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"AHA" TEACHING : PATTERN RECOGNITION AND OBSERVATION TRAINING THROUGH KIDS PLAYING IN THE RISK DETECTION " SPEECH DELAY " FOR EARLY CHILDHOOD TEACHERS

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Abstract

Play has many functions, one of which is a diagnostic function which play can be a strategy to detect the capability and barriers facing the development of the child, including an indication of the existence of barriers to the development of speech (speech delay). This study is an experimental study which aims to improve understanding of early childhood teachers on diagnostic functions of play. Through this training, early childhood teachers, as research subjects will be given an understanding of early detection of speech delay through the introduction and observation of children's play patterns. Experimental design used was one group pretest-posttest (repeated measure) with pattern recognition and observation training to play as the treatment given. Subjects in this study were 16 early childhood teachers of Aisiyah's Kindergarten 42, 48, dan 53 Pedurungan, Semarang. The results of data analysis using different test paired samples t values obtained (-5.000) with sig. (0.000) which means that there is a significant difference between pretest and posttest or in other words, there is the effect of increasing the understanding of teacher training in early childhood of playing as a pattern recognition strategies for early detection of risks speech delay.

Keywords : training of playing as a pattern recognition and strategy observation, detection of risks speech delay

1. Introduction

Each stage of age has the characteristics of growth and development, as we know that growth and development are the attributes that accompany every living creature. Grow and flower literally implies increasing the quantity and quality of moving towards maturity both physically and psychologically on individuals (1). Physical maturity can be easily observed or measured such as height and weight. But the psychological maturity requires a certain technique in observing and measuring such levels of intelligence, emotional maturity, language skills, social competence, and so forth. Psychological maturity level to be achieved is clearly different at each stage of age but still showed an average progression to late adulthood (45-50 years) in the individual's life span. This is a common pattern and principle in the development of the individual.

In fact, do not always show the progression of individual development or achievement of success. There are times when delayed, delayed, or even missing/ not able at all, it is the individual experiencing barriers / developmental disorder. Barriers or developmental disorders can be experienced by an individual of one or even several aspects of development as well, for example: the obstacles in the development of motor-physical, emotional, cognitive, social, and language. Barriers / interference on one aspect of development directly or indirectly affect the development of other aspects that needed early treatment. Early treatment can be carried out if the identification and introduction of barriers / developmental disorder in children can also be done as early as possible. The role of parents and educators (teachers) that preschool teacher for children under 6 years become a key role in the identification / recognition of the existence of barriers to the development of the child.

Language as one of the aspects of the development of the individual is very important to note. Language is a form of communication-whether spoken, written, or implied, based on a symbol (2). Language skills may be an indicator of the overall development of the child because

of the development involves cognitive ability, sensory motor, the emotions, and the environment around the child [3]. Developments in language skills may have problems such as delays in speech or speech delay. Speech delay is a delay in speech and language appropriate stages of the child's age[4]. Children with speech delay/ language has a limited ability to communicate that is characterized by the use of language that is "not ripe" and a very limited vocabulary.

Some data indicate that the incidence of speech delay in children is quite high. According to the NCHS, based on the reports of parents (not accompanied by hearing loss and cleft on the palate) incidence rates of 0.9% in children under the age of 5 years and 1.94% in children aged 5 to 14 years[5]. Hartanto[6] states during 2007 in child development clinic Kariadi Hospital obtained 22.9% of the 436 new visits dating with complaints of late to talk, and 2.98% were obtained developmental language disorders. Yulie[7] to submit data that speech disorders in children is one of the disorders that are often experienced by children and occurs in 1 out of 12 children or 5% -8% of preschoolers.

Prevalence of speech delay developmental delays in children based on the data above should be enough to make us aware and pay more attention to the development of the child. In Indonesia, the problem is still very much a developmental delay while the program to improve the quality and protection of children became one of the priorities of the government. Until now there has been no definitive data on the number of Indonesian children experiencing developmental delays. A total of 6.5% of Indonesian children aged less than 2 years experience delays in language development. If the barrier is not immediately addressed the development of the course will affect subsequent child development and certainly experience an interruption in communication with the family and the environment. Children who have communication disorders will be at risk of getting frustrated and offensive treatment of the environment [8]. The immediate environment of early childhood have a key role in this regard. Parents, caregivers, and early childhood teachers can work together to detect and intervent developmental delays, including delays in speech and language in infancy and early childhood. The handling must be preceded by identification/ recognition of the type of obstacles that arise. The earlier this obstacle is detected along the faster cause stimulation and interventions that can be performed on the child. Early identification should be done by all parties involved in the growing development of the child from the parents, caregivers, families, teachers, and professionals. Speech delay can be identified early by comparing the child's ability to speak with an average speech at his age, for example, be wary when at the age of 2-3 years old children are not able to arrange two words into a sentence or designate parts of the body / object around which meant adults, said almost all of the words that are not clearly articulated [9].

Speech delay with prevalence in preschool children suggests that early childhood educators have a role that is no less important than the parents in helping to identify the presence of speech delay. However, the identification of the course teachers should have a stock of knowledge, understanding, and technical about speech delay. Existing assessment instruments such as Denver and the Bayley test procedures that are not easy to be implemented by non-medical professionals debate even psychometric also coloring the use of this test [10]. In addition, the instrument was not specifically designed to detect speech delay. Instrument identification (screening) can be established by considering the context of the individual who will be identified. Early childhood as target identification very closely with the world play therefore, through understanding and observation of children's play activities we can do the detection of developmental delays.

Some experts say that the play is needed by children, among others, to reflect on the experiences they went through, as a means to educate children, even play associated with the development of such emotional development, motivation, cognition, social, cultural, and learning [11]. Playing even be a scientific way for a child to disclose conflicts that exist in itself where initially the child was not aware that he is experiencing conflict [12]. Children's play activities undertaken have and show a certain pattern according to the pattern of development of both cognitive, motor, and social at the average age of them. For example, at the age of 4-6 months, the average baby show excitement when playing boo when viewed from the stage of cognitive development that cognitive abilities at the age of 0-2 years are in the sensorymotor stage where young infants learn from what is seen, heard, and felt. Boo make baby happy and surprised because the object of vision can suddenly and disappear along with the sound of surprise. From the play-boo baby also shows social skills with a laugh that he showed and called the smile/ laugh social.

Based on the above explanation, playing children who do can indicate the level/ ability of cognitive, motor, and social development. Therefore, playing not only serves the recreational but also stimulation, identification, and even therapy. Play such identification function in some children who demonstrate an inability to communicate and interact with friends while playing that should be done is the kind of play that social play, then adults should begin to develop alertness. Children with developmental speech and language barriers can be observed from 2 areas/ types of play in children is symbolic play and social play [13]. Interest in symbolic play shows the relationship between the development of speech and the development of symbolic function. Many studies claim that children with speech barriers still do play pretend, but less frequently and showed immaturity than children who do not have problems talking [14]. Furthermore, children with a great expressive language problem more helpless in symbolic play verbally [15].

Early identification of the presence of obstacles, including delays in speech development through play children's activities more profitable. In addition to its natural, identification through the play does not make children feel threatened, even observer or an adult who may be involved in the identification, stimulating children through play. Early identification or screening process would require knowledge, therefore it is necessary to transfer knowledge and skills on how to conduct screening for the presence of speech delay in children through play. Transfer of knowledge is one of them through training/ training of the individuals concerned and has a role in the growth and development of children include early childhood teachers.

2. Literature review

A. Barriers to Progress " Speech Delay " or Delay Talk

The ability to speak is the ability to pronounce the sounds of articulation or say the words to express thoughts, ideas, feelings to the listener. Listeners receive information through a series of tones, pressure, and placement of joints (juncture). If the communication takes place face to face, coupled with hand gestures and expressions of speech [16]. Speak impact on social and personal adjustment of children is much greater than the impact of motor development, because it involve others, affecting the personal adjustment, resulting in a greater influence on a child's social adjustment [17].

Speech delay is the term used to describe the barriers to speech and language development in children, without delay in other aspects of developments. In general, they have a developmental and social-emotional intelligence are normal. According to the study, this problem occurs or experienced 5 to 10% of children of preschool age and are more likely to be experienced by boys than girls [18]. Individuals with speech disorders usually know what they want to say and what the appropriate situation but they have problems in producing sound to communicate effectively. Speech disorders include a variety of conditions ranging causes of problems in the pronunciation of the letter / sound specific to the inability to produce almost stout words. Some of them were the result of physical abnormalities or it could be as a result of organ damage speak, but often the cause is not known with certainty [19]. Speech delay occurs when a child's speech development level is below the level of the quality of the child's speech development, the same age that can be seen from the accuracy of the use of the word [20]. These barriers experienced by children aged 3-6 years with incidence rates of 7.9% per year [21]. The quality of speech development the average age of the child based on the same termed language development tasks. The few figures convey that each stage of the child's age showed differences in language development tasks. Wendy [22] stated that the stages through which the child's language development in general is:

a. Born-5 months of age:

- Babies react to sound, trying to find the source / voice directions
- Can be enjoyed or did not enjoy the sound

b. 6 -11 months:

- Babling, understand the "no-no"
- Using the gesture / movement to communicate
- Trying to-repeat sounds

c. 12 -17 months:

- Speaking points / core course
- Focus on the book / toy for two minutes
- Following simple command
- Answering simple questions in nonverball
- Can say 2-3 words clearly though sometimes as a symbol .

d . 18-23 months :

- Enjoying be read
- Following simple commands
- Identifying parts of the body
- Understand simple words
- Voicing letters such as : n , m , p , and h
- Use 8-10 words

- Make animal noises

e . 2 -3 years :

- Using at least 40 words
- Understand the concept of space
- Can recognize the word has
- Using 2-3 word
- Using phrases and combinations of words although sometimes not understood by other people .

f . 3-4 years :

- Recognize and can say set of objects
- Can identify colors
- Using a lot of tone
- Describe objects used
- Expressing feelings and ideas

g . 4-5 years :

- Can understand the errors in speech
- Saying 2000 - 3000 different words
- Tells how to do something
- Answering the questions "why"
- Understand the rhythm / beat sound

The task of child language development by Suryanah [23], divided into 4 age:

1. The first period (age 1-1.6 years)

The words spoken by children is a continuation of the feeling, it is seen from the similarity of words formed in pronunciation by children of any language in the world, for example: the word "ma" for the mother and the word "pa" to the father. When approaching mentioned a word with him, the child understands that the words addressed to him and the child will imitate the word though not with the correct pronunciation. Children express the words to convey his wishes known by one word sentences. At this age, children are expected to have been able to mention 1-3 words and be able to point 2 images.

2. The second period (1.6-2 years)

At this time the vocabulary of children increases the more things she wanted to know so-called period of "what it is". At this time the child has difficulty saying is caused by the development of a willingness and desire faster than riches vocabulary. Actually, the child wants to tell but because its vocabulary is still a bit then he completes the movement of the hands and feet. At this age children are expected to be able to combine words, unable to name one picture, able to mention 6 parts of the body, is able to show 4 images, can speak partially understood.

4. The fourth period (2.6 years-onwards)

At this time the child's desire to know everything started to grow because it is not sufficiently prolonged child questions were answered with a short answer. Positive response will help the development of the mind and vocabulary of children. At this age children are expected to understand the two adjectives and mention one color, one is able to calculate the objects, capable to mention the usefulness of 2-3 objects, able to know the 4 activities and talk all understandable.

Thing to note is that although the quality of a child's speech development in accordance with the stages of age, but the presence of obstacles speech and language development in children systematically related to cognitive development and emotional aspects [24]. It is then also underlies the stimulation and detection of speech-language development of children, including obstacles in its development also should pay attention to aspects of cognitive and emotional development of children. What and how proper stimulation and detection must be in accordance with the characteristics and needs of children one through the play as play activity is a fun activity and not make them feel threatened.

Types of barriers to speak:

a. Barriers in fluency: relating to the smooth/ rhythm of speech; children with these obstacles usually doubt, repeat, or long enough to utter the letters / phrase for example: stuttering; usually occurs in children early; if continued until school age children in school will affect adaptation and environment outside the home

b. Barriers in the articulation of speech: include difficulty in formation or articulation of words (articulation generated through the use of the lips, tongue, teeth, and throat). In some cases of birth defects that cause physical (speech organs ex: cleft) result in barriers articulation; children whose teeth have not fully grown will also experience this obstacle, but the temporal nature. As a child, children typically experienced obscurity articulation (lisp), this may be funny but in the opinion of experts should not be allowed to talk patologist / soluble in this habit. Adults should provide examples of correct articulation

c. The sound barrier: includes voice control, quality (vibration), and loudness; child with a sound barrier will produce a monotonous voice is too high or too low for the age / gender of his; The sound barrier caused by damage, disease, or disorder of the larynx / vocal

B. Playing

1. Play

Parten [25] highlights the play activities as a means of socialization and he observed there are six forms of interaction among children occur when they play. Stages that reflect the level of social development of children is as follows:

a. Unoccupied play

In actual play unoccupied child beanr not really involved in the play, but just observe the events surrounding the child's attention. If there is no interest, the child will concern themselves with doing some things like play limbs, follow others, around or up and down a chair without a clear purpose.

b. Social Play

Adults, especially fathers and mothers became friends playing first for infants and young children in almost all cultures. Social play begins at 1 month of age when adults take the initiative to play with varying vocal. In social play, early childhood will respond created an atmosphere of playing parents with positive expression includes vocals funny / laugh. Social play then also done early childhood involving / using objects or play thing.

c. Symbolic play

Symbolic play is shown first child at the age of 1 year. One example of symbolic play is when children act/ act by himself. Children pretend to drink from the bottle, pretend to eat, and so forth. At first, symbolic play is done by himself / solitary child, which then involves eye contact with peers and their caregiver symbolic play together and play them all laughing and talking to each other. Furthermore, the language will contribute and thrive in symbolic play is a solitary activity nor shared.

Parents from different cultural backgrounds showed activity symbolic play (pretend) with their children differently.

3. Benefits of Playing

Tedjasaputra [26] suggested that the play has a variety of benefits, namely for the development of the physical aspects, gross and fine motor, social, emotional or personality aspects, aspects of cognition, sharpening sharpness sensing, develop sports skills and dancing, as a therapeutic medium, and media intervention.

4. Playing in children with speech and language delays

All children are bound to play. Children with disabilities were also tied to the activity of play differently than normal chiidren. Many developments Psychologists have expressed a pattern of how children master the developmental aspects of how they looked in the use of social interaction, especially in social play. Language development showed that early age children understand and use emotions to describe feelings (affective language) are typical in every stage of development age for example, they speak reflect feelings honestly though extreme in other family members [27] as well as the activities that they are doing a good play solitaire (the object) and socially.

However the condition of children, play remains a crucial element in the development and their learning process. Forms of play in children with limitations of course depend on the type of limitation experienced, the opportunity to play, accessibility and the environment play, as well as the presence of peers and adults who facilitate and encourage play. Playing on children with disabilities (special needs) is an important factor in the assessment and diagnosis of the condition of the limitations of the child [28]. Characteristics of play in children with obstacles and delays in speech and language or communication failure can be seen from two main areas, namely symbolic play and social play (through social interaction with peers). Children with speech delay and language barriers demonstrate a lack in the symbolic and social play in terms of frequency and maturacy. This is particularly evident in children aged mainly over 3 years. Symbolic and social play is a developmental stage play that requires the ability to speak and communicate in conveying the imagination and foster interaction with playmates[29]. Barriers understanding / mastery of language and how children express their thoughts in speaking an issue that can be easily identified by family members in the interaction within the family of course, but often also members of the family is the most permissive to be unaware that the child how to speak the language and was not according to the development tasks. Therefore, the broader context can be selected to detect the risk of barriers speech delay, for example, when children play mainly symbolic and social play. In addition, the identification is done by teachers for example would be to make parents aware of the barriers to development and that the child's developmental barrier soon to be assisted [30].

3. Research methods

This study is an experimental research whitin-subject design or known as a repeated-measures design (repeated measurements). Design repeated measurements with one dependent variable is applied in the form of measurements before and after treatment or pre-posttest [31]. Pretest will be given to the subjects before treatment or treatment rendered. Next,

treatment is given and after that the final measurement (post-test) will be conducted. Pretest and posttest was given as a measuring instrument to see any changes (understanding) of early childhood teachers about the function of play in detecting the risk of delays in speaking to students.

Treatment in the study was training speech delay detection risk through a child's play pattern recognition and observation. Subjects were 12 early childhood teacher (which teaches children aged 2.5 to 6 years) in Aisiyah 42, 48, and 53 kindergarten, Pedurungan, Semarang. Some of the material presented in the training include: developmental and speech delay, play, observation through playing characteristics that indicate risks speech delay in children (attached material). Controls carried out with single-blind technique is to evaluate the subjects one by one and selected in accordance with the relevant factors to be included in the group [32].

4. Result

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pretes	1.50	12	.798	.230
	postes	2.75	12	.452	.131

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	pretes & postes	12	.126	.696

	Paired differnces					t	df	Sig. (2-tailed)
	M	Std. Dev.	Std. Error M	95% confidence interval of difference				
				low	up			
Pair 1 pre Post	-1.250	.866	.250	-1.800	-.700	-5.000	11	.000

The analysis showed t value of -5,000 with significance 0,000 which means there are differences in the results of the pretest and posttest. In another word it can be said that the treatment was effective to increase teacher's knowledge and skill to detect speech delay through observation of children's play activities. It is very important to note that the speech delay is immediately intervened with the child's ability to read-write (delayed speech would very likely bring on dyslexia) [32], affecting ability and academic achievement of children, the potential gain bullying, social-emotional problems in children with delayed speech, is not environmentally acceptable.

Observations with knowledge of playing in infants and children in general will give birth normally understanding that the play is done babies and normal children actually showed a quality development. Play performed by children under the age of two years is associated with the capacity of their physical development in which children that age will increase the body's ability to control and coordinate the development of the hand and the eye [34]. Along with increasing age and physical-motor abilities, children also demonstrated the ability of exploring objects in play activities. When children begin to understand and use the language, desire to play and the type of play that made even begin to differentiate. They started to like playing social well with parents and peers. The ability of social play is also evolving as a child growing new environment include schools, public places, and friends playmates around the house. In doing for social play children will learn about the rules, sharing or share the experience even share such roles in symbolic play or drama.

When the process of the development of the individual (child) did not show progression as expected developmental tasks and obstacles that may occur in the area of sensory, motor, perceptual, cognitive, and emotional. One of the barriers to the development of children's label on cognitive areas, especially language is speech delay. Barriers to development can be identified early. Many parents who say "my child can not play" where the parent statement that indicates the existence of barriers to the development of anxiety experienced by children. Supposedly, the inability of the child to the activity played since the age of the baby can make parents aware of the barriers experienced by child development. Children who are experiencing developmental delays will show the limitations in the use of physical-motor, explore object/ objects in play and shows, as well as language skills and social interaction [35]. Children who experience barriers to the development of speech indicate impairment or inability that does not comply with children in general when social play. Usually they will demonstrate the inability to use language which then affects the interaction-communication with friends to play [36].

Children with obstacles and delays in speech and language or communication disorder

showed a different play activities that can be viewed from two main areas, namely symbolic play and social play (through social interaction with peers). Children with speech delay and language barriers demonstrate a lack in the symbolic and social play in terms of frequency and maturation. This is particularly evident in children aged mainly over 3 years. Symbolic and social play is a developmental stage play that requires the ability to speak and communicate in conveying the imagination and foster interaction with playmates. (37)

In addition to the physical - motor play, objects, and social, play activities which also became characteristic of play in children's development and become an important characteristic is pretend play. Some of the barriers to growth experienced by children such as autism, mental retardation, and language disorders including speech delay can be identified from pretend play activities conducted child. Children with speech and language disorders have difficulty in pretend play even showed a decrease in the ability to do this game (38) . O'Conner and Stagnitti also conducts research on interventions to play in assisting the development of children with developmental delays one speech disorders. Here the play shows not only have a diagnostic function such as screening/ identification but also therapeutic functions (39) .

5. Conclusion

Function of play is so important in this regard diagnostic functions need to be known by the parties concerned, among others, parents and teachers. Knowing the function of play will help the environment to develop the capability and optimization of child development. Similarly, when obstacles such developmental speech delay found in children through observation of children's play activitie , will be able to help with immediately provide appropriate interventions to optimize the child's development. Of course, the help of the professionals in the diagnostic process speech delay in children is still required to ascertain the cause and determine appropriate treatment measures .

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