

**EXERCISE BRAIN (*BRAIN GYM*) TO ENHANCEMENT POWER REMEMBER
FOR PRESCHOOL AGE CHILDREN (AGE 4-6 YEARS)
IN KINDERGARTEN SETAPUK BESAR VILLAGE**

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Background: Future performance and quality of life of a person and in Social life is an influence on children's intellectual development and academic performance. Golden period in the process of developing independence in early childhood is at preschool age. Preschool age children's readiness to improve cognitive development is a must so that children do not experience lateness in process learning And socialize. Practice memory on children in the learning process and improving achievement can be done in various ways. Therefore, researchers took the initiative to do brain exercises to improve the memory of preschool-aged children. 1) Research Objective: To prove that brain exercises are effective in improving memory in preschool children. 2) Research Method: The research method uses a *quasi-experiment* with a *pre-test* and *post-test* with control design. The sample consisted of 52 children who were divided into intervention groups and control groups. The intervention group was given an introduction to transportation and brain exercises, while the control group was given an introduction to transportation. 4) Results: The results of the study show that brain exercises can improve the memory of preschool children (4-6 years old) in the Setapuk Besar District State Kindergarten. With a *P-value* = 0.000 (*p* value < 0.05), *H_a* is accepted and *H_o* is rejected. 5) Conclusion: The results of this study can be concluded that brain exercises can improve the memory of preschool children (aged 4-6 years).

Keywords: Exercise brain; Power remember; Child age preschool.

A. Introduction

A person's future performance and quality of life and social life are influenced by children's intellectual development and academic performance. Data from *the World Health Organization* (WHO) 2018 recorded that 52.9 million boys, 54% of whom experienced developmental disorders in 2016. Data from *the United Nations Children's Fund* (UNICEF) on year 2017

25.5% of the data was obtained with 2.5 million children experiencing developmental delays and especially those under 5 years of age experiencing motor development problems (Azizah, nd). National data from the Indonesian Ministry of Health in 2018 percentage as much 88.3% child age 3 to 6 years experience development problems (Risksedes, 2018).



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In 2017-2021 there will be fluctuations in the number of children aged 3-6 years of participation in Early Childhood Education (PAUD) has decreased, while education can help children's growth and development. The impact that will occur if there is a delay is that fine motor development is not optimal, resulting in decreased creativity and concentration levels in children. Training children's memory in the learning process and increasing achievement can be done in various ways (Rahmadaynti et al., 2023).

Way fun will have more influence on children so that children can more remember what what has been studied. Doing brain exercises is one effective way For practice Power remember early childhood. To overcome motor problems in children aged 4-6 years by applying brain gymnastics (*Brain Gym*) to help development motor

in children (Rahmadaynti et al., 2024).

B. Method

The research design used is a *quasi-experimental design* with a *pre and post test with control group design* . The research carried out brain exercise interventions and the introduction of transportation using image media in the experimental group. Researcher provide an introduction to means of transportation using image media. Before the intervention and introduction of transportation equipment to the experimental group and before the introduction The means of transportation in the control group were *pre-tested* first.

The research was carried out within 2 weeks on sub-district state kindergarten students Setapak Big with a population of 52 people. The research was conducted on 52 respondents who met the inclusion criteria with 26 people divided into the control group And 26 person is at in the intervention group. The research results consist of univariate analysis and bivariate analysis.

C. Results And Discussion

Children's memory (pre and post) in the control group using pictures of transportation media.

	Pre	Intervention		Control	
		Qty	Percentage	Qty	Percentage
100 (A)	1	3.85%	-	-	-
80-90 (B)	-	-	-	-	-
70 (C)	1	3.85%	-	-	-
60/<60 (D)	24	92.30%	26	100%	-
Post					
100 (A)	10	38.47%	2	7.7%	-
80-90 (B)	14	53.85%	9	34.6%	-
70 (C)	1	3.84%	4	15.4%	-
60/<60 (D)	1	3.84%	11	42.30%	-

In the data normality test using Kolmogrov Smirnov parameters, the data was not normally distributed, the results were Asym Sig 0.046 (P value < 0.05). So the next test use test Wilcoxon.

Variable	P value	
	Intervention	Control
Pre	0,000	0,046
Post	0,181	0,059

Analysis of Brain Exercises on Improving Memory in Preschool Children

Variable	P value
Before Intervention	-
After Intervention	0,000
Before Control	-
After Control	0,000

The results of the Wilcoxon test with Pre Test and Post Test are p-value = 0.000 (p value < 0.05) then Ha is accepted and Ho is rejected, so it is concluded that brain exercises can improve the memory of preschool children (aged 4-6 years). For the control group, the results were obtained from the Wilcoxon test with Pre Test and Post Test, namely p-value = 0.000 (p value < 0.05) then Ha is accepted and Ho is rejected. From this statement, the control group also experienced an increase in memory in preschool-aged children.

Test the difference between the intervention group and the control group regarding improvement children's memory.

Variable	Test Mann-Whitney		
	Mean	elementary school	N
Intervention class	39,04	18,499	26
Control class	78,46	19,442	26
Total	-	-	52
Asym. Sig	-	-	0,000

Got it results Asym Sig 0,000 (P value <0.05) then it can be concluded that the hypothesis is accepted, which means there is a difference in results between the control group and the intervention group.

Research by Ach Royyan (2023), carried out brain exercises to improve the memory of preschool-age children. In this research, Pre-Experimental research was used with a one-group pre-post test design. The sample used was 30 respondents. The results of the Wilcoxon statistical test showed that the significance figure (0.03) was much lower than 0.05, so Ha was accepted, which means there is an influence of brain exercise. (*Brain gym*) on memory in preschool children (aged 4-6 years) at Miftahul Falah Kindergarten in Tokuh Village, Pragaan District, Sumenep Regency (Royyan, 2023).

D. Conclusion

Based on the results of research with a total of 52 respondents using the Wilcoxon test and the results of the Pre Test and Post Test, namely p-value = 0.000 (p value < 0.05), then Ha is accepted and Ho is rejected, so it is concluded that brain exercises can improve the memory of preschool children (4-6 years old). Based on the Mann-Whitney test, it shows the significance value of Asym Sig 0,000 (P value <0.05) then the hypothesis can be accepted, which means there is a difference results between groups control

and intervention group. It can be concluded that in the intervention group the child's post test was higher than the post test score in the control group .

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