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The Effect of Throwing and Catching the Ball on the Social-Emotional Ability of 5-6-Year-Old Children in Smart Ceria Simbontar Kindergarten

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Abstract. This study aims to determine how much influence it has on the Social Emotional Ability of Children 5-6 Years Old in Smart Ceria Simbontar Kindergarten in the 2020/2021 Academic Year. The hypothesis is that Throwing and Catching the Ball has a positive and significant effect on the Social Emotional Ability of 5-6 Years Old Children in Smart Ceria Simbontar Kindergarten in Simbontar. This study uses a descriptive quantitative approach. The early childhood population in Smart Ceria Simbontar Kindergarten collects 30 people with a sample of 30 people. The data was collected using a closed questionnaire with as many as 30 items compiled by the author of variable indicators according to expert theory. The questionnaire trial was conducted on 30 early childhood children outside the study sample and has been tested for validation and reliability. The results of data analysis show that there is a positive and significant influence on the Ball Catching Influencer on Anal Socio-Emotional Ability Ages 5-6 Years in Smart Ceria Kindergarten in the 2020/2021 Academic Year with a coefficient of determination (r^2) = 81.3% and a significant effect test is obtained ($F_{\text{count}} > F_{\text{table}}$ of $54.77 > 4.17$, meaning that H_0 is rejected and H_a is accepted. This research is recommended to play-catch the ball in improving the social-emotional abilities of children aged 5-6 years in Smart Ceria Simbontar Kindergarten by the teacher must be carried out correctly.

Keywords. ball, children, throwing and catching, Social-Emotional, ability

Introduction

Learning is an instructive interaction to develop abilities, innovation, and behavior further. The General Schooling System Regulations have emphasized that youth training is a direction that focuses on birth to the age of 6 years, which is carried out through educational enhancement arrangements to encourage physical and deep development and progress so that every child has the readiness to enter an educational institution that emphasizes building the foundation for some the accompanying direction (Nadeak, Juwita, Sormin & Naibaho, 2020; Tyas & Naibaho, 2021; Tyas & Naibaho, 2019). Each child is also egocentric, has unique interests, is a social animal, novel, rich in dreams, prominent range, and is the period most expected for learning. The adolescent is every child aged 0 to 8 years (NAEYC 1992).

According to school system regulations, the age range in Indonesia is 0 to 6 years (Agustin and Wahyudin, 2011).

Emotional and social skills are the stage of developing children's skills to familiarize themselves with the most extensive social world. Emotional and social growth is the basis for later character growth and is positively related to other aspects. In individual social abilities, following a pattern is a regular sequence of social behavior, which is the same pattern for each child. Because in general, children go through the stages of socialization, with the lack of opportunities for children to socialize will limit growth. Because, in general, children go through the steps of socialization, with at least the opportunity for children to socialize will hinder development.

Play is a way for every child to practice, use, and control which is carried out more than once using an instrument or without using it to get data, have fun, and grow their creative mind. Play is a formative need for aspects of machine, perception, creativity, language, feelings, social collaboration, values, and mentality so that life can be fulfilled. Playing can be tried in various forms, for example, by playing throw and catch the ball. In developing a socially full of emotions, early childhood uses play media that are easy to obtain and produce in the field, such as an accessible object that does not burden the child. One of the activities of this ball-throwing game can increase children's emotional and social, with the aim that children can collaborate in playing.

Research method

The method used in this exploration is a separate quantitative strategy. A straightforward quantitative technique can be interpreted as a critical thinking strategy that is researched by describing the condition of the subject or item in the concentrate as individuals, foundations, networks, and others who are present in the view of objective reality or what is. A quantitative deductive strategy is used to describe or investigate exploration results for broader purposes (Sugiono 2017:31; Nendissa, et al., 2021). Population is all the information we consider in the extension of time and the time we determine. The Population is a speculative area that is divided into each item or subject that has unique characteristics, not all of which are determined by experts to be contemplated and then drawn up (Sugiono 2017:80). The Population in this exploration is all children aged 4 to 5 years, a total of 30 people.

Number of Children in Group A for Academic Year 2021/2022

No	Class	Number
1.	A1	15
2.	A2	15

Data Source: Administration of Smart Ceria Simbontar Kindergarten for Academic Year 2021/2022

The purposive sampling method is a method for determining the illustration of the researcher with certain considerations whose aim is that the data obtained will be representative (Sugiyono 2017:85). The sample in this exploration is children aged 4 to 5 years in the Smart Ceria Simbontar Kindergarten, North Tapanuli Regency. Where in class A1 = 15 people and class A2 = 15 people. The number of children with problems in this study was 30 people.

Results and Discussion

It can be seen that the one with the highest value weight out of the other 13 items regarding the social-emotional abilities of children aged 5-6 years at Smart Ceria Simbontar Kindergarten, North Tapanuli Regency is item number 19 with a score of 99 and an average value of 3.3. Many children say they do not distinguish skin color, ancestry, hair, religion, and others. In contrast, the lowest weight value of the other items is item number 30, with a score of 63 with an average value of 2.1, which means that ananda sometimes wants to help a friend who is having a problem.

To find out whether there is a relationship between variable X and variable Y, the Pearson Product Moment correlation formula is used with the deviation value proposed by Sugiyono (2013: 183) as follows:

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N \sum X^2 - (\sum X)^2\} \{N \sum Y^2 - (\sum Y)^2\}}}$$

Based on the results of the formula above, the value of is obtained:

$$\sum X = 1595$$

$$\sum Y = 1131$$

$$\sum X^2 = 86329$$

$$\sum Y^2 = 43203$$

$$\sum XY = 60887$$

So that the rxy value can be found, namely:

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N \sum X^2 - (\sum X)^2\} \{N \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{xy} = \frac{30 \cdot 60887 - (1595)(1131)}{\sqrt{\{30 \cdot 86329 - (1595)^2\} \{30 \cdot 43203 - (1131)^2\}}}$$

$$r_{xy} = \frac{22665}{\sqrt{\{2589870 - 2544025\} \{1296090 - 1279161\}}}$$

$$r_{xy} = \frac{22665}{\sqrt{\{45845\} \{16929\}}}$$

$$r_{xy} = \frac{22665}{214,11 \times 130,111}$$

$$r_{xy} = \frac{22665}{27858,75}$$

$$r_{xy} = 0,813$$

From these calculations, the value (rxy) of 0.813 was obtained in consultation with $r_{count} (\alpha=0.05, n=30) = 0.361$ (attachment 5). From the results of these calculations, it is known that the value of rcount is greater than the value of rtable, namely $0.813 > 0.361$, so it can be concluded that there is a positive influence on the influence of group games on the social-emotional ability of children aged 5-6 years at Smart Ceria Simbontar Kindergarten. To find out the significant relationship between the influence of group games on the social-emotional abilities of children aged 5-6 years at Smart Ceria Simbontar Kindergarten, a significant test was carried out with the following formula:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Information:

t = Real level

r = Correlation coefficient

n = number of respondents

$$t = \frac{0,813\sqrt{30-2}}{\sqrt{1-0,813^2}}$$

$$t = \frac{0,813\sqrt{28}}{\sqrt{1-0,661}}$$

$$t = \frac{0,813 \times 5,291}{\sqrt{0,339}}$$

$$t = \frac{4,301}{0,582} = 7,388$$

Thus, the value of t_{count} is 7.388 and it is known that the t_{table} in = 0.05 for the two-party test with degrees of freedom $n-2=30-2=28$ is 2.048 (appendix 6). From the results of these calculations, it is known that the value of t_{count} is greater than t_{table} , namely $7,388 > 2,048$. It means that there is a significant relationship between the influence of group games on the social-emotional abilities of children aged 5-6 years at Smart Ceria Simbontar Kindergarten. Simple linear regression analysis is used to determine the functional relationship between variable X and variable Y by using the formula:

$$\hat{Y} = a + bX$$

$$a = \frac{(\sum y)(\sum x^2) - (\sum x)(\sum xy)}{N \cdot \sum x^2 - (\sum x)^2}$$

$$b = \frac{N \cdot \sum xy - (\sum x)(\sum y)}{N \cdot \sum x^2 - (\sum x)^2}$$

So,

$$a = \frac{(\sum y)(\sum x^2) - (\sum x)(\sum xy)}{N \cdot \sum x^2 - (\sum x)^2}$$

$$a = \frac{(1131)(86329) - (1595)(60887)}{30,86329 - 1595^2}$$

$$a = \frac{97638099 - 97114765}{2589870 - 2544025}$$

$$a = \frac{523334}{45845}$$

$$a = 11,42$$

$$b = \frac{N \cdot \sum xy - (\sum x)(\sum y)}{N \cdot \sum x^2 - (\sum x)^2}$$

$$b = \frac{30,60887 - (1595)(1131)}{30,86329 - 1595^2}$$

$$b = \frac{1826610 - 1803945}{2589870 - 2544025}$$

$$b = \frac{22665}{45845}$$

$$b = 0,494$$

Thus, the price,

$\hat{Y} = \alpha + bX = 11,42 + 0,494X$. This equation means that there is a functional relationship between the variables X and Y, which means that group games on the social and emotional abilities of children aged 5-6 years in TK Cerdas Ceria Simbontar. of $11,42 + 0,494X$. To find out the magnitude of the influence of the X variable on the Y variable, namely the amount of Group

Games on the Social Emotional Ability of Children aged 5-6 Years at Smart Ceria Simbontar Kindergarten. Then the effect test is carried out with the formula:

$$R = r^2 \times 100\%$$

$$R = 0,813 \times 100\%$$

$$R = 81,3\%$$

It means that group games on social-emotional abilities of children aged 5-6 years at Smart Ceria Simbontar Kindergarten. by 81.3% and partly influenced by other factors as stated in the identification of the problem. To test the significance of the effect using a simple linear regression formula proposed by Sudjana (2005:327) as follows:

$$JK = \sum Y^2 = 43203$$

$$JK(a) = \frac{\sum(Y)^2}{n} = \frac{1131^2}{30} = \frac{1279161}{30} = 42638,7$$

JK_{reg} = J.K. (b/a), according to Sudjana (2005:328), can be known by the formula:

$$JK_{reg} = JK(b/a) = b \left(\sum XY - \frac{(\sum X)(\sum Y)}{N} \right)$$

$$= 0,494 \left(60887 - \frac{(1595)(1131)}{30} \right)$$

$$= 0,494 \left(60887 - \frac{1803945}{30} \right)$$

$$= 0,494 (60887 - 60131,5)$$

$$= 0,494 (755,5)$$

$$= 373,217$$

$$S^2_{reg} = JK(b/a) = 373,217$$

$$JK_{res} = \sum (Y - \hat{y})^2$$

$$= 190,8$$

$$S^2_{res} = \frac{\sum y - \hat{y}^2}{n-2}$$

$$= \frac{190,8}{30-2} = \frac{190,8}{28}$$

$$= 6,81$$

$$S^2_{reg}/S^2_{res} = \frac{373,217}{6,814} = 54,77$$

Table 1. Anava

Variation Source	dk	JK	KT	F
Total	48	$\sum Y^2 = 43203$	-	
Regression (a)	1	$\frac{(\sum Y)^2}{n} = 42638,7$	$\frac{(\sum Y)^2}{n} = 42638,7$	$\frac{S^2_{reg}}{S^2_{res}}$
Regression (b/a)	1	$JK_{reg} = Jk(b/a) = 373,217$	$S^2_{reg} = Jk(b/a) = 373,217$	$= 54,77$
Residue	30-2	$JK_{res} = \sum (Y - \bar{Y})^2 = 190,8$	$S^2_{res} = \frac{\sum (Y - \bar{Y})}{n-2} = 6,81$	

From the ANOVA table above, the value $F = S^2_{reg}/S^2_{res} = 54.77$ from the F distribution list with dk in the numerator 1 (One) and dk in the denominator (n-2) is obtained $F = 4.17$ (attachment 7), it turns out that $F_{count} > F_{table}$ ($54.77 > 4.17$) means that there is a positive and significant influence between the influence of group games on the emotional, social abilities of children aged 5-6 years in TK Cerdas Ceria Simbontar.

Hypothesis: There is a positive and significant effect between Group Games On Social Emotional Abilities of Children 5 – 6 Years Old in Smart Kindergarten Symbolar.

Criteria for rejection and acceptance of hypotheses:

$H_a = F_h > F_t; 0,05$: There is a positive and significant effect between the X variable and the Y variable.

$H_0 = F_h < F_t; 0,05$: There is a positive and significant effect between the X variable and the Y variable, so the calculation results obtained $F_{count} = 54.77$, which means it is more significant than $F_{table} = 4.17$, then based on hypothesis testing $H_\alpha = F_h > F_t (54.77 > 4.08)$, this indicates that H_α is accepted and H_0 is rejected, which means that there is a positive and significant influence between Group Games on Social Emotional Ability of Children aged 5-6 Years at Smart Ceria Simbontar Kindergarten, North Tapanuli Regency Q.A. 2020/2021.

The results of research conducted on children aged 5-6 years in Smart Ceria Simbontar Kindergarten show that there is a positive relationship between Group Games on Social Emotional Ability of 5-6 Years Old Children in Smart Ceria Simbontar Kindergarten. $0.813 > 0.361$ and a significant relationship with a significant test of the relationship $t_{count} > t_{table}$ that is $7,388 > 2,048$, so it is known that there is a relationship between Group Games on Social Emotional Ability of Children 5-6 Years Old in Smart Ceria Simbontar Kindergarten, North Tapanuli Regency T.A. 2020/2021. The regression equation obtained $Y = +bx = 11.42 + 0.494X$. The better the application of group games, the better the social-emotional abilities of children aged 5-6 years at Smart Ceria Simbontar Kindergarten. The magnitude of the effect is 79.2%, and the significance of the effect is $F_h > F_t (54.77 > 4.08)$, meaning that the results of this study can be applied to the entire Population.

Based on the results of respondents' answers about the application of the experimental method, there is the highest weight value of all questionnaire items about throwing and catching the ball, namely item number 14, with a score of 107 and an average value of 3.57, which is how many children throw the ball in the right way to hit the target. While the lowest weight value of the other items is item number 4, with a score of 67 with an average value of 2.23, some children have not been able to throw the ball down with both hands. Based on the results of respondents' answers about the emotional and social abilities of children aged 5-6 years at Smart Ceria Simbontar Kindergarten, North Tapanuli Regency, item number 19 with a score of 99 and an average value of 3.3, that is, many children say they do not distinguish skin color, descent, hair, religion, and others, while the lowest weight value of the other items is item number 30, with a score of 63 with an average value of 2.1, which means that you sometimes want to help a friend who is having a problem.

Throw Catch Ball Game - Play is a means for children to practice, exploit, and manipulate, which is done repeatedly using tools or without them to obtain information, have fun and develop their imagination. Play demands the developmental needs of motor dimensions, cognition, creativity, language, emotions, social interaction, values, and attitudes to life that can be fulfilled. Playing is fun for early childhood, is tried over and over again, and brings satisfaction. Throw and catch the ball is a game that uses the ball as a medium. This game of throwing and catching the ball is done in early childhood to be able to train social-emotional. Throw and catch group games are very well used to develop children's social and emotional; in addition to teaching children motor skills when throwing balls using hand and foot muscles, throwing and catching balls also train children to cooperate in the group game of throwing and catching the ball, children are also taught to be patient (Nadeak & Naibaho, 2020; Tyas, Sunarto

& Naibaho, 2020). Waiting for their turn can train children's emotions when throwing the ball at their friends. In this game of throwing and catching the ball, children are also trained so that the throw they try is on target and tries to make the child able to see the ball that is shown to him.

Children's Emotional Social Skills - Social and emotional abilities are two different aspects, but in reality, they influence each other. Social skills are closely related to vigorous growth, although each has specificity. Social and emotional skills in early childhood are facing very rapid progress. The position of parents and teachers in schools in improving children's social and emotional attitudes can be instilled through good perspectives (Naibaho, 2022; 2022). Children's social-emotional behavior is influenced by the process of treatment, care, and direction from parents to children in introducing various aspects of social life, as well as the rules of social life, and giving examples to their children how to practice these rules in everyday life. Every child needs to develop fundamental values that can be used functionally in later life. In interacting, the thing that is separated from attention is the development of showing emotions or reactions arising from communication or event. Children can regulate emotions according to events that are happening. For example, children feel happy when they meet friends at school and can play with friends at school, they feel so glad to meet teachers and also play equipment at school, and they feel sad when they cannot meet their friends at school and cannot play with a friend (Naibaho, 2022).

Conclusion

From the discussion that has been carried out above, it can be concluded that: a) There is a positive and significant relationship between the application of group games, the social and emotional abilities of children aged 5-6 years in Smart Ceria Simbontar Kindergarten because $t_{count} > t_{table}$ are $0.813 > 0.361$ and $t_{count} > t_{table}$ is $7,388 > 2,048$, so it is known that there is a relationship between the application of group games and the social-emotional abilities of children aged 5-6 years in Smart Ceria Simbontar Kindergarten in the 2021/2022 academic year; b) There is a positive and significant effect between the application of group games and the social-emotional abilities of children aged 5-6 years at Smart Ceria Simbontar Kindergarten in the 2021/2022 academic year because $F_h > F_t$ is $54.77 > 4.17$; and c) The application of the Experimental Method affects the Cognitive Development of children aged 5-6 years by 81.3% in the Smart Ceria Simbontar Kindergarten in the 2021/2022 academic year. Based on theoretical conclusions and conclusions based on the results of research and data processing, the authors conclude that there is a positive influence between Throwing and Catching the Ball on the Emotional and Social Ability of Children aged 5-6 Years in Smart Ceria Simbontar Kindergarten in the Academic Year 2021/202.

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