



The Impact of ACIK Gymnastics on Physical Fitness in Elementary Schools

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Abstract

Physical fitness is a condition that every child must have. Children who have good physical fitness show healthiness. To have good physical fitness can be done by exercising. One sport that is easy for children to do is gymnastics. This study was aimed to determine the impact of ACIK gymnastics on children in elementary schools. This study was supposed to determine the impact of gymnastics on the physical fitness of children aged between 6-9 years. This type of research was experimental research by providing treatment in the form of ACIK gymnastics to children. The sample used in this study was 30 girls at SD 01 Kandis Ogan Ilir. The data were obtained from the results of the pretest and posttest. This research was an experimental research. Statistical test using SPSS means the value of Sig. (2 tailed) is $0.002 < 0.05$, then H_0 is rejected and H_a is accepted. So it can be concluded that there is a difference in the average pretest and post-test TKJI test results, which means that there is an effect of ACIK gymnastics on the physical fitness of children at SD Negeri 10 Kandis. Based on data analysis and discussion, it can be concluded that gymnastics has a significant impact on increasing physical fitness in early childhood. It can be suggested that ACIK gymnastics can be used in physical activities as well as exercises to improve fitness because of it.



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INTRODUCTION

Planned and organized physical activity allows students to improve their physical fitness. One of the exercises that is thought to be able to improve the physical fitness of female students is through gymnastics. If the exercise is done correctly and with enthusiasm, it will be able to have an impact on physical fitness. Conversely, if female students have no physical activity, then it is unlikely that they will have good physical fitness.

Students who do not have good physical fitness, students will not study well, because of a lack of enthusiasm in learning. The process of learning one's physical education will be disrupted if the physical fitness of the student is disturbed. The physical activity provided is by doing gymnastic exercises, one of which is ACIK gymnastics which is one of the important gymnastics and must be owned by every student in order to improve physical fitness. Gymnastics is an excellent mechanism for educating basic motor abilities and advertising health-related fitness in youth for a long time (Sukamti et al., 2020). Synchronized tumbling is also known as rhythmic gymnastics. "Rhythmic gymnastics is defined as a high leap demanding sport. Leaping ability is a basic component of rhythmic gymnastics, expected to execute both leap difficulties and choreographic elements" (Polat, 2018).

The need for physical education, especially learning rhythmic gymnastics is to help children fulfill their desire to move, then as a vehicle for developing children's physical fitness, besides that it can also be used to develop various types of process-oriented basic movement skills, and as enrichment of various kinds of basic movement skills. Rhythmic gymnastics movements follow the rhythm used and prioritize elements of beauty, smoothness, flexibility, harmony of

movement, and movement accuracy to the accompaniment rhythm. The ACIK exercise consists of several stages, namely: 1) Warming up, 2) Core, 3) Cooling down. (Ulfah et al., 2021)

ACIK gymnastics namely ACIK (Anak Ceria dan Kreatif/ Cheerful and Creative Children). ACIK (Anak Ceria dan Kreatif) gymnastics is a series of exercises arranged by the author that are adjusted to the characteristics of kindergarten students and prioritizes basic elements of motion such as locomotor, non-locomotor and manipulative (Sukmawati et al., 2020). ACIK gymnastics is a gymnastic movement that is adapted to children's motor development by combining 5 subject matter themes which are combined into a series of gymnastic movements and combined in one gymnastic series. ACIK's gymnastic models are designed according to the objectives to improve children's physical fitness. ACIK gymnastics is gymnastics consisting of 3 types of gymnastic movements (non-locomotor ACIK gymnastics, locomotor ACIK gymnastics and manipulative ACIK gymnastics), with a series of gymnastic movements consisting of 5 (five) themes, namely myself, animals, transportation, professions and the natural surroundings which are adapted to the childhood characteristics.

The benefits of gymnastic movements are that children can make movements appropriately according to the function of these movements, thereby reducing motion confusion when doing rhythmic gymnastics activities and reducing the risk of motion injuries in children. Music and lyrics that are made according to the theme and gymnastic movements will cause expression and imagination, so that children are more interested in doing gymnastic movements because the music and song lyrics are adapted to the theme of the movements.

ACIK gymnastics is a factor that is considered important and is thought to influence the level of physical fitness possessed by female students. Students will be successful in achieving the maximum level of physical fitness if students are given ACIK gymnastic exercises. If students have a good level of physical fitness, students will not feel fatigue which is significant in learning, students will continue to be enthusiastic about participating in each lesson according to a predetermined schedule. So that with this condition, students will be able to study well and achieve a good level of physical fitness as well.

Elementary school age (SD) is the final childhood period that lasts from the age of six to about the age of eleven or twelve years. The main characteristic of elementary school students is that they display individual differences in many aspects and fields, including abilities in cognitive and language, personality development and children's physical development. So it is clear, in giving treatment to elementary school students, they must consider a series of movements that can generate interest and attractiveness for these students in carrying out a physical fitness activity. Physical fitness is one of the important aspects that every student must have in order to be able to participate in teaching and learning activities properly.

Physical fitness is a supporting factor for a student to participate in learning activities at school, and is a supporting factor for students to be able to achieve good learning outcomes. Physical fitness plays an important role in life, having a good level of physical fitness will certainly have high productivity and be able to work effectively and efficiently. Where students who have good fitness are believed to have endurance and concentration to cope with the learning load that continues to increase along with

the increasing age of students. Currently, girls' physical fitness is very low, because of the current developments; children tend to play with cell phones or gadgets rather than physical activity.

Therefore researchers try to provide physical activity to improve physical fitness, because physical fitness is something that every child must have. Physical fitness is the capacity to perform physical activity, and makes reference to a full range of psychological qualities. Physical activity is any body movement produced by muscle action that increases energy expenditure, whereas physical exercise refers to planned, structured, systematic and purposeful physical activity (Ortega et al., 2008). Physical fitness is related to a person's activities/activities in carrying out activities and moving. Physical fitness is needed to support a person's daily activities so that these activities are optimal. (Ortega et al., 2008). Physical fitness is related to a person's activities/activities in carrying out activities and moving. Physical fitness is needed to support a person's daily activities so that these activities are optimal. It is adapted to the demands of tasks and activities in everyday life. Physical fitness is the ability of a person's body to carry out daily work tasks, without causing significant fatigue (Nurhasan, 2013). As physical fitness refers to a wide range of aspects of health- and skill-related aspects (Corbin et al., 2008).

The importance of physical fitness activities is for the body to improve one's health and quality of life. Based on previous relevant research that shows that gymnastics greatly influences physical fitness including: the effect of cheerful gymnastics exercises on increasing the physical fitness of class VIII students of SMP Negeri 4 Golewa (Rewa et al., 2021),), based on their research it shows

that physical fitness can be improved by cheerful exercise.

The similarities with this research know the level of physical fitness, but the difference lies in the gymnastics and sampel used. Then the research entitled the effect of aerobic exercise on the level of physical fitness of students (Dewi & Rifki, 2020), based on this research shows that physical fitness can be improved by cheerful gymnastics. The similarity with this research is knowing the level of physical fitness, but the difference lies in the exercise used. Furthermore, research entitled the effectiveness of Indonesian children's cheerful gymnastics on gross motor skills and the active lifestyle of elementary school children (Dwijayanti, 2016).

Based on his research, it shows that physical fitness can be improved by cheerful gymnastics. The similarities with this research is knowing the research subjects and the type of treatment used, namely cheerful gymnastics which have in common that they are included in rhythmic gymnastics, the difference lies in the dependent variable being studied. Based on the search for relevant research, the researchers tried to conduct research to see the effect of ACIK gymnastics on bodily fitness. ACIK gymnastics is easy to do at any time. This exercise is expected

to improve the health and physical fitness of female students.

METHODS

The research type used in this study was experimental research. Experimental design is a design with each defined action step, so that information related to or required for the problem to be studied can be factually collected. The experimental research design also used a pre-experimental design with a one group pretest-posttest design (Noor, 2015). Here is a figure of the design

Pre- Test	Dependent Variable	Post test
O1	X	O2

Figure 1. One Group Pretest- Posttest Design

Experiment researchers can predict the level of physical fitness of female students from ACIK gymnastic exercises. This study used experimental methods using pretest and posttest. The instruments used for pre-test and post-test data collection were physical fitness instruments designed for children aged 6 to 9 years, namely physical fitness tests: sprinting, hanging your elbows, lying-sitting, jumping upright and running moderate distances. Each multi-test result is recorded and graded according to the table below:

Table 1. TKJI Value (For Girls Age 6 -9 Years)

Value	Run 30 meter	lang Elbow Benc	Lying Sitting	Jump upright	Run 600 meter	Value
5	S.d – 5,8"	33" – Up	15 – Up	38 – Up	s.d – 2'53"	5
4	5,9" – 6,6"	18" – 32"	11– 14	29 – 37	2'54" – 3'23"	4
3	6,7" – 7,8"	9" – 17"	4 – 10	22 – 28	3'24" – 4'08"	3
2	7,9" – 9,2"	3" – 8"	2 – 3	13 – 21	4'09" – 5'03"	2
1	9,3" – etc	0" – 2"	0 – 1	1– 12	5'04" – etc	1

Source: (Arsil & Adnan, 2021)

The table above shows the TKJI values for five items, namely running 30 meters,

hanging elbows, lying- sitting, jumping upright, running 600 meters,

with a maximum value of 5 and the lowest score of 1. For the overall norm of the

physical fitness test, see the following table:

Table 2. Indonesian Physical Fitness Test Norms (Female)

No	Total Value	Classification of Physical Fitness	
1	22 – 25	Excellent	(BS)
2	18 – 21	Good	(B)
3	14 – 17	Average	(S)
4	10 – 13	Deficient	(K)
5	5 – 9	Very Deficient	(KS)

Source: (Arsil & Adnan, 2021)

This research was held at SD Negeri 10 Kandis Ogan Ilir. The research was done from June to August 2022. The sample in this study was 30 female students. While the sampling technique is purposive sampling, purposive sampling is where the determination of the sample is based on certain objectives or considerations first.

RESULT AND DISCUSSION

There are many obstacles in conducting research that hinder the process of conducting research, including: (1) motivation of children in carrying out tests

(2) lack of encouragement from parents who think their children are being used for research purposes, even though this test aims to let parents know the level of their children's fitness in facing lessons, (3) the difficulty of controlling children's activities and nutritional intake. In general, the results of this study were carried out well, where data on the level of physical fitness of female students was obtained using the TKJI where in the initial data collection for children, for more details, see the initial test using the Indonesian Physical Fitness Test Norms table as follows:

Table 3. Physical Fitness Level Preliminary Test

Total Value	Classification of Physical Fitness	Student	%
22 – 25	Excellent	0	0,00
18 – 21	Good	3	10,00
14 – 17	Average	15	50,00
10 – 13	Deficient	10	33,30
5 – 9	Very Deficient	2	6,70
		30	100

According to the initial test table above based on TKJI norms (Indonesian Physical Fitness Test) for SD Negeri 10 Kandis students, it was found that 0 students were in the excellent category (0.00), 3 students were in the good category (10.00), 15 students were in the average (50.00), as many as 10 students in the deficient category (33.30), as many as

2 students in the very deficient category (6.70). So from 30 students who were used as research samples in the initial test implementation in the average category. After being given the ACIK exercise to students from SD Negeri 10 Kandis for 16 meetings, then these students were again measured using the Indonesian Physical Fitness Test (TKJI). For more details, see

the final test using the Indonesian Physical Fitness Test Norms table as follows:

Table 4. Physical Fitness Level Final Test based on TKJI Norms for female students at SD Negeri 10 Kandis

Total Value	Classification of Physical Fitness	Student	%
22 – 25	Excellent	1	3,33
18 – 21	Good	5	16,67
14 – 17	Average	18	60
10 – 13	Deficient	6	20,00
5 – 9	Very Deficient	0	0,00
		30	100

Based on the final test table above based on TKJI norms (Indonesian Physical Fitness Test) for SD Negeri 10 Kandis students, it was found that 1 student was in the excellent category (3.33), 5 students were in the good category (16.67), 18 students were in the average category (60), 6 students in the deficient category (20.00), 0 students in the very deficient category (0.00). So from 30 students who were used as research samples in the implementation of the final test. Before researchers use parametric statistical techniques, the normality of the data must be tested first. If the data is not normal, then parametric

statistics cannot be used, therefore nonparametric statistics need to be used. (Sugiyono, 2016). Based on the statement above, it is necessary for researchers to carry out the previous analysis requirements;

a. Normality

The normality test uses the Liliefors test which is based on the number of samples ($N = 30$) in the Liliefors test table with a significant level of $\alpha 0.05$, showing that the data is normally distributed, the results of the Liliefors test can be seen in the following table:

Table 5. Research Data Normality Test

Tests of Normality

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Pretest	.156	30	.061	.949	30	.157
Posttest	.118	30	.200*	.966	30	.438

From these data, it shows that the pretest results show that $0.061 > 0.05$. Based on these data, it shows that the pretest data is normally distributed. Furthermore, the posttest results showed that $0.200 > 0.05$. Based on these data, it shows that the posttest data is normally distributed.

b. Homogenitas

SPSS homogeneity test sig value based on 0.431 significant $\alpha 0.05$ obtained a value, because the value is $0.431 > 0.05$, it can be concluded that the two variants are homogeneous, the test results can be seen in the following table:

Table 6. Research Data Homogeneity Test

Test of Homogeneity of Variance

		Levene Statistic	Df1	Df2	Sig.
TKJI Result	Based on Mean	.630	1	58	.431
	Based on Median	.386	1	58	.537
	Based on Median and with adjusted df	.386	1	57.607	.537
	Based on trimmed mean	.524	1	58	.472

After the analysis requirements test was done and it turned out that all research data met the requirements for further statistical testing, hypothesis testing was then carried

out. The statistical test used is the t-test, which is to see the effect of the count mean in the same group at a significant level of α 0.05.

Table 7. Results of Hypothesis Testing on the Effect of ACIK Gymnastics Exercises

Paired Samples Test

		Paired Differences			95% Confidence Interval of the Difference		Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df
Pair 1	Pretest Posttest	1.86667	1.75643	.32068	-2.52253	-1.21080	-5.821	29

Based on table 7, the output table of "paired sample test" can be seen. Above is known the value of Sig. (2 tailed) is $0.002 < 0.05$, then H_0 is rejected and H_A is accepted. So it can be concluded that there is a difference in the average results of the TKJI Pretest and Posttest, which means that there is an effect of good exercise on the physical fitness of children in SD Negeri 10 Kandis. Thus it can be concluded that the ACIK exercise has an effect on increasing the physical fitness of girls in elementary school. Previous research has shown that ACIK gymnastics has been proven to improve physical fitness for kindergarten children (Sukmawati et al., 2021). The 3 basic movements contained in ACIK gymnastics are also found in other types of gymnastics

such as SKJ gymnastics, rhythmic gymnastics, aerobic gymnastics, etc. Therefore, the reference of the results of research on other gymnastics to physical fitness can be used as a supporting reference in this study, such as, SKJ gymnastics is proven to improve the physical fitness of high school students. (Rusli et al., 2022) Furthermore, related to this research conducted on elementary school students, SKJ Gymnastics which was given for 3 weeks was proven to improve the physical fitness of ibtidaiyah madrasah students in grade 5 (Arifin, 2018). Rhythmic gymnastics is effective for improving the physical fitness of elementary school students (Pasaribu & Mashuri, 2019).

Scout gymnastics is also proven to improve the physical fitness of elementary school students (Putra, 2012). Aerobic gymnastics affects the level of physical fitness for the body with an exercise intensity of 60% - 80% and the time required is between 45-60 minutes and can provide many benefits for children's growth and development and make the body condition healthier (Dewi & Rifki, 2020). SKJ 2008 gymnastics has a significant effect on improving the physical fitness of female students.(Oktavani & Meirony, 2017)

CONCLUSION

Based on the data analysis and discussion that has been described, it can be concluded that ACIK gymnastics has a significant effect on improving the physical fitness of SD Negeri 10 Kandis students. This indicates that if ACIK exercise activities are carried out more regularly with adequate motion intensity, the level of physical fitness will also increase. Based on the analysis of research findings, it is suggested to PJOK teachers to be able to utilize rhythmic gymnastics as a routine activity to maintain children's physical fitness.

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