THE INFLUENCE OF BRAIN GYM ON MEMORY ABILITY OF SCHOOL-AGE CHILDREN AT SDN 10 KONDA SOUTH KONAWE DISTRICT

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ABSTRACT

Based on a preliminary study at SDN 10 Konda, the fifth-grade students at SDN 10 Konda were 150 students. From the observations and initial data collection results, it was found that students in class V SDN 10 Konda, when viewed from the student's learning achievement, were still below the average compared to other classes. It is influenced by several factors, including students' internal factors such as the memory ability of students who cannot catch lessons well.

This study aimed to determine the effect of giving a brain gym on the memory ability of fifth-grade students at SDN 10 Konda, South Konawe Regency. The research design used in this study was a pre-experiment with a one-group pretest and posttest design. The population in this study were all fifth-grade students at SDN 10 Konda, totaling 150 students with a total sample of 21 respondents who were taken using the purposive sampling technique.

From the normality test results of the data using the Shapiro-Wilk test with a value of = 0.05, it was found that the data were not normally distributed. So the test used is the Wilcoxon signed-rank test. From the test results, a significant value of 0.000 <0.05 means that Ho is rejected and Ha is accepted. It can be concluded that Brain Gym influences the memory ability of children's age at SDN 10 Konda in Konda District, South Konawe Regency.

This research suggests that teaching staff at SDN 10 Konda regularly apply the brain gym in classroom learning to improve memory skills.

Keywords: Brain gym, Memory Ability, Konda 10 State Elementary School

I. INTRODUCTION

Children are unique individuals who cannot be assessed socio-economically and are entitled to individual health services. However, in meeting their needs, children are still dependent on adults and their environment (Supartini, 2011).

The achievement of a child's growth and development phase can affect the next stage of development. During this phase of growth and development, children tend to have a strong urge to explore the surrounding environment, so children need an environment to interact and express their ideas or thoughts (Siamy et al., 2015). Based on the stages of development, children can be divided into several age groups, namely infant, toddler age, pre-school age, school age, and adolescent age.

When compared with pre-school-age children, they tend to have a stronger memory. School-age children can relate the information they have just received with existing information. This ability places school-age children to recall the materials received (rehearsal) (Gunarsa, 2006).

Of course, with the ability of a child's good memory, it can help children to get satisfactory academic achievements. However, not all children have exemplary academic achievements in
school. It is due to children's different memory abilities, which are influenced by the child's internal factors and the child's external factors.

Various ways can improve children's memory, one of which is to train children with a brain gym. Brain gym is a series of simple motion exercises that aim to maximize the work of the human brain. Brain gym can be applied for various purposes, including training a person to strengthen memory during the learning process or repeating the subject matter at school.

Based on the results of a preliminary study conducted at SDN 10 Konda, South Konawe Regency, students in class V have academic achievements on average compared to other classes. It can be seen from the reports of student learning outcomes carried out every semester.

From the results of interviews with several fifth-grade students at SDN 10 Konda, it was said that students had difficulty remembering what the teacher had said or taught. Likewise, in the case of reading textbooks, students cannot quickly grasp the material being studied. So that in reading or studying students have to repeat it several times. Moreover, the students said that their lessons were easier to lose from their memory.

Based on the description above at SDN 10 Konda, the researcher wanted to see if there was an influence of Brain Gym on the Memory Ability of Elementary School-aged Children at SDN 10 Konda in Konawe Selatan Regency”.

This research aims to determine the effect of Brain Gym on the Memory Ability of School-Age Children.

2. RESEARCH METHOD

The design used in this study was Pre-Experimental with a one-group pretest and posttest approach. Namely, looking at the effect of brain gym on children's memory skills (Notoatmojodo, 2010).

The independent variable in this study is brain gym, while the dependent variable is the memory ability of school-age children. This research will be conducted at SDN 10 Konda, South Konawe Regency. The population in this study were all students at SDN 10 Konda totaling 150 students. In comparison, the number of samples in this study amounted to 21 students in class V SDN 10 Konda.

Samples were drawn using the purposive sampling technique. With the inclusion criteria, students are active in school at SDN 10 Konda, fifth-grade students, and physically and mentally healthy. Meanwhile, the exclusion criteria in this study were students who were not willing to be respondents, were on school leave, or were sick.

Primary data in this study was collected by measuring children's memory using the Children's Memory Action Test Question instrument (Source: Reni Tri Rahayu, 2014). In measuring children's memory, children will be asked to memorize a list of names that have been listed, then asked to memorize them again. It is recorded according to the child's memory on the observation sheet. As for the brain gym itself uses standard instruments that already exist about the brain gym SOP.

The research instrument used by the researcher is the standard instrument for measuring children's memory and the SOP for Brain Gym. The instrument is not tested for data validity.
and reliability. The data was collected by measuring the children's memory before the brain gym (pretest), after which the researcher would give or train the children to do the brain gym for 5 minutes. Brain gym will be done two times a week for four weeks, where the total movement in the brain gym is eight movements.

After that, researchers will measure the memory of children who have done brain gym in the last week to find changes in children's memory after the brain gym. Considering that this research was carried out during the Covid 19 pandemic, the research was carried out by following strict health protocols.

Then the data were processed using SPSS 16. Previously, the normality test of the data was carried out using Shapiro-Wilk with a level of 0.05 ($\rho = 0.05$). If the data is usually distributed and the data scale is the paired t-test interval (paired t-test) at the level of significance ($\rho$) = 5% (0.05). Meanwhile, if the data is not normally distributed, then non-parametric statistics are used, namely, the Wilcoxon signed-rank test, at the level of significance ($\rho$) = 5% (0.05). The normality test results found that the data were not normally distributed so that the test used was the Wilcoxon signed-rank test.

Maintain the confidentiality of respondent data, and researchers, including the consent form, carry out several research ethics to become a respondent (Informed Consent). Without the respondent's name disguised (Anonymity), the respondent's data in respondent characteristics are kept secret (Confidentiality).

3. RESULTS AND DISCUSSION

a. Research result

1) Characteristics of respondents

a) Age

Distribution of respondents by age as shown in the table below:

**Table 1. Distribution of Respondents by Age at SDN 10 Konda**

<table>
<thead>
<tr>
<th>No.</th>
<th>Age</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>11 yrs</td>
<td>2</td>
<td>9.5</td>
</tr>
<tr>
<td>2.</td>
<td>10 yrs</td>
<td>19</td>
<td>9.05</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>21</td>
<td>100</td>
</tr>
</tbody>
</table>

b) Gender

Distribution of respondents by gender as shown in the table below:
Table 2. Distribution of Respondents by Gender at SDN 10 Konda.

<table>
<thead>
<tr>
<th></th>
<th>Sex</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Male</td>
<td>9</td>
<td>42,9</td>
</tr>
<tr>
<td>2.</td>
<td>Female</td>
<td>12</td>
<td>57,1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>21</td>
<td>100</td>
</tr>
</tbody>
</table>

2) Univariate analysis

Univariate analysis was carried out on each variable, namely the child's memory ability before and after the brain gym was done.

Table 3. Frequency Distribution of Respondents Based on Memory Ability of School-Age Children at SDN 10 Konda, South Konawe Regency

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Before</th>
<th></th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability</td>
<td>n</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Memory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>15</td>
<td>71,4</td>
<td>1</td>
</tr>
<tr>
<td>Medium</td>
<td>6</td>
<td>28,6</td>
<td>2</td>
</tr>
<tr>
<td>High</td>
<td>0</td>
<td>0 %</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>100</td>
<td>21</td>
</tr>
</tbody>
</table>

The table above shows that students' memory ability before being given a brain gym was low, namely 15 respondents, six respondents whose memory was moderate. While the students' memory ability after being given a brain gym showed an increase where 18 respondents (95.5%) were high, two respondents (9.5%) were moderate, and one respondent (4.8%) was low.

3) Bivariate analysis

The results of the bivariate analysis can be seen in the following table:

Table 4. The Effect of Brain Gym on Memory Ability of School-Age Children at SDN 10 Konda in Konda District, South Konawe Regency
Conclusion

Table 4 shows that the Wilcoxon test results obtained a significant value of 0.000 < 0.05. With the conclusion that Ho is rejected, Brain Gym's influence on Memory Ability in School-Age Children at SDN 10 Konda in Konda District, South Konawe Regency.

b. Discussion

Brain Gym, or what is known by the public as brain gymnastics, is an intervention carried out to increase one's concentration and increase the brain's ability to remember things that have been previously learned. This brain exercise, of course, can positively impact students in remembering or memorizing lessons that have been learned in class.

It is in line with Nunung (2015), which states that the movement in brain gymnastics can stimulate the performance of the right brain and left brain to produce body coordination, coping cognitive, alertness, concentration, memory, problem-solving, and one's creativity. Brain exercise is an exercise with simple movements so that in its application, it can be quickly followed. Although regular exercise also has simple movements, it has a different purpose: improving the heart's work, lung function, and increasing muscle ability (Diana, 2017).

Respondents who have been doing brain gym routinely for eight times in 4 weeks, which are done twice in 1 week, namely on Wednesdays and Fridays with a duration of 5-10 minutes at SDN 10 Konda, can experience an increase in memory skills. The research evidence shows a difference in the average points obtained by respondents before and after being given a brain gym. In line with the results of statistical tests, a significant value of 0.000 < 0.05 was obtained. Memory can improve because respondents follow brain gym training procedures regularly with health conditions and can do brain gym correctly and adequately.

In this study, an assessment of improving memory skills was carried out by measuring memory after being given a brain gym using a questionnaire media. Assessment of memory using a questionnaire media before being given a brain gym and after being given a brain gym for eight times in 4 weeks, for two times in 1 week, every Wednesday and Friday for 5-10 and using video tools with a video duration of 5 minutes at SDN 10 Konda, South Konawe Regency.
4. CONCLUSION

Based on the research results on the effect of brain gym on memory ability in school-age children at SDN 10 Konda in South Konawe Regency. It can be concluded there is an effect of brain gym on memory ability in school-age children at SDN 10 Konda, South Konawe Regency.

REFERENCE

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