

The Effect Of Cross Crawl Brain Gym On Temper Tantrum In Preschoolers Of Tk Ma'had Pekalongan

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Abstract

Background : One of the most difficult problems to overcome during children growth is temper tantrums. Temperature tantrums is a children behavior that need to be resolved for better development of children as an individual. Cross crawl brain gym is to reduce the temper tantrums by stimulating systems that are related to feelings or emotions, namely the midbrain (limbic system) and the cerebrum. **Objective :** The purpose of this research was how the effect of cross crawl brain gym on temper tantrums in preschoolers of TK Ma'had Islam Pekalongan. **Research Method :** This research method used of quisi experiment with pretest-posttest control group design. The population of this research was 105 of preschoolers in TK Ma'had Islam Pekalongan and the samples were 30 respondents which is used purposive sampling technique. The cross crawl brain gym was done 6 times a week. The data analysis of this research using SPSS. **Result :** The result of this research showed that the Independent T-test found that there was the effect of cross crawl brain gym on temper tantrums in preschool children with the p value = 0.006. **Conclusion :** The cross crawl brain gym can reduce temper tantrum in preschoolers. Nurses should regularly giving information for parents about the importance of cross crawl brain gym for reducing temper tantrums reaction among preschool children.

Keyword : Preschoolers, Temper Tantrums, Cross crawl braingym

Introduction

Preschoolers are children between the ages of 3-6 years, and usually they already in the preschool program. According to Dewi, Oktawati, Saputri (2015) says that the cognitive and social abilities have been perfected at the preschool age. In order, The Indonesian Ministry of Education and Culture (2017), The population of preschoolers in Indonesia reaches around 316,848 people, while the population data of preschoolers in Central Java reaches around 712,116 people. The education authorities in December 2018 recorded a population of preschoolers in the Pekalongan City reaching around 9,236 people (Education Authorities, 2018).

According to Novan (2016) says that the emotional development in preschoolers is strongly influenced by their social development, both also have the relationship to influence each other. One of the most difficult problems to overcome during children growth is temper tantrums. Temper Tantrum is a reaction with extremely strong emotional outburst,

accompanied by anger, aggressive attacks, crying, screaming, and rolling over. It can be influence children have the characteristics including; difficult to adaptation with new situations or new people, often in negative moods, easily provoked anger, and difficult to distract (Antasari, 2009).

Research was conducted by Cichago 50-80% temper tantrum occurs at the age of 2-3 years occurs once a week, and 20% occur almost every day, and 3 or more temper tantrums occur for approximately 15 minutes (Tiffany, 2012). In another researched in Northwestern Feiberg based on the survey of nearly 1,500 parents, this study found that 84% of children aged 2-5 years express their frustrations by raging in the past month, and 8.6% have daily tantrums which are precisely if they are occur every day is not normal (Wakschlag, 2012). Whereas in Indonesia, toddlers who experience this in time, 23-83% of children aged 2 to 4 years have experienced temper tantrums (Psologologizone, 2012).

Children who often experience temper tantrums, are at risk of experiencing emotional disturbances and behavioral disorders. Playing therapy and brain intelligence therapy are the way efforts to overcome it, and the important thing for preschoolers age is brain exercise (Hayes, 2010).

The brain gymnastics is a series of sequential exercises for dynamic, crossing body movements. This exercise stimulates the systems which is connecting with feelings or emotions, namely the midbrain (limbic system) and cerebrum. Brain exercise can affect emotional intelligence because brain exercise is a physical activity movement which is easy to do and fun for children. Brain gymnastics can be done at all age, whether elderly, infants, autistic children, adolescents, or adults (Saichudin et al, 2009). The Researchers chose cross crawl brain gymnastics because cross crawl brain gymnastic movements are easy for preschoolers to do.

The results of a preliminary study conducted in February 2019, Ma'had Islam Kindergarten in Pekalongan city which is have 5 classes with 105 students. A structured interview was conducted for 8 mothers who had preschool children stated that almost of them confuse when overcome their children while in temper tantrums. Parents usually will comply the child's needs when the children in a situation of temper tantrums. This is the most efficient solution taken by parents commonly. Especially if their children do temper tantrums in public places, parents will certainly give everything what the child wants or even make promise new things, which is able to attract the child's attention.

Methods

The research design was used a quisy experiment with a pre-test and post-test control group design. According to Dharma (2011) says that quisy experiment is a study that try to intervene in a group of subjects with or without a comaparison of a group, but there is no randomization to include the subject in treatment or control group. In this research used a pre-test design. Which a group that has not been given

cross-crawl brain exercise interventions and post-test is a group that has been given cross-crawl brain exercise interventions.

In this research the subjective group and the control group will be given an intervention to be able to compare in a group that before and after given by the intervention. The treatment group and the control group was given cross-brain exercise intervention. The design of this study is almost the same as pure research, but in this study the researcher did not randomize. So that there is a risk of an imbalance of sample characteristics between the treatment group and the control group (Dharma, 2011).

Result and Discussion

The results of the study will be described in two parts, as follows:

1. Analisis Univariat.

Table 1 : The characteristics of respondents by sexes at TK Ma'had Islam Pekalongan

Sex	n (%)
Female	11 (36,6%)
Male	19 (63,4%)
Total	30 (100%)

Source: the primary data, 2019.

Based on the table above the characteristics of respondents by sexes stated that the majority of male respondents were 19 children (63%).

Table 2 : The characteristics of respondents based on age at TK Ma'had Islam Pekalongan

Age	n (%)
5 years	15(50%)
6 years	15 (50%)
Total	30 (100%)

Source: the primary data, 2019.

Based on the table above it can be seen that the respondents which aged 5 years are 15 children (50%) and aged 6 years are 15 children (50%).

Tabel 3 : Tantrum tantrum in the control group (n = 15)

Information	Ma x	Min	Me an	Temper Tantrum
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				High	Low
Pretest	81	56	68,2	8 (53,3 %)	7(46, 7%)
Posttest	78	54	66,8	10 (66,7 %)	5 (33,3 %)

Source: the primary data, 2019

Based on the table above, it can be seen that the number of pretest high temper tantrum respondents is 8 (53.3%) children and low temper tantrum is 7 (46.7%) children with temper tantrum score the minimum value is 56 and the maximum value is 81 with mean value 68.2 while the number of posttest respondents with high temper tantrum are 10 (66.7%) children and low temper tantrum are 5 (33.3%) children with a minimum value of 54 and the maximum value is 78 with mean value of 66.8. And the p value obtained $0.188 > 0.05$, it can be said that the temper tantrum there is no difference.

Table 4 : Tantrum temperatures before and after the cross-crawl brain exercise were performed in the treatment group at TK Ma'had Islam in Pekalongan City (n = 15)

Information	Max	Min	Mean	Temper Tantrum	
				High	Low
Pretest	81	56	67,2	6 (40%)	9 (60 %)
Posttest	65	52	58,2	4 (26%)	11 (73, 3%)

Source: the primary data, 2019

Based on the table above, it can be seen that before doing cross-crawl brain gymnastics the number of respondents in high tantrums are 6 (40.0%) children and low tantrums are 9 (60.0%) children with a minimum value of 56 and the maximum value are 81 with mean value of 67.2. Whereas after doing cross crawl brain gymnastics the number of high temper tantrum respondents are 4 (26.7%) children and low temper tantrum are 11 (73.3%) children with a minimum value of 52 and the maximum value with an mean value of 58.2. And p value

obtained $0,000 < 0.05$, it can be said that there is a difference in temper tantrums.

1. Analisis Bivariat

Table 5 : The Result of Normality Test

	Group	Statistic	Frequency	P value
Pre-test	Treatment	0,962	15	0,724
	Control	0,917	15	0,171
Post-test	Treatment	0,977	15	0,949
	Control	0,989	15	0,999

Source: the primary data, 2019

Based on the results of Shapiro Wilk test, it proves that the data is normally distributed if the value of $p > 0.05$. From these results obtained:

- 1) Pretest data of the treatment and control group are normally distributed
- 2) Posttest data of the treatment and control group are normally distributed

Then next to the hypothesis test in the comparison of pre and post test, the control group will use the paired T parametric test, and in comparison between the treatment group and the control group will use the independent t-test.

Table 6 : The difference of temper tantrum scores in control group at TK Ma'had Islam City of Pekalongan in 2019 (n = 30)

Information	N	Mean	P-value
Pretest	15	68,2	0,188
Posttest	15	66,8	

Source: the primary data, 2019

Based on the table above, the results show that the mean pretest in the control group is 68.2 and posttest 66.8 with a p value of 0.188 where > 0.05 so that it can be stated there is no difference.

Table 7 : The difference of temper tantrum scores before and after the cross crawl exercise is performed in treatment group at TK Ma'had Islam Kindergarten in Pekalongan City in 2019 (n = 30)

Information	N	Mean	P-value
Pretest	15	67,2	0,000
Posttest	15	58,2	

Source: the primary data, 2019

Based on the table above, the results show that the mean pretest in treatment group is 67.2 and posttest 58.2 with a p value of 0,000 where < 0.05 so that it can be stated that there are significant differences.

Table 8 :The Homogeneity test for difference in temper tantrum scores after cross crawl brain gymnastics is performed

<i>F</i>	<i>P Value</i>
0,004	0,953

Source: the primary data, 2019

Based on the table above, it is known that the homogeneity test p-value is 0.953, it means that the data is homogeneous. The independent t test results in this study are as follows:

Table 9 : Independent t test of the difference in temper tantrum test after cross-crawl brain gymnastics performed at TK Ma'had Islam Pekalongan

Information	Mean	t	<i>P value</i>
Control	8,60	-2,988	0,006
Treatment	1,06		

Source: the primary data, 2019

Based on the table above, it is known that the mean of temper tantrum in control group is 8.60 while the mean in treatment group is 1.06. The t value of *Independent t-test* in temper tantrum difference after was done by cross-crawl brain gymnastics of -2.988 with a p value of 0.006 ($0.006 < 0.05$). So it can be concluded that there are differences.

Conclusions

Based on the results of the research that has been done and the discussion, there are several conclusions that can be proposed with the description as follows:

1. The majority of respondents who experienced high tantrums based on the most sex are men and the mean age is 5-6 years.
2. There is an effect of giving cross crawl brain gymnastics to temper tantrums in preschoolers age at TK Ma'had Islam Pekalongan with the significance of paired t-test 0,000 ($< p$ value 0.05)
3. The mean of temper tantrum before cross-crawl brain gymnastics performed at TK Ma'had Pekalongan in control group is 68.2 and in treatment group is 67.2.
4. The mean of temper tantrum after cross-crawl brain gymnastics performed at TK

Ma'had Pekalongan in control group is 66.8 and the treatment group is 58.2.

5. Types of tantrums that happened were manipulative tantrums.

Suggestion

1. For respondents
The results of this study can be used as additional information for respondents, so that both parents and kindergarten teachers can use cross crawl brain gymnastics to overcome temper tantrums in preschoolers.
2. For other researchers
For further researchers to be able to develop research by adding frequency, duration and other activities to overcome temper tantrums in preschooler.
3. For Educational Institutions
For educational institutions, especially the Nursing Science Study Program can develop the results of this research.

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