

# Effects of Rhythmic Gymnastics Exercise Based on Chair Media to Physical Fitness of Students

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**Abstract**— This aim of this research is to know of the effect of rhythmic gymnastics exercises based on chair media to physical fitness on senior high school students. The test instrument of this research is the Indonesian Physical Fitness Test (TKJI). The sample of this research amounted to 40 people who are students of SMAN 3 Cikarang Utara. Based on the results of the research of cadence-based gymnastic rhythm based on media that with the model of rhythmic gymnastic based chairs media, physical fitness students of SMAN 3 North Cikarang increased after the treatment, from 14.6750 average to 18.1500 with a total increase of 10%. The result of t-test on the result of the Indonesian Physical Fitness Test before and after being given the exercise model of rhythmic gymnastics based chair media shows = 0,000 < 0,05 and t-count = -14.3, df = 39. Based on the above explanation can be take a conclusion that the exercise model of rhythmic gymnastics based chair media effectively improve physical fitness on SMAN 3 Cikarang Utara.

**Keywords**— *Exercise, Rhythmic Gymnastics, Chairs Media, Indonesia Physical Fitness Test*

## I. INTRODUCTION

In running the daily life, people do not escape from fatigue and stress. Along with today's lifestyles, people are beginning to realize that sport can be the way out. This is because exercise aims to develop and improve physical fitness. Physical fitness is the ability of the individual to face daily tasks without any significant fatigue [1]. Aerobic Fitness on the other hand is a quantifiable physiological variable that reflects the ability of the indigenous to produce energy for movement [2]

Physical fitness is an effort that aims to improve the health and fitness level of the society including teenagers through physical activity. Activity teenagers are many and more complex in his age requires good physical fitness to avoid fatigue and decreased stamina and energy, so that productivity does not decrease. The teen age range is 16-19 years old, in this case an age dominated by high school students.

One effort to improve physical fitness in physical learning, especially high school students is the rhythmic gymnastics. Rhythmic gymnastics is the movement of steps and if the body is shaped in such a way as to produce the beauty of regular motion and movement that one other movement 3]. Gymnastics is a sport characterized by early intensive practice. It can represent the most demanding sport in which excellence in performance is achieved during childhood and early adolescence [4]. Childhood and adolescence are periods of

enormous skeletal growth (at the end of adolescence, the major part of adult bone mass is acquired).

Rhythmic gymnastics can provide a great influence on the individual, not only able to improve the function of physical condition but also improve the mood in carrying out routine activities. This is due to fun and fun drama rhythm performed because accompanied by music, nyayian and count[5]. Although rhythmic gymnastics tend to be favored by students because of accompaniment of music, singing and counting, an effort to further motivate the motion for students who are teenagers is through additional media that is the seat media. Because teens are more easily bored and like new things and challenging. Cadence-based rhythmic gymnastics is essentially a type of health sport created for the purpose of maintaining and improving physical fitness in different ways. This chair-based rhythmic gymnastic movement is easy, understandable and contains an element of physical fitness consisting of strength, endurance, flexibility, speed, balance.

Based on the background of the problem, the researchers are interested to conduct a researcher with the title "Influence of exercise exercises rhythm cadence-based media chair students in SMAN 3 North Cikarang".

## II. METHOD

In accordance with the background and purpose of research, the research method used is the method of experimental research. The study was conducted by looking at the freshness of the jasamani of class XII (Twelve) students of SMAN 3 Cikarang Utara Bekasi Regency

Population is the whole subject of research (Arikunto, 2010). The population in this study is the students of class XII SMAN 3 Cikarang Utara Bekasi Regency which there are all 6 classes, consisting of XII MIA 1, XII MIA 2, XII MIA 3, XII MIA 4, XII IIS 1 and XII IIS 2 which all amounted to 247 students.

Sampling technique that is in accordance with the above conditions is using cluster sampling technique. In the cluster sampling, the selected is not an individual. Rather a group or area is then called a cluster. The sample in this research is the students of class XII IIS 2 which amounted to 40 students.

To obtain the necessary data in this study conducted tests and measurements. For physical fitness with 16- to 19-year-old

age group using the Indonesian Physical Freshness Task (TKJI) consisting of 60 meter sprint, 60 seconds lifting body lift, 60-second test sit-up, vertical jump, far man test run 1200 meters and daughter 1000 meters[6].

**III. RESULT AND DISCUSSION**

**A. Results**

To find out the results of this study, then the data collected should be in though first. The results of pre-test and post test data conducted by the researchers will be described in tabular form. The table table consisted of the results of the tests performed on each test item including: 1) run 60 meters, 2) hang 60 seconds body, 3) 60-second seats, 4) upright jump, 5) far away 1200 meters son and daughter 1000 meters. Test results can be seen in the table below:

**TABLE I. PRELIMINARY TEST RESULT INDONESIAN PHYSICAL FRESHNESS TEST OF YEAR XII (TWELVE) STUDENTS OF SMAN 3 CIKARANG UTARA**

No	Number of	Category	Value Amount of Test Value	Presentase
1	22 – 25	Very Good		
2	18 – 21	Good	4	10 %
3	14 – 17	Medium	36	90 %
4	10 – 13	Less		
5	5 – 9	Less Once		
Total			40	100%

Based on the table and picture above, the initial test of physical fitness level of students of class XII (Twelve) SMAN 3 North Cikarang age 16-19 years are as follows

1. There are 4 people or 10% of students of SMAN 3 North Cikarang aged 16-19 years have good physical fitness level categorized.
2. There are 36 people or 90% of students SMAN 3 North Cikarang aged 16-19 years have a level of physical fitness categorized moderate.

The final test result of physical fitness of class XII (twelve) students of SMAN 3 Cikarang Utara can be seen below:

**TABLE II. FINAL TEST RESULT INDONESIAN PHYSICAL FRESHNESS TEST OF GRADE XII (TWELVE) STUDENTS OF SMAN 3 CIKARANG UTARA**

No	Number of	Category	Value Amount of Test Value	Presentase
1	22 – 25	Very Good	3	7.5%
2	18 – 21	Good	23	57.5%
3	14 – 17	Medium	14	35%
4	10 – 13	Less		
5	5 – 9	Less Once		
Total			40	100%

Based on the table and picture above, the final test of physical fitness level of students of class XII (Twelve) SMAN 3 North Cikarang age 16-19 years is as follows

1. There are 3 people or 7.5% students of SMAN 3 North Cikarang aged 16-19 years have a very good physical fitness level.

2. There are 23 people or 57.5% of students of SMAN 3 North Cikarang aged 16-19 years have good physical fitness level categorized.
3. There are 14 people or 35% students of SMAN 3 North Cikarang aged 16-19 years have a moderate degree of physical fitness.

Furthermore, the two samples were tested for difference significance using spss test 16 by using Paired Sample T Test test, the result below:

**TABLE III. RESULTS PAIRED SAMPLES STATISTICS (PRE TEST) AND AFTER GIVEN TREATMENT (POST-TEST)**

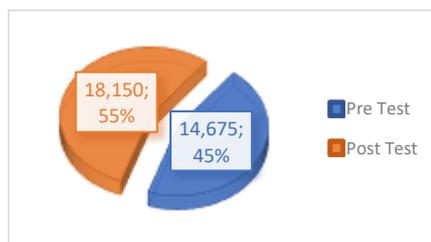
Mean	N	Std. Deviation	Std. Error Mean
14.675	40	1.20655	.19077
18.150	40	1.40603	.22231

The average result of the physical fitness test of Indonesian students before being given a seat-based rhythmic gymnastics is 14.6750 and the result after being given a chair-based rhythm-based gymnastics treatment is 18.1500 which means there is an increase in students' physical fitness after being given a chair-based rhythmic gymnastic treatment.

**TABLE IV. RESULTS PAIRED SAMPLES TEST (PRE-TEST) AND (POST-TEST)**

Pair	PRETEST - POSTTEST	Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1		-3.475	.535	.242	-3.97	-2.98	-14.3	39	.000

In the significance test of difference with spss 16 in get result mean = 3.475 shows difference of pre test result and post test result, t-hitung = -14.3 df = 39 and p-value = 0.00 <0.05 which means there is significant difference between before and after being given a chamber based rhythmic gymnastics treatment. Comparison of physical fitness test results before and after treatment of ray-based chest-based gymnastics for adolescents aged 16-19 years can be described in the pie diagram below:



**Fig I. Article of irama based on chair media**

### B. Discussion

Based on the results of data analysis obtained showed that the average of the initial test before the students were given treatment amounting to 14,675 and after being given the treatment of rhythmic gymnastics based on the seat media showed that the average of the final test of the students amounted to 18,150 means there is an increase after given the treatment of 10 seat-based rhythmic gymnastics as much as 10 %.

Basically a chair-based rhythmic aerial gymnastics has a purpose as a means to nurture, enhance and maintain the physical fitness of the culprit in different ways. The advantages of chest-based rhythmic gymnastics are a series of fewer movements that are less complicated and easy to memorize because they consist of 14 motion sequences, ie 5 sets of heating motions, 4 circuits in core motion and 5 in cooling motion. The disadvantages of this chair-based rhythm-based gymnastics are four exercises performed carefully by the students: 3 movements in the core and one in cooling. when viewed from the duration of exercise cadence-based gymnastic movement based on the chair has a relatively short time of 9 minutes ie with a 2 minute time allocation for heating, 5 minutes for the core, 2 minutes for cooling.

Factors influencing the result of physical fitness level in this research is possible because: firstly students not yet accustomed to doing gymnastics by using media of chair, after being given treatment by using gymnastic rhythm based on chair media can increase student motivation to do movement earnestly so that the result of gymnastics is found to be effective for improving students' physical fitness. Enough rest and increase nutritional intake with balanced nutrition

performed by students while performing a chest-based rhythm exercise. With all the possibilities that exist above the students can increase the physical freshness is not obtained by itself without any regular and systematic practice effort.

### IV. CONCLUSION

Based on these results it can be concluded that rhythm-based chest-based gym for adolescents aged 16-19 years effective and can improve physical fitness. The result of the significance test (t-test) difference with spss 16 in mean = 3,475 indicates difference of pre test result and post test result, t-count = -14.31, df = 39 and p-value = 0.00 < 0.05 meaning there is a significant difference between before and after being given a chair-based rhythmic gymnastics treatment.

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