THE EFFECTS OF RHYTHMIC ACTIVITY ON SELECTED PHYSIOLOGICAL AND PHYSICAL FITNESS PROFILE OF SCHOOL GOING CHILDREN

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ABSTRACT

This research included 30 Male student aged 14+ which made up the Experimental group, and 30 the control group. The effects of a rhythmic activity on selected physiological parameters and physical fitness profiles were studied. The experimental model of the recreational aerobic exercise model was realized six times a week, over a period of six weeks, and the duration of each individual exercise was 60 minutes. The variables used for physiological parameters were pulse rate, vital capacity and Blood pressure. Physical fitness profiles were accessed by using the variables muscular strength, muscular endurance, cardiovascular endurance and flexibility. For rhythmic activity, aerobic dance was considered. The study was considered only for six weeks duration. The basic descriptive statistic parameters were calculated for all of the results, and the difference between the initial and final measuring was determined by 't' test. A statistically significant difference was found to exist between the initial and final measuring in regards to the applied variables for the evaluation of Physical and Physiological variables of the subjects belonging to the experimental group, while there were no statistically significant differences found in the case of the subjects belonging to the control group. Group statistics and Independent t test analysis revels that there is significant effect of rhythmic activity on the Strength endurance, Cardiovascular-endurance, Flexibility and Vital capacity. And there was no significant effect on the parameters viz. Explosive strength, Resting pulse rate, Systolic B.P., Diastolic B.P.This research supports the existing conclusions about the positive effects of rhythmic activity, on the condition that it is realized with the appropriate intensity, length and duration.

Key words: *rhythmic activity, aerobic exercise, functional abilities, recreation, Vital capacity*

INTRODUCTION

Due to the high degree of automatization, modern man is experiencing a high degree of inactivity which is becoming an increasingly significant factor in the appearance of a great number of illnesses. In these current living conditions where technological development has directed man's activities from physical to intellectual labor, modern man is increasingly susceptible to a sedentary lifestyle. This brings about a decrease in physical activity, and thus leads to the endangerment of the health and normal functioning of organs and systems of organs (Hollmnan, 1992; Hollman & Hettinger, 2000; Weineck, 2000). The threat to the health of sedentary individuals is conditioned by a decrease in the functioning of the locomotor, cardio-vascular, and respiratory system, as well as other organs and systems of organs. Physical inactivity and a sedentary lifestyle have a very negative effect on almost all of the systems of the human body, and especially on cardiovascular functions (Fentem, 1992). The decrease in the functional abilities of the human body in the modern world, the development of hypertension and obesity are just some of the problems which can be solved by regular physical activity (Misigoj-Durakovic et al., 1999).

Fitness centers offer a variety of aerobic exercises to music as part of their exercise programs, in the form of various organized physical activities. What is characteristic about this kind of exercise is that all of the participants in the aerobic exercise program exercise to the same rhythm and to the same tempo, and thus activate muscles of various parts of the body. Taking part in recreational activities, or to be more precise in systematic physical exercise, enhances the harmonious functioning of all organs and systems of organs, and influences the preservation of functional abilities of the cardio-vascular, respiratory, endocrine, locomotors and nervous systems. In addition, physical activities which are

performed during exercise have a positive effect on the decrease of arterial blood pressure and hypertension (Hagberg, Montain, Martin et al., 1989; Duraskovic, 2002).

On the basis of the research carried out by various authors, the positive influence of aerobic physical activities on functional abilities, body composition, and the muscle strength of man in the sense of a qualitative improvement. Thompson, Goodroe, Johnson, and Lambert (1991) have studied the changes to VO2max, heart rate frequency, systolic arterial blood pressure, diastolic arterial blood pressure and the accumulation of lactates in the blood under the influence of two different aerobic dance programs. Kostic and Zagorc (2005) compared the effects of two Hi/Lo aerobic models on the cardiovascular fitness of women. The evaluation of cardio-vascular fitness was carried out by means of the following variables: resting heart rate, heart rate under strain, systolic and diastolic arterial blood pressure and absolute and relative oxygen uptake. The results of the research indicated that overall statistically significant differences between the two groups existed in the initial and final measuring and that the variables: resting heart rate and relative oxygen uptake were the greatest contributors to the difference. It was concluded that the effects of both aerobic dance models on cardio-vascular fitness were positive, if the exercise is realized continuously over a longer period of time (three times a week, for 50 minutes), or if the exercise takes place five times a week for 35 minutes. When the intensity of the load is optimum, the structural or functional adaptation of the organs of the person who is exercising, which are under strain, can lead to an improved tolerance to load. Many of the reactions to load, as well as the body's adaptation to them, are both caused by activities which are appropriate for the abilities of the subject, who experiences an improvement in his general health and the functional

capacity of his body (Kohrt et al., 1991). On the basis of the recommendations of various authors, the exercise program should consist of interval or continual exercise with an intensity of 50% for beginners up to as much as 80% of maximal oxygen uptake or heart rate frequency for the more advanced. The exercise should occur with a frequency of at least three times a week for a period of 30 to 40 minutes. This kind of exercise brings about maximal oxygen uptake, heart volume, maximal minute heart volume, or in a word, the general improvement of the body (Astrand, 1999). The American College of Sports Medicine (ACSM), recommends that all those who would like to maintain and improve their cardio-respiratory abilities should exercise three to five times a week with the use of rhythmic, aerobic activities which activate large muscle groups in the human body (walking, running, bike riding, using a stationary bike, aerobic dance, etc.). The intensity of the exercise should be from 55/65% to 90% of the maximal heart rate frequency, and the duration of the exercise should be from 20 to 60 minutes. If the intensity of the exercise is smaller than the recommended maximum heart rate frequency values, the duration of the exercise should be increased. In addition to aerobic exercise, one should also include exercises for the development of stamina, mobility and strength, at least twice a week, which would maintain a body mass without fat, improve muscle strength and stamina and preserve their functions. All this is made possible through an extended participation in regular physical activity and a lifestyle of higher quality (Blair, Lamonte & Nichaman 2004).

From the introduction of aerobic dance in the early 70's, it has generally been regarded that the music accompaniment to exercise provides an important beneficial effect to the exercise experience. Many health and fitness instructors regard the addition of music to exercise similarly to an

ergogenic aid, with the removal of music or an inappropriate selection of music as a sure bet to an unsuccessful class. Some Sports Scientist like Hopkins, David R. (1990) examined the effect of low-impact aerobic dance on 53 sedentary older women. After 12 weeks of dance, subjects improved significantly on all functional fitness components except motor control/coordination, including cardio respiratory endurance, strength/endurance, body agility, flexibility, body fat, and balance. In another study Todd, C Davies made a comparative study to find out the physiological responses and rating of perceived exertion in two modes of aerobic exercise in men and women over 50 years of age and found that %peak VO_2, %HRmax, and RPE were significantly higher for aerobic dance than for walking.

The benefits of Rhythmic activity (aerobic dance) toward the contribution to overall wellness have been studied in a skewed manner. Numerous studies in the past have examined the cardio respiratory benefits of aerobic dance. Fewer studies have reported about the effects on Physical Fitness. In this present piece of research the effects of rhythmic activity on selected physiological parameters and physical fitness profiles on male students was studied.

METHOD & MATERIAL

The purpose of the study was to find out the effects of rhythmic activity on selected physiological parameters and physical fitness profiles on male students.

60 male students age 14 + randomly selected from Maharashtra Mandal, Pune (INDIA). The subjects were divided randomly in two equal groups. Group A (N-30) and B (N-30). Group 'A' under went a program selected Aerobic Dance and group 'B' was control group. Group 'A' followed the program of instruction for a period of 6 weeks and training was carried for 6 weeks. Measurement for various

variables were taken at the beginning (pre- test) and at the end of experimental period, after six weeks (post-test).

The data was collected before and after six weeks of experimental period by using standard tests. The variables used for physiological parameters were pulse rate, vital capacity and Blood pressure. Physical fitness profiles were accessed by using the variables muscular strength, muscular endurance, cardiovascular endurance and flexibility. For rhythmic activity, aerobic dance was considered. The study was considered only for six weeks duration. The equipment and facilities those are available in the Health Education and Physiology Laboratory of Chandrashekhar Agashe College of Physical Education Maharashtra (India) was used for the data collection.

Variables Selected & Tools Used

Physiological parameters: Pulse rate: pulse measuring in beats/minutes was counted with the help of important Pulse/HR Omron digital machine. Vital capacity: vital capacity was measured by using wet Spiro meter in litter. Systolic and Diastolic blood pressure measured in mm/hg. By using Omron B.P monitor (digital).

Physical fitness profiles: Muscular strength was measured in Centimetres/meters by standing Broad Jump, One Minute maximum Sit–Up test was used for Muscular endurance (measured in minutes).Cardiovascular Endurance measured by 12 min.Run & Walk test (measured in minutes). Curetons Sit & Reach Test was used to access the Flexibility (measured in Centimetres).

RHYTHMIC ACTIVITY PRACTICES

The selection of the Rhythmic activity namely, aerobic dance included only five exercises standing, marching, side to side, side to side double step, Knee up were made on the

basis of expert advice. The aerobic dance practices selected for the study were accepted as rational for the purpose of this study, as per the available literature and expert guidance on theory and practice of aerobic dance. The aerobic dance practices were scheduled for group 'A' instead of the daily physical training periods.

The duration of various aerobic dance practices by the experimental group were as follows.

TRAINING SCHEDULE:

Group 'A' practice selected five aerobic dance activity in these student used to report in Maharashtra Mandal, Pune. Uniform consisted T-Shirt and Half Pants. The practice session was conducted for the period of 60 minutes day for the duration of six weeks.

Orientation Programmed

1) Teaching of aerobic dance exercise practice
2) Teaching of exercise series and practice

Exercise Design

Training Schedule

Assembly

Warming up and stretching exercise 15 minutes

Aerobic dance Activity

1st and 2nd weeks

16 count exercise

Total Practices: 6 minutes, 7 repetitions = 42 minutes

Total Rest: 1.30 minutes, 6 between each repetitions = 1 minutes

3rd and 4th weeks

16 count exercise

Total Practices: 6 minutes, 8 repetitions = 48 minutes

Total Rest: 1 minute, 7 between each repetitions = 7 minutes

5th and 7th weeks
16 count exercise
Total Practices: 6 minutes, 9 repetitions = 54 minutes
Total Rest: .30 minutes, 8 between each repetitions = 4 minutes

The dose of the practice for aerobic dance was 1st and 2nd weeks six minutes seven repetition, 3rd and 4th weeks six minutes eight repetition and 5th and 6th weeks six minutes nine repetitions respectively and the total time for the daily practice by the experimental group was between 42 to 54 minutes. The time for rest was between 1.30 minute, 1 minute and 0.30 minute as prescribed by experts. All together, the practices were schedule for one hour every day in the morning.

TRAINING IN RHYTHMIC ACTIVITY

Experimental groups practised selected Five Rhythmic Activity in the sports room specially allotted for experiment of CACPE Pune College of Physical Education Pune. The practice session was conducted for a period of 60 minutes every Monday to Saturday for the duration of six weeks.

RESULT & DISCUSSION

The difference in the mean gain of each group for selected variable was tested for significance of difference by 't' test. The difference of initial and final scores was taken into account. The level of significance was set at .05 level of confidence.

Effect of rhythmic activity on explosive strength

Table-1

Group Statistics					
	Group	**N**	**Mean**	**S. D**	**SEM**
Pre-test SBJ	Experimental	30	1.46	0.15	0.03
	Control	30	1.44	0.15	0.03
Post-test SBJ	Experimental	30	1.47	0.30	0.05
	Control	30	1.47	0.15	0.03

From table-1 of group statistic for standing broad jump (SBJ) test, mean of pre-test of experimental group is 1.46 meter with standard deviation of 0.15 and that of control group is 1.44 meter and standard deviation of 0.15. Similarly mean of standing broad jump post-test of experimental group is 1.47 meter and standard deviation is 0.30 and that of control group is 1.47 meter and standard deviation of 0.15.

Graph-1

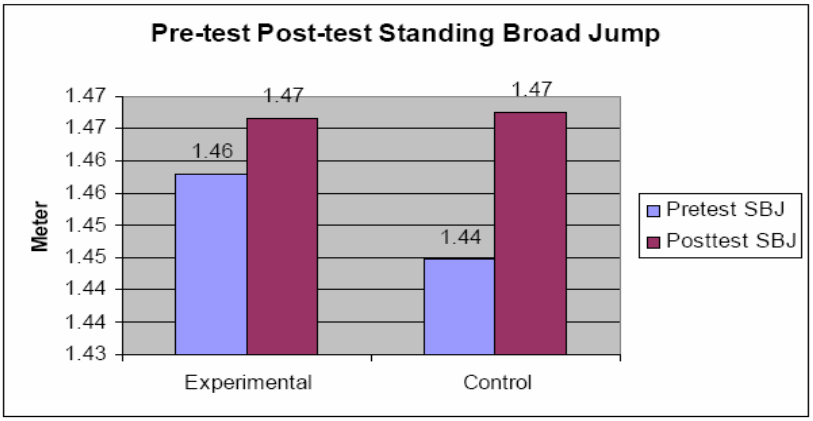


Table-2

Independent Samples T Test				
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**
Pre-test SBJ	0.33	58.00	0.74	0.01
Post-test SBJ	0.02	58.00	0.99	0.01

From Table-2 of 'Independent Sample T Test' mean difference of SBJ performance of experimental group and control group is 0.01 meter, t value is equal to 0.33 at 58 degrees of freedom is not significant at 0.05 significance level. This suggests that there is no significant difference between the pre-test mean of experimental group and control group. This implies that both the groups are homogeneous with respect to SBJ performance at pre-test point. Similarly for the post-test t value is equal to 0.02 at 58 degrees of freedom is not significant at 0.05 significance level. This suggests that there is no effect of treatment on the standing broad jump test performance i.e. explosive strength of the subjects.

Effect of rhythmic activity on strength endurance

Table-3

Group Statistics					
	Group	**N**	**Mean**	**S.D**	**SEM**
Pre-test Sit ups	Experimental	30	35.43	6.41	1.17
	Control	30	36.83	4.93	0.90
Post-test Sit ups	Experimental	30	46.43	9.01	1.64
	Control	30	39.30	7.84	1.43

From Table-3 of group statistics for sit ups test, mean of pre-test of experimental group is 35.43 with standard deviation of 6.41 and that of control group is 36.83 and standard deviation

of 4.93. Similarly mean of sit ups post-test of experimental group is 46.43 and standard deviation is 9.01 and that of control group is 39.30 and standard deviation of 7.84.

Graph-2

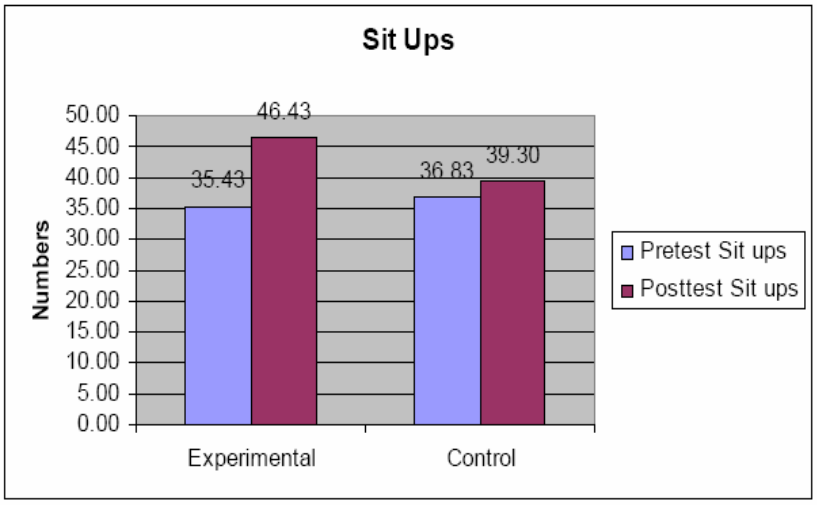


Table-4

Independent Samples T Test				
	t	**df**	**Sig.(2-tailed)**	**Mean Difference**
Pre-test Sit-ups	0.95	58.00	0.35	1.40
Post-test Sit-ups	3.27	58.00	0.00	7.13

From Table-4 of Independent Sample T Test' mean difference of sit ups performance of experimental group and control group is 1.40, t value is equal to 0.95 at 58 degrees of freedom is not significant at 0.05 significance level. This suggests that there is no significant difference between the

pre-test mean of experimental group and control group. This implies that both the groups are homogeneous with respect to sit ups performance at pre-test point. Similarly for the post-test mean difference in the experimental and control groups sit up performance is 7.13 and 't' value is equal to 3.27 at 58 degrees of freedom which is significant at 0.05 significance level. This suggest that there is effect of treatment on the sit ups test performance i.e. strength endurance of the subjects.

Effect of Rhythmic Activity on Endurance

Table-5

Group Statistics					
	Group	**N**	**Mean**	**S.D**	**SEM**
Pre-test Run & Walk	Experimental	30	1606.17	36.29	6.62
	Control	30	1583.67	50.68	9.25
Post-test Run & Walk	Experimental	30	1655.33	43.29	7.90
	Control	30	1607.50	39.32	7.18

From Table-5 of group statistic for run and walk test, mean of pre-test of experimental group is 1606.17 meters with standard deviation of 36.29 and that of control group is 1583.67 meters and standard deviation of 50.68. Similarly mean of run and walk post-test of experimental group is 1655.33 meters and standard deviation is 43.29 and that of control group is 1607.50 meters and standard deviation of 39.32.

Graph-3

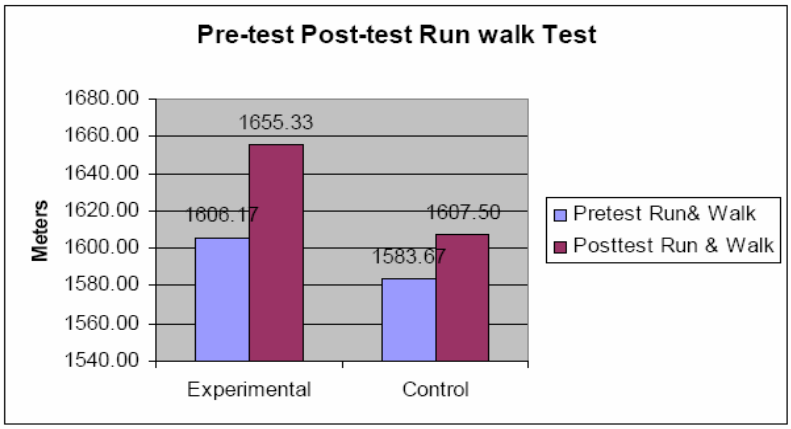


Table-6

Independent Samples T Test'				
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**
Pre-test Run & Walk	1.98	58.00	0.053	22.50
Post-test Run & Walk	4.48	58.00	0.000	47.83

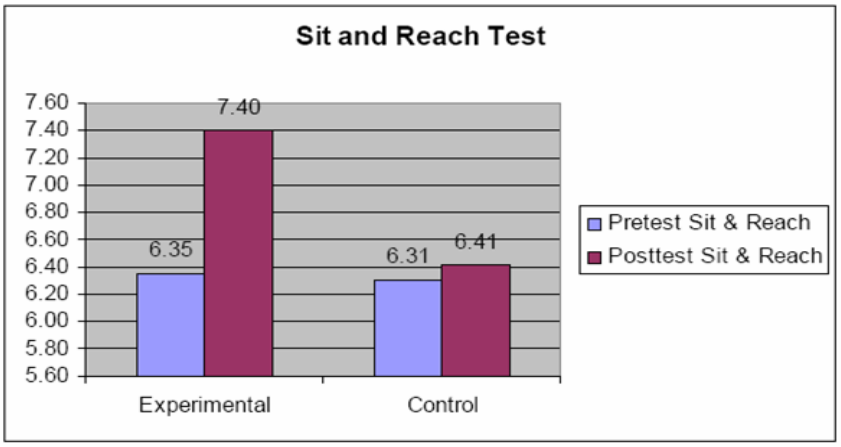
From Table-6 of 'Independent Sample T Test' mean difference of run and walk test performance of experimental group and control group is 22.50, t value is equal to 1.98 at 58 degrees of freedom is not significant at 0.05 significance level. This suggests that there is no significant difference between the pre-test mean of experimental group and control group. This implies that both the groups are homogeneous with respect to run and walk test performance at pre-test point. Similarly for the post-test mean difference in the experimental and control groups run and walk test performance is 47.83 meters and 't' value is equal to 4.48 at 58 degrees of freedom which is significant at 0.05 significance level. This suggest that there is effect of treatment on the run and walk test performance i.e. endurance of the subjects.

Effect of Rhythmic Activity on Flexibility

Table No- 7

Group Statistics					
	Group	**N**	**Mean**	**S.D**	**SEM**
Pre-test Sit & Reach	Experimental	30	6.35	1.54	0.28
	Control	30	6.31	1.58	0.29
Post-test Sit & Reach	Experimental	30	7.40	1.38	0.25
	Control	30	6.41	1.60	0.29

Graph-4



From Table-7 of group statistic for sit and reach test, mean of pre-test of experimental group is 6.35 centimetres with standard deviation of 1.54 and that of control group is 6.31 centimetres and standard deviation of 1.58. Similarly mean of sit and reach post-test of experimental group is 7.40 centimetres and standard deviation is 1.38 and that of control group is 1607.50 centimetres and standard deviation of 1.60.

Table-8

Independent Samples T Test'				
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**
Pre-test Sit & Reach	0.11	58.00	0.91	0.04
Post-test Sit & Reach	2.56	58.00	0.01	0.99

From Table-8 of 'Independent Sample T Test' mean difference of sit and reach test performance of experimental group and control group is 0.04 centimetres, t value is equal to 0.11 at 58 degrees of freedom is not significant at 0.05 significance level. This suggests that there is no significant difference between the pre-test mean of experimental group and control group. This implies that both the groups are homogeneous with respect to sit and reach test performance at pre-test point. Similarly for the post-test mean difference in the experimental and control groups run and walk test performance is 0.99 centimetres and 't' value is equal to 2.56 at 58 degrees of freedom which is significant at 0.05 significance level. This suggest that there is effect of treatment on the sit and reach test performance i.e. flexibility of the subjects.

Effect of Rhythmic Activity on Resting Pulse Rate
Table No-9

Group Statistics					
	Group	**N**	**Mean**	**S.D**	**S.E Mean**
Pre-test Resting Pulse Rate	Experimental	30	80.90	1.24	0.23
	Control	30	81.10	1.18	0.22
Post-test Resting Pulse Rate	Experimental	30	80.73	1.14	0.21
	Control	30	81.00	1.02	0.19

From Table-9 of group statistics for resting pulse rate, mean of pre-test of experimental group is 80.90 with standard deviation of 1.24 and that of control group is 81.10 and standard deviation of 1.18. Similarly mean of resting pulse rate post-test of experimental group is 80.73 and standard deviation is 1.14 and that of control group is 81.00 and standard deviation of 1.02.

Graph-5

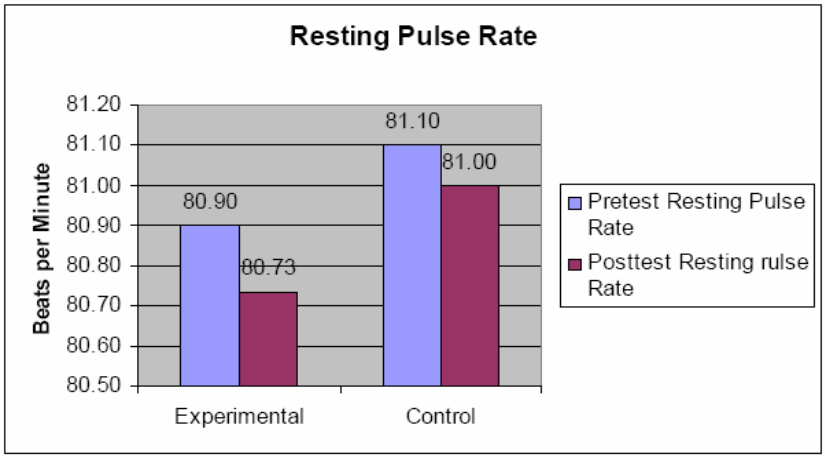


Table-10

Independent Samples T Test				
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**
Pre-test Resting pulse rate	0.64	58.00	0.53	0.20
Post-test resting pulse rate	0.95	58.00	0.34	0.27

From Table-10 of 'Independent Sample T Test' mean difference of resting pulse rate test performance of experimental group and control group is 0.20 , t value is equal to 0.64 at 58 degrees of freedom is not significant at 0.05 significance level. This suggests that there is no significant difference between the pre-test mean of experimental group and control group. This implies that both the groups are homogeneous with respect to resting pulse rate test performance at pre-test point. Similarly for the post-test mean difference in the experimental and control groups resting pulse rate test performance is 0.27 and 't' value is equal to 0.95 at 58 degrees of freedom which is not significant at 0.05 significance level. This suggests that there is no effect of treatment on the resting pulse rate test performance of the subjects.

Table-11

Group Statistics					
	Group	**N**	**Mean**	**S.D**	**SEM**
Pre-test Vital Capacity	Experimental	30	1079.00	71.70	13.09
	Control	30	1065.00	51.11	9.33
Post-test Vital Capacity	Experimental	30	1156.67	50.40	9.20
	Control	30	1096.97	51.87	9.47

From Table-11 of group statistics for vital capacity, mean of pre-test of experimental group is 1079.00 with standard deviation of 71.70 and that of control group is 1065.00 and standard deviation of 51.11. Similarly mean of vital capacity post-test of experimental group is 1156.67 and standard deviation is 50.40 and that of control group is 1096.97 and standard deviation of 51.87.

Graph-6

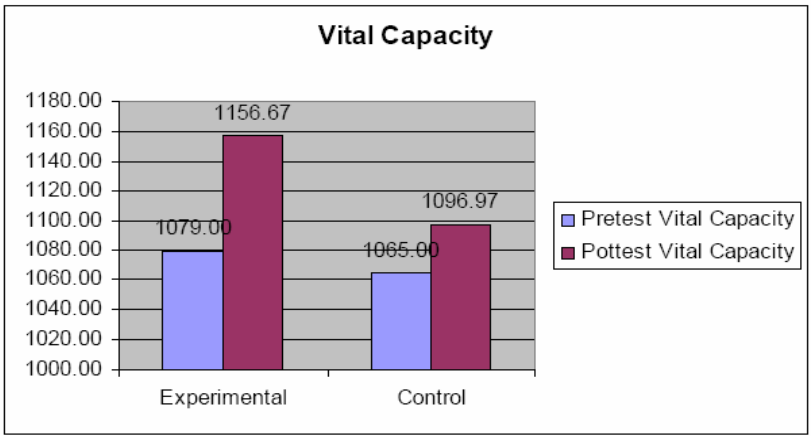


Table-12

Independent Samples T Test				
	t	**df**	**Sig.(2-tailed)**	**Mean Difference**
Pre-test Vital Capacity	0.87	58.00	0.39	14.00
Post-test Vital Capacity	4.52	58.00	0.00	59.70

From Table-12 of 'Independent Samples T Test' mean difference of vital capacity test performance of experimental group and control group is 14.00 , t value is equal to 0.87 at 58 degrees of freedom is not significant at 0.05 significance level. This suggests that there is no significant difference

between the pre-test mean of experimental group and control group. This implies that both the group are homogeneous with respect to vital capacity test performance at pre-test point. Similarly for the post-test mean difference in the experimental and control group's vital capacity test performance is 59.70 and 't' value is equal to 4.52 at 58 degrees of freedom which is significant at 0.05 significance level. This suggests that there is effect of treatment on the vital capacity test performance of the subjects.

Effect of rhythmic activity on Systolic B.P

Table-13

Group Statistics					
	Group	**N**	**Mean**	**S.D**	**SEM**
Pre-test B.P. Systolic	Experimental	30	113.00	3.37	0.62
	Control	30	113.50	3.26	0.59
Post-test B.P Systolic	Experimental	30	113.67	2.60	0.48
	Control	30	112.87	2.49	0.45

From Table-13 of group statistics for systolic B.P., mean of pre-test of experimental group is 113.00 with standard deviation of 3.37 and that of control group is 113.50 and standard deviation of 3.26. Similarly mean of systolic B.P. post-test of experimental group is 113.67 and standard deviation is 2.60 and that of control group is 112.87 and standard deviation of 2.49.

Graph-7

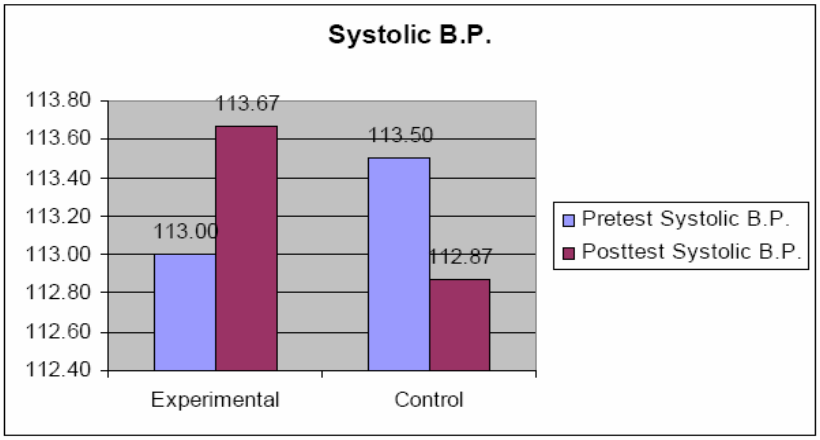


Table-14

Independent Samples T Test				
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**
Pre-test Systolic B.P	0.58	58.00	0.56	0.50
Post-test Systolic B.P	1.22	58.00	0.23	0.80

From Table-14 of 'Independent Sample T Test' mean difference of systolic B.P. test performance of experimental group and control group is 0.50, t value is equal to -0.58 at 58 degrees of freedom is not significant at 0.05 significance level. This suggests that there is no significant difference between the pre-test mean of experimental group and control group. This implies that both the group are homogeneous with respect to systolic B.P. test performance at pre-test point. Similarly for the post-test mean difference in the experimental and control group's systolic B.P. test performance is 0.80 and 't' value is equal to 1.22 at 58 degrees

of freedom which is not significant at 0.05 significance level. This suggests that there is no effect of treatment on the systolic B.P. test performance of the subjects.

Effect of rhythmic activity on Diastolic B.P

Table-15

Group Statistics					
	Group	**N**	**Mean**	**S.D**	**SEM**
Pre-test B.P Diastolic	Experimental	30	72.33	2.54	0.46
	Control	30	72.33	2.54	0.46
Post-test B.P Diastolic	Experimental	30	72.50	2.54	0.46
	Control	30	71.50	2.33	0.43

From Table-15 of group statistic for diastolic B.P., mean of pre-test of experimental group is 72.33 with standard deviation of 2.54 and that of control group is 72.33 and standard deviation of 2.54. Similarly mean of diastolic B.P. post-test of experimental group is 72.50 and standard deviation is 2.54 and that of control group is 71.50 and standard deviation of 2.33.

Graph- 8

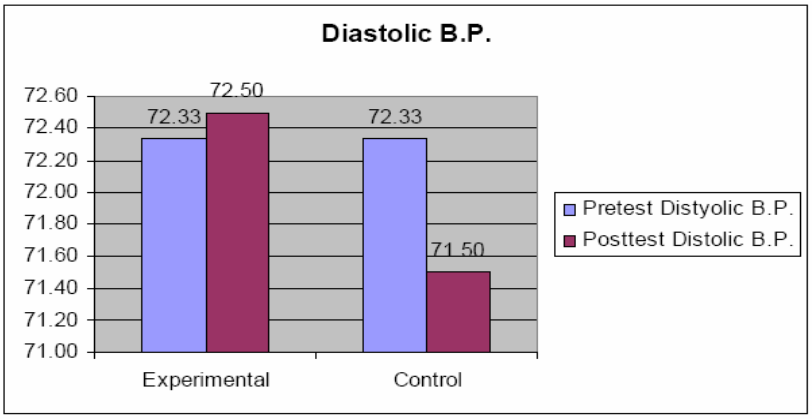


Table-16

Independent Samples T Test				
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**
Pre-test Diastolic B.P	0.00	58.00	1.00	0.00
Post-test Diastolic B.P	1.59	58.00	0.12	1.00

From table no. 16 of 'Independent Sample T Test' mean difference of diastolic B.P. test performance of experimental group and control group is 0.00, t value is equal to 0.00 at 58 degrees of freedom is not significant at 0.05 significance level. This suggests that there is no significant difference between the pre-test mean of experimental group and control group. This implies that both the groups are homogeneous with respect to diastolic B.P. test performance at pre-test point. Similarly for the post-test mean difference in the experimental and control group's diastolic B.P. test performance is 1.00 and 't' value is equal to 1.59 at 58 degrees of freedom which is not significant at 0.05 significance level. This suggests that there is no effect of treatment on the diastolic B.P. test performance of the subjects.

The present study confirmed the positive effects on Strength endurance, Cardiovascular-endurance, Flexibility and Vital capacity over six Weeks. School children engaged in rhythmic activity demonstrated higher Strength endurance, Cardiovascular-endurance; Flexibility and Vital capacity.The results of this study are similar to that of Hopkins, David R. (1990) examined the effect of low-impact aerobic dance on 53 sedentary older women. After 12 weeks of dance, subjects improved significantly on all functional fitness components including cardio respiratory endurance, strength/endurance, body agility, flexibility, body fat, and balance.

The present piece of research also indicate that their was no significant difference was found in Explosive strength, Resting pulse rate, Systolic B.P. and Diastolic B.P.

CONCLUSION

Within the frame–work of the present investigation, the following conclusions may be drawn that there is significant effect of rhythmic activity on the Strength endurance, Cardiovascular-endurance, Flexibility and Vital capacity. And there was no significant effect on the parameters viz. Explosive strength, Resting pulse rate, Systolic B.P., Diastolic B.P. This study shows a significant improvement in almost all physical fitness can be achieved with a training program implemented at a school level. Further studies to classify fitness levels obtained by these programs based on more detailed analysis for training duration, training schedules as well as fitness indices will enable assessment of the most optimal training methods. Additionally this methodology could be applied to a female student population to investigate any differences in response between genders to fitness training in other countries.

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