palsy Students before the experiment

No	Articulation Ability	**Total**	**Percentage**
1	Not enough	1	25,00%
2	Enough	2	50,00%
3	Well	1	25,00%
	Amount	4	100,00%

Table 2 above shows that the articulation ability of cerebral palsy students in inclusive schools in Surakarta City after the experiment showed that the articulation ability was less than 1 student (25.00%), the articulation ability was sufficient as much as 2 students (50.00%) and cerebral palsy students 1 student (25.00%). The average articulation ability of cerebral palsy students before the experiment was 6.25 which was included in the sufficient category. So, in general it can be stated that the articulation ability of cerebral palsy students after getting the experiment was 7.63 in the sufficient category. When compared to before the experiment, the post-test value has increased even though the category has not changed much.

2. Bivariate Analysis

Bivariate analysis is used to determine the effect on two variables (Notoatmojo, 2014). In this study, a bivariate analysis was carried out to determine whether or not telepractice articulation therapy was effective in improving the articulation ability of cerebral palsy students at inclusive schools in Surakarta City. To determine the significance, bivariate analysis was performed using the marginal homogeneity test with a significance limit of 5% (0.05). Rejection of the hypothesis if $p < 0.05$ which means there

is a difference, failure to reject the hypothesis if p > 0.05 which means there is no difference. Analysis of the data using a computer program SPSS. In addition, when viewed from the significance of the p value, it can be interpreted as follows:

a) Ho is rejected if p < 0.05, which means there is a difference between before and after telepractice articulation therapy for cerebral palsy students in inclusive schools in Surakarta City.
b) Ho is accepted if p > 0.05, which means there is no difference between before and after telepractice articulation therapy for cerebral palsy students in inclusive schools in Surakarta.

The results of the bivariate analysis using the marginal homogeneity test obtained the following data:

Table 3 Bivariate Test Results

		post			Total	Asymp. Sig
		Not enough	Enough	Good		
pre	Not enough	1	0	0	1	0,031
	Enough	0	2	1	3	
Total		1	2	1	4	

Based on the results of the analysis using the marginal homogeneity test, a p value of 0.031 (p < 0.05) statistically showed that there was a difference between before and after telepractice articulation therapy for cerebral palsy students in inclusive schools in Surakarta. So, it can be stated that telepractice articulation therapy is effective for improving the articulation ability of cerebral palsy students at inclusive schools in Surakarta City during the pandemic.

Discussion

1. Articulation Ability of Students with Cerebral Palsy Inclusive Schools in Surakarta

Based on the analysis, it was found that the articulation ability of cerebral palsy students in inclusive schools in the city of Surakarta before the experiment showed that the articulation ability was less than 1 student (25.00%), the articulation ability was sufficient for 3 students (75.00%) and there were no cerebral palsy students. have good articulation skills (0.00%). The average articulation ability of cerebral palsy students before the experiment was 6.25 which was included in the less category. the articulation ability of cerebral palsy students in inclusive schools in Surakarta City after the experiment showed that the articulation ability was less than 1 student (25.00%), the articulation ability was sufficient for 2 students (50.00%) and cerebral palsy students who had good articulation ability were as many as 1 student (25.00%). The average articulation ability of cerebral palsy students after the experiment was 7.63 which was included in the sufficient category. So, in general it can be stated that the articulation ability of cerebral palsy students after getting an experiment is in the sufficient category. When compared to before the experiment, the post-test value has increased even though there is not much change in the category.

The limited articulation ability of children with cerebral palsy is caused by anal cerebral palsy, which is someone who experiences difficulties in motor aspects, but sometimes accompanied by accompanying disorders such as emotional, speech, intelligence, and sensory disorders. Meanwhile, (Cahyanto, Yuni, & Efendi, 2021) states that Cerebral Palsy is a form of brain injury, which is a condition that affects the control of

the motor system due to a lesion in the brain or a neuromuscular disease caused by developmental disorders or damage to parts of the brain connected to the control of motor function.

The obstacles experienced by children with cerebral palsy are not only in their motor skills but also in their language development. According to its function, language is a communication tool used by a person in his association or relationship with other people. Language is a social tool. Therefore, the use of language becomes effective since one person needs to communicate with other people. Since a baby begins to communicate with other people, since then language is needed. In line with the development of one's language (infants) it begins with touching (sounds or sounds without meaning) and is followed by one-syllable, two-syllable language, composes simple sentences and so on to socialize using complex language according to the level of social behavior.

Children's problems in moving the muscles that process sound can be formed, one of which has an impact on articulation disorders. Articulation is how individuals are able to produce speech with sound or do breathing without sound through movements of the lips, tongue, velum, and base of the esophagus. Articulation disorders in children with cerebral palsy are a significant aspect of their interpersonal communication problems (Satria, 2019).

2. Effectiveness of Articulation Therapy through Telepractice for Cerebral Palsy Students in Inclusive Schools in Surakarta

Based on the results of the analysis using the marginal homogeneity test, a p value of 0.031 ($p < 0.05$) statistically showed that there was a difference between before and after telepractice articulation therapy for cerebral palsy students in inclusive schools in Surakarta. So, it can be stated that telepractice articulation therapy is effective to improve the articulation ability of cerebral palsy students in inclusive schools in Surakarta City. The results of this study are in accordance with the research

Ministry of Health to implement e-Health which includes Telemedicine, and Nursing. Telepractice is a form of management, coordination and delivery in providing care and services through information technology and telecommunications also helps clients and families to actively participate in speech therapy, especially for mild conditions and accelerate the success of therapy. This system allows therapists to provide accurate information and support online. One of the steps in supporting the smooth implementation in Indonesia with the characteristics of the archipelago and to be able to facilitate and improve the quality of speech therapy services.

Telepractice includes all types of speech therapy and services provided over long distances. can be performed in various settings such as outpatient speech therapy, call centers, hospital units, emergency departments, HR. The examples of telepractice speech therapy are as follows: answering questions about consultation, providing information, facilitating audio or video for consultation, providing evaluation and counseling about early detection and early stimulation. Speech therapy uses video equipment, computers and data to monitor the health status of clients in home, sending pictures of lesions on the camera to get remote speech therapy (Indriati et al., 2011).

Based on the research that has been conducted on the four subjects with cerebral palsy, the general result is that telepractice articulation therapy can improve the articulation ability of cerebral palsy students. These results can be seen from the increasing score on

each component in the articulation ability test tool. This is in accordance with the purpose of articulation therapy expressed by Tiel (2007:327) in his book that articulation therapy is to improve language and speech skills, especially language production by means of how children can issue ideas that exist in the form of words, as well as expansion of language mastery. Even though the approach is for children to be able to express various ideas in the form of language, the imitation form will also be positively rewarded.

From the results of the research above, it can be said that telepractice articulation therapy can improve the articulatory abilities of cerebral palsy students and reduce the symptoms of language weakness (barriers) in children with cerebral palsy with verbal abilities. It is possible that some people with cerebral palsy respond positively to researchers as a motivator. In accordance with the behaviorism view that language development is seen as a progress from random verbal expression to the actual ability to communicate through the principle of S-R (stimulus-response) relationships. In other words, telepractice articulation therapy is effective in optimizing the articulation ability of children with cerebral palsy at the Inclusive School in Surakarta City.

In telepractice therapy, the role of parents is not only to look at the child's physical health, but also to pay attention to the progress and development of physical motor (motion) and language skills that occur in children, and to give attention and motivation to children.

Parents take a very central role in the education of their children, because parents are the main formation of the family. The main shapers of the family are parents, so the responsibility for education for children lies with the parents. According to (Ceka & Murati, 2016) the family is an informal education that functions as a provider or user. That is, education in the family, will educate their children intentionally based on the ideals and hopes for them (Morrow, 2013). The implication of this opinion is that education in the family carried out by parents is a consequence of forming a family with lofty ideals (Sun, 2018). All parents have aspirations and hopes for the existence of their children as the next generation who are able to be independent and live in society.

Parents with children with cerebral palsy are the main educators who are very crucial for the development of their children. Parents, when they get their children with cerebral palsy, there are certainly many who experience loss or hopelessness. It was also stated by (Cleary, Taylor, Dodd, & Shields, 2019), parents who experience parenting stress are prone to have a perceptual bias in assessing child's behavior, reactive in responding to children, and showing a tendency to aggressive behavior. The return to the condition to accept the condition of their child and gradually have the hope to be able to optimize their child from a condition that is considered unable to develop is a struggle that must be carried out gradually. For this reason, this condition is a challenge when they are motivated to act as primary educators.

Referring to (Sumarno, 2011) that education in the family by parents as informal education which has flexibility, wider reach, and continuity. Children with cerebral palsy have language disorders that can be found in almost every child. Research conducted by (Voorman, Dallmeijer, van Eck, Schuengel, & Becher, 2010) which shows that 74% of children with cerebral palsy have difficulty in communication.

CONCLUSION

Based on the results of data analysis, this study can be concluded that articulatory

therapy through the telepractice model is effective for improving articulation skills in cerebral palsy children at inclusive schools in Surakarta City during the Covid-19 pandemic.

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