



## The Effectiveness Of Brain Gym On Concentration On Child Age Toddler

Titi Sulastris<sup>1)</sup>, Dina Carolina Hapsari<sup>2)</sup>

<sup>1),2)</sup>Nursing Study Program, Health Polytechnic Ministry of Health Jakarta III

Email : <sup>1)</sup>[titi.sulastris@gmail.com](mailto:titi.sulastris@gmail.com), [dinakanza.dc@gmail.com](mailto:dinakanza.dc@gmail.com)

Corresponde Author : [titi.sulastris@gmail.com](mailto:titi.sulastris@gmail.com)

Article Information	Abstract
<p>Article history: Received: 15-10-2023 Revised: 27-10-2023 Accepted: 24-11-2023</p> <p><b>Keywords:</b> Brain Gym , Concentration Power, Toddler Age Children</p>	<p>Concentration is a person's attention that is only directed at an object, with the nature of being somewhat fixed, firm, strong and not easily shifting one's attention to other objects, while brain gym is exercise or movement Which used For increase Power remember And concentration. The aim of this research is to find out whether there is effectiveness in doing Brian Gym in increasing children's concentration power. Method in study This will use quantitative pre-experiment with design <i>one-groups pretest-posttest design</i> Where study This No There is group comparison but use group Which Already There is For in measuring difference score concentration before And after did it treatment on sample that Already There is. Results study And discussion Which served researcher in chapter This based on Data collection was carried out on 05-08 May 2023 in the RT 002 RW 015 area Tanjung Priok Village, North Jakarta. the number of respondents who were research subjects was 10 person respondents with technique total sampling in where samples Which taken is all overpopulation involved. Based on the research and studies that have been carried out, it can be concluded that brain exercises have a positive influence on children's concentration. Brain exercise involves physical movement and brain exercise that stimulates blood flow and the release of chemicals who plays a role in improving concentration and focus.</p>

### Introduction

Toddler are children aged 12-36 months or 1-3 years, this age is included in the *golden age* for children's intelligence and development. In this period, children have started to walk, recognize the house and the surrounding environment, can put together 6 blocks, are starting to learn to eat on their own, learn to direct their eyes and nose, and can control urination like adults. Children will be actively involved in learning new things at this age, such as how things operate and how to manage users of an object. Ages 1-3 years are often in the process of growth and development. And the rapid development of brain cells. Children who receive stimulation will grow faster than those who receive little or no stimulation.

According to (Wang, 2021) other research has shown that around 250 million children under the age of 5 years (around 43%) are at risk of experiencing developmental delays. China is estimated to be ranked second globally in terms of the total number of young children with psychosocial developmental delays, namely 45 million. Recent studies in China, however, show that psychosocial delays are most common among children in rural areas. While studies in urban areas consistently show rates of psychosocial developmental delay among infants and toddlers below 15%, the average rate of delay for healthy populations, studies of children aged 0 to 6 years in rural China have found rates of psychosocial developmental delay between 39 and 49%. age children suffering from psychosocial

development disorders, including fine motor development disorders. In Indonesia, the achievement of children's health services has reached 75.82 % , while the national target is 85% (Ministry of Health of the Republic of Indonesia, 2021).

According to Afarizi 2019 in his research journal, children's concentration can be trained through brain exercise methods. Brain exercises are exercises used to improve memory and concentration. Brain gym is a series of movements and touches that can stimulate the brain so that it can work optimally. Brain gymnastics has several benefits, namely sharpening the ear's sensitivity to hearing so that hearing is sharper, stimulating the brain that receives information (receptive) and the part that uses information (expressive) making it easier to learn new things and can restore brain facilities after a lot of activity that makes stress, increases concentration and increases the ability to understand and think rationally.

**Research methods**

This research used a quantitative pre-experiment using a one-group pretest-posttest with control design to analyze differences in concentration scores in the samples before and after treatment. The concentration score on the sample before treatment will be measured for this pre-test. Next, 10 children will be given treatment, namely brain exercises and their concentration scores will be measured again after treatment (post-test), while the controls will not. This exercise will be carried out on 3 days for 5-10 minutes. In this research, researchers used a total sampling technique. The total sampling technique is where the sample taken is the entire population involved. Based on the researchers' initial survey, there were 20 children aged 3 years who would participate in brain exercise activities in the RT002/RW015 area, Tanjung Priok Village, North Jakarta.

Results and Discussion The research results and discussion presented by researchers in this chapter are based on data collection carried out on 05-08 May 2023 in the RT 002/RW 015 area, Tanjung

Priok Village, North Jakarta. The number of respondents who were research subjects was 20 respondents using a total sampling technique where the samples taken were the entire population involved. As well as data analysis using analytical estimation of data distribution using the Independent-Samples T Test. To determine the difference in concentration test scores in the control and intervention groups before being given Brain Gym stimulation (brain gymnastics) in the intervention group 3 times in 3 days for 5-10 minutes, this was done Independent-Samples T Test to determine the difference in mean concentration scores

**Table 4.3 Differences in Concentration Score Results Before Being Given Brain Gym Stimula (Brain Gymnastics) 3 times for 3 days.**

Group	N	Mean	elementary school	S.E	P Value
Intervention	10	6.70	0.8566	0.474	0.780
Control	10	7.40	1.50284	0.683	
Total	20				

In table 4.3, the results of the Independent T test analysis show that the concentration score in the intervention group has a mean value of 6.70 with a standard deviation of 0.8566, while in the control group the mean value is 7.40 with a standard deviation of 1.50284. The statistical test results obtained a p value = 0.780, which means > 0.05 so there is no significant difference in concentration scores between the intervention group and the control group.

**Table 4.4 Normality Test Results of Concentration Scores in the Intervention Group and Control Group for 3 year old children in RT 002/RW 015 Tanjung Priok Subdistrict, North Jakarta**

Group	Variable	Normality test		
		Shapiro-Wilk	Skewness Value	Standard error
Intervention	Pre-Test concentration score	0.314	-0.512	0.37417
	Post-Test concentration score	0.314	0.512	0.37417

<b>Control</b>	<b>Pre-Test concentration score</b>	<b>0.086</b>	<b>-0.315</b>	<b>0.67823</b>
	Post-Test concentration score	0.421	0.541	0.58310

Based on table 4.4, the results obtained from the skewness calculation divided by the standard error, with the normality criteria being (-2 to 2), the concentration score results obtained before being given Brain Gym stimulation (brain gym) in the intervention group were (0.325), and the score results concentration after Brain Gym stimulation (brain gymnastics), namely (0.613). In the control group, the results obtained from skewness divided by the standard error obtained were the concentration score results before Brain Gym stimulation (-0.464), namely (-0.464) and the concentration score results after being given Brain Gym stimulation (brain gymnastics), namely (0.927). Judging from normality descriptively, the data above is normally distributed. The normality test using the descriptive method is seen from the skewness test, if the skewness value is divided by the standard error to produce a number in the range -2 to 2 then the data is a normal distribution. 50) and Shapiro- Wilk (sample less than 50) if the significance value is > 0.05 then the data has a normal distribution. Judging from the Shapiro-Wilk values above, there are no values less than 0.05 , which means it can be concluded that the data distribution is normal.

So in this research we used the Dependent T test/ Paired Samples T Test and Independent-Samples T Test to carry out data analysis because the data was normal. a. Differences in concentration score results before and after being given brain gym stimulation in the intervention group. The analysis used in this study used parametric analysis, namely the Dependent T Test/ Paired-Samples T Test, because in the results of the data normality test the data distribution was normal. . Here are the results.

**Table 4.5 Differences in concentration score results before and after being given brain gym stimulation in the intervention group**

Variable	N	Mean	Elementary School	S.E	P Value
Concentration Score Results					
Pre Test	10	9.30	1,816	0.882	0,000

Post Test	10	8.60	1,503	0.653
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Based on table 4.5 above, it can be seen that by using the Dependent/ Paired- Samples T Test, the Mean Pre Test ( 9.30 ) and Mean Post Test (8.60) were obtained . The statistical analysis value P-value (sig) is (0.000). Because P-value (sig) <  $\alpha$  (0.05 ) then Ha is accepted. This is in accordance with Suparno's theory (2013: 116) if P value (sig) <  $\alpha$  (0.05 ) means Ho is rejected. Thus, there is a significant difference in the results of concentration scores before and after being given Brain Gym stimulation 7 times during the intervention group in RT 002/RW 015, Tanjung Priok Subdistrict, North Jakarta.

Gunanggoro's research (2016) found that brain exercises were effective in increasing concentration in 3 year old children. The final results of the study showed a significant increase in the average concentration score (p=0.000) after being given brain exercises. The results above show that respondents who received Brain Gym stimulation (brain gymnastics) experienced increased concentration power, so that Brain Gym stimulation (brain gymnastics) is good for children of developmental age . a . Differences in Concentration Test Score Results Before and After Being Given Brain Gym Stimulation in the Control Group.

The analysis used in this research uses parametric analysis, namely the Dependent T Test/ Paired-Samples T Test, because the results of the data normality test show a normal data distribution. Here are the results.

**Table 4.6 Differences in concentration score results before and after being given brain gym stimulation in the control group.**

Variable	N	Mean	Elementary school	S.E	P Value
Concentration Score Results					
Pre Test	10	9.30	1,816	0.882	0.186
Post Test	10	8.60	1,503	0.653	0.167

Based on table 4.6 above, it can be seen that by using the Dependent T test/ Paired-Samples T Test, the Mean Pre Test value was (9.30 ) and the Mean Post Test value was (8.60). The P-value (sig) statistical analysis value is (0.186 & 0.167). Because P-value (sig) >  $\alpha$  (0.05 ) then Ha is rejected. This is in accordance with Suparno's theory (2013: 116) if P value (sig)

$> \alpha (0.05)$  means  $H_0$  is accepted. Thus, there is no significant difference in the concentration score results in the control group before and after Brain Gym stimulation (brain gym) in the control group. The mean value in the control group above decreased after the post test from 9.30 to 8.60, this is This was due to the absence of stimulation given, namely Brain Gym (brain gym) in the control group with a P value of 0.186 & 0.167, which means it is not significant. This is supported by the research results of Nurmalasari & Susilowati (2022) with a P-value of 0.470, which means it is not significant either.

Conclusion Based on the research and studies that have been carried out, it can be concluded that brain exercises have a positive influence on children's concentration abilities. Brain exercise involves physical movement and brain exercise that stimulates blood flow and the release of chemicals that play a role in increasing concentration and focus. The direct benefits of brain exercise on children's concentration include improving information processing abilities, problem solving, memory, as well as focus and attention.

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