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Health Service The Language Evaluation On The Effects Of Educational Game For Early Childhood

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ABSTRACT

Language skill must be owned by every child. While 2014 in Indonesia, problems language developmental experience 6-19% toddler. As much 32 toddler have problem language development visit everyday in Poli tumbuh kembang anak RSUD dr. Soetomo Surabaya. In Jember, language disorders experienced by 8% of preschool. The children that has slowness experience language has effect experience delays in their cognitive, sensorimotor, psychological, emotional, and child's environment. The purpose of this research is to know the difference of early childhood language development before and after APE (finger puppet). The design of this research is Quasy experiment with one group pretest posttest. The sampling technique using simple random sampling, samples are taken random by lottery. Total population of 32 children and sample of 30 children. The instrument used is an observation sheet in the form of a checklist of language development assessment. Statistical analysis using wilcoxon signed ranks test. The results showed after given APE (finger puppets) total of children with very good developing category increased from 3.4% to 46.7%. Results wilcoxon signed ranks test program SPSS version 22.0 obtained p value 0.000 of $p < 0.05$ which means H_0 rejected and H_a accepted there is difference of language development of early child after giving APE (finger puppet) in PAUD Alamanda 46 Jember. APE (finger puppet) one of alternative for increase language development. So it is recommended for teachers give story with finger puppets twice a week and parents to start story with finger puppets of two years olds.

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INTRODUCTION

The responses to stimulus involve speaking, communicating, following orders, and so on (Muchtar, 2016). This language ability is essential for every child. Children must start learning from an early age. The first three years in a child development are an important moment when their

brain cells develop and reach 80% of their potential. The stimulus given to children during the first three years will have a substantial influence on their brain development and become the basis for forming future lives. The earlier the stimulus is given, the better the child's development will be. In addition, the more stimulus is given, the broader knowledge a child can acquire. Conversely, if the child is never given a stimulus, the brain tissue will shrink so that brain function will decrease. This significantly hampers children's brain development (Yuniarti, 2015).

In 2014, toddlers in Indonesia were found to experience developmental problems in the language aspect. Data shows that 6-19% of toddlers in Indonesia experience developmental problems in the language aspect (Anna, 2014). In 2014, 32 children under five or 40% of the 80 patients under five who visit the Child Development Polyclinic of dr. Soetomo Hospital in Surabaya have problems in the language aspect (Wijayanti, 2014). Meanwhile, in 2014 in Jember, 8% of preschool-age children experienced language disorders (Azis, 2015). On Saturday, January 28, 2017, researchers conducted a preliminary study at Alamanda 46 Early Childhood School in Jember. The researchers selected 5 children randomly. From the results of direct observation, one child was not able to answer simple questions such as mentioning pictures of animals, and another child was not able to say simple sentences. According to the results of interviews with the school teachers, the development of the children's second language requires triggers in the form of examples.

Language development disorders can be caused by intertwined factors, such as the environment, hearing ability, cognitive impairment, nervous function, psychological emotions, and others. This can be caused by sensory hearing loss, ranging from moderate to severe impairment, while others may be due to repetitive hearing difficulties, resulting in decreased language skills (Soetjningsih, 2015).

The impact on language aspects will lead to delays or abnormalities in other systems such as cognitive, sensorimotor, psychological, emotional, and environmental abilities. This is because the information from the primary and secondary auditory cortex is transmitted to the posterior temporoparietal cortex. This information will be matched with the stored memory. Furthermore, the answers are formulated and transmitted by the arcuate fasciculus to the anterior part of the brain, for coordination of motor responses. If there is an abnormality in one of these impulses, a speech disorder will occur. Damage that occurs in the posterior will result in abnormalities in receptive language. Likewise, the damage to the anterior will cause expressive language disorders (Soetjningsih, 2015).

To stimulate language development in children, it is necessary to fulfill basic needs in the form of care, love, and exercises. Exercise is the forerunner of stimulus for the learning process in children. The stimulus comes from the environment outside the individual child. Giving stimulus will be more effective when the needs of children according to the stage of development are well taken into account. At the beginning of a child's development, a visual and verbal stimulus is an important early stimulus because it gives rise to expressive properties. Children's language development can occur optimally with the aid of educational games and tools to train speech and compose correct sentences. In this regard, health workers must emphasize the use of educational games such as puppets that children can use to actualize their imagination (Soetjningsih, 2015).

Seeing the problem of language development, with its impact that greatly affects the next life, the researchers were interested in conducting a study entitled "The Language Evaluation on The Effects of Educational Game for Early Childhood". The purpose of this study was to determine the children's language development before and after being playing educational game (finger puppets) at Alamanda 46 Early Childhood School of Jember.

METHODS

In this study, the researchers applied a pre-experimental research design in one group (One Group Pre-test and Post-test). The present study aimed to find out whether there were differences in language development among children at early childhood school before and after being engaged to play with finger puppets. In this study, 32 children in Alamanda 46 Early Childhood School of Jember were available.

The sample is part of the accessible population that can be used as research subjects through sampling techniques (Nursalam, 2009). In this study, a sample of 30 children was recruited. The sampling technique used by the researchers was simple random sampling. The

researchers chose the sample randomly using a lottery. The variables in this study were the language development of children before and after being engaged to play with finger puppets.

RESULTS

Respondents' Characteristics based on Sex

Table 1. Distribution of Respondents Characteristics by Sex in Alamanda 46 Early Childhood School of Jember

No	Characteristics based on Sex	Frequency	Percentage (%)
1	Female	17	56,7
2	Male	13	43,3
Total		30	100

Based on Table 1, 17 respondents are females (56.7%), and there are 13 males (43.3%).

Respondents' Characteristics Based on Children's Nutritional Status

Table 2. Respondents' Characteristics Based on Children's Nutritional Status

No	Nutritional status	Frequency	Percentage (%)
1	Normal	26	86,7
2	Thin	4	13,3
Total		30	100

Based on Table 2, 26 respondents were confirmed to have normal nutrition (86.7%), while 4 respondents (13.3%) were found to experience nutritional issues due to sub-optimal weight. Obesity was not found in the study.

Respondents' Characteristics Based on Mother's Education

Table 3. Respondents' Characteristics Based on Mother's Education

No	Number of siblings	Frequency	Percentage (%)
1	Primary school	15	50
2	Junior high school	10	33,3
3	Senior High School	5	16,7
4	Undergraduate/Postgraduate	0	0
Total		30	100

Based on Table 3, 26 respondents were confirmed to primary school (50%), junior high school (33.3%), senior high school (16,7%).

Respondents' Characteristics Based on Number of Siblings

Table 3. Respondents' Characteristics Based on Number of Siblings

No	Number of siblings	Frequency	Percentage (%)
1	<2	28	93,3
2	>2	3	6,7
Total		30	100

Based on Table 4, 28 respondents (93.3%) have <2 siblings, and 2 respondents (6.7%) have >2 relatives.

Specific Data

Identification of PAUD Children's Language Development Before Giving Finger Dolls at Alamanda 46 Early Childhood School of Jember

Table 5. Distribution of Language Development of Children Before being Given Educational Game Tools (Finger Puppets) at Alamanda 46 Early Childhood School of Jember

No	Development Children's Language	Frequency	Percentage (%)
1	Start growing	13	43,3
2	growing According to expectations	16	53,3
3	growing Very good	1	3,4
Total		30	100

Based on Table 5 which contrasts the data between before and after the treatment using finger puppets, the children's language indicated significant development, as was found on 16

respondents (53.3%). In addition, 13 respondents (43.3%) demonstrated initial development, and 1 respondent (3.4%) showcased substantial development.

Identification of The Children's' Language Development After Playing Finger Puppets at Alamanda 46 Early Childhood School of Jember

Table 6. Identification of The Children's' Language Development After Playing Finger Puppets at Alamanda 46 Early Childhood School of Jember

No	Development Children's Language	Frequency	Percentage (%)
1	Start Growing	4	13,3
2	Growing According to expectations	12	40
3	Growing Very good	14	46,7
Total		30	100

Based on Table 6, the children's language development after playing finger puppets demonstrates satisfactory improvement as is found on 14 respondents (46.7%). What is more, 12 respondents (40%) are found to meet the threshold of development. However, 4 respondents (13, 3%) still demonstrate initial development.

Analysis of The Children's Language Development Before and After Playing Finger Puppets at Alamanda 46 Early Childhood School of Jember.

Based on the results of manual calculations using the Wilcoxon Signed Ranks Test analysis test, Z count was found -3.560 (detailed results attached). The Z table shows an error level of 0.025, as seen from the intersection of the vertical line 0.02 with the horizontal line 0.005, obtaining a value of 1.96 (detailed results attached). Furthermore, the two are compared, so that $Z \text{ count} - 3.560 > Z \text{ table } 1.96$ (rate is not taken into account because it is deemed absolute). As a result, the null hypothesis is rejected and the alternative hypothesis is accepted. The analysis results using SPSS 22 for the Wilcoxon Signed Ranks Test statistic test obtained a Z value of -3.869 with a p-value (Asymp. Sig 2 tailed) of 0.000 (results attached) < from the critical limit of 0.025. This concludes that the null hypothesis is rejected and the alternative hypothesis is accepted. This means that there are differences in the children's language development before and after playing finger puppets at Alamanda 46 Early Childhood School of Jember. The educational game, the finger puppets, represents an alternative to improve the language development of PAUD children.

DISCUSSION

The Children's' Language Competence Before Playing Finger Puppets

The analysis results on the pre-treatment sessions showed that 16 children (53.3%) developed as expected, 13 children (43.3%) began to show a sign of development, and 1 child (3.4%) demonstrated fine development.

According to Muchtar (2016: 174) language skills are related to the ability to respond to sounds, speak, communicate, and follow orders. A 3-year-old child has a vocabulary of 900 words, uses complete sentences of 3-4 words, talks non-stop regardless of whether someone is paying attention, repeats sentences of 6 syllables, and asks numerous questions (Adriana, 2011).

Language development is influenced by several factors, as described by Hasmy (2014). These include age, gender, nutritional status, mother's last education, mother's occupation, socioeconomic status, number of siblings, mother and child interaction, and stimulus.

The theory above is following the results of the study that most 53.3% of early children developed according to expectations because they are skilled in the language. Cognitive abilities and the environment, especially role models that consistently affect vocabulary, conversation, and understanding, help children to socialize and interact by communicating with people around them. There is a small percentage of children (3.4%) who develop this set of abilities very well. This is because several factors influence the language development of children. One of them is the mother's last education. The results of the present study show that 13.3% of the mothers' last education was college. Children who have mothers with broad knowledge and insight will showcase marked language development because mothers actively seek information to increase knowledge, such as reading books, and articles concerning their children's language development so that they can know the procedures for providing verbal stimulus to children

The present study also showed 43.3% of children's language began to develop. Almost half of the children still have to be reminded or assisted by their teachers, as shown by the assessment results. The observation results indicate that children still have difficulty understanding expressive language such as saying sentences according to the intended purpose. This is because children aged 3 years are still in the preoperational stage. When egocentrism children's minds are still immature about causal information, they are still often confused about the identity of an object, and the ability to focus on one object at a time. For this reason, the act of providing developmental stimulus needs to be carried out intensively followed by an evaluation of the results.

The Children's' Language Competence After Playing Finger Puppets

The results showed significant language development after the children played finger puppets, as evinced by a total of 14 children (46.7%) demonstrating exemplary development, 12 children (40%) with fair development, and 4 children (13.3%) indicating a sign of initial development. Stimulus is part of the basic needs of children, namely sharpening. Continuously practicing children's abilities lead to increased language performance. Giving stimulus can be done through exercise and play. Children who get directed stimulus will develop faster than those who get less stimulus. Playing activities can use games as support (Nursalam, 2005).

According to Wong (2009), the language development of early children after playing finger puppets is signified by the ability to raise a lot of questions, use plurals, correct pronouns, and the past tense of verbs. They can name familiar objects such as animals, body parts, relatives, and friends. They can give and follow simple commands. They tend to speak over and over again without paying attention to whether or not the people around them listen to or answer their language performance.

The theory above is following the results of the study that playing finger puppets for 10 minutes in 14 days leads to 46.7% of children's satisfactory language development. The role of the environment amplified by the opportunity to play finger puppets can improve their language development because it can increase children's basic knowledge which refers to intensive language development, namely being able to understand language and express language. The results also show that 40% of children meet the expected language development. In addition, 43.3% of the children were female. Girls tend to obey and imitate each new vocabulary. Girls also like to play finger puppets, so girls are more interested in this game than boys.

The research results revealed that after playing finger puppets, not all of the children could develop as expected. Unfortunately, 13.3% of the children only demonstrate initial development due to underweight. Lack of food intakes such as energy and protein can affect the growth and development of brain tissue. Nutritional status plays a crucial role as one of the supports to achieve optimal growth and development results because the brain of children aged 3 years is characterized by only 80% development of their brain tissues. Therefore, nutritional status also affects children's language development.

Differences in the Language of Early Childhood Education Before and After Playing Finger Puppets

Based on the analysis results of the Wilcoxon Signed Ranks Test, Z is found at - 3.869 with a p-value (Asymp. Sig 2 tailed) of $0.000 < 0.025$, meaning the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, there is a significant difference in the children's language competence before and after playing finger dolls at Alamanda 46 Early Childhood School of Jember.

In 2010, finger puppets came under the spotlight as one of the educational tools which were believed to develop children's language, and enhance their skills and creativity. Developing moral aspects and instilling values in children will escalate their overall competence.

Fantasy and practicing the coordination of fingers when playing finger puppets are two fundamental aspects supporting language development. Susanto (2012:76-77), quoting Ganeshi's opinion in Eliason, explains that children's language does not start from word to letter then experience, but from action or experience to new letters, subsequently moving to words. By contrast, Vygotsky mentions that the language and thoughts of children are different. According to the stages of mental development, language and thought merge so that language is an expression of thoughts. Children naturally learn language by interacting with other people to communicate, namely expressing their thoughts and desires, while at the same time learning to understand other

people's thoughts and desires. Aspects of language development will develop along with their development and experience interacting with their environment, and children's vocabulary will develop rapidly. Through examples of language that children hear and see in their environment, children will be able to use spoken language with accurate sentence structure. Children can also use words according to their purpose. Children can express their desires, rejections, and opinions by using words in the right sentences. Communicating through playing together will help children to develop their language competence. In this regard, generally, children automatically communicate with their friends while playing, as in listening to stories and telling stories to their friends. Likewise, role play, puppet play, and finger puppets will play vital roles to reach the expected language development.

The theory above is in line with the results of research that 70% of early children's language development demonstrates marked complexity after playing an educational game, i.e. finger puppet. According to its characteristics, 93.3% of early childhood is characterized by fewer than two siblings. Thus, parents are more focused on their children, therefore spending more time with their children and providing more support for their children by telling stories or introducing new vocabulary to their children. Telling stories to children is one way to provide the sensory stimulus associated with listening. While the use of finger puppets when telling stories is one way to provide the sensory stimulus related to seeing or observing. Auditory and visual stimuli are pivotal in language development. Storytelling activities using finger puppets provide a learning experience for children to practice listening and speaking

The provision of stimulus in language development must be congruent with the principle of using activity themes, oriented to the abilities to be achieved and aimed at fostering freedom associated with spontaneity and pleasant communication. To attract children's attention to the stimulus for improving their language development, the present study carried out an experiment involving finger puppets as an educational game to stimulate their language development. By using finger puppets, children can interact, communicate, and increase vocabulary and syllables. The stories conveyed are also simple and easy to understand, easy to imitate, and easy for children to memorize. Simply put, it is recommended for teachers and parents to provide stimulus by telling stories using finger puppets intensively to support their children's language development optimally.

CONCLUSIONS

In analyzing the effect of postpartum exercise on uterine involution in postpartum women in Wonosari Health Center, an overview of 35 postpartum women was put under analysis. The findings have drawn several conclusions. First, uterine involution in postpartum women in Wonosari Health Center is classified as rapid involution, 42.9%. Also, postpartum 60% of women in Wonosari Health Center have carried out postpartum exercises regularly every day. The other implication is that postpartum exercise affects uterine involution in postpartum women, in that postpartum women who do postpartum exercise regularly experience rapid uterine involution.

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