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Effects of aerobics and Dollu Kunita Dance training programs on health related fitness among high school boys

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Abstract

The current study is going to investigate the effects of various Aerobics activities and Dollu kunita dance programs on health related fitness among high school boys. To achieve this study researcher has took 90 samples and 05 health related components. Data's were taken from different schools and collected data's was tested by paired 't' test. The research shows that Aerobics and Dollu kunita dance programs did played a significant role on health related components. Similarly pre and post test data's of control group did not changed. Hence we have to promote and motivate the peoples to participate in any physical or dance activities to maintain their health to live long life span.

Keywords: Aerobics, Dollu Kunita, programs, health related components

Introduction

Exercise is very important and needy thing for the healthy society. Peoples are very creative but less in physical activities. Some peoples are interested in physical exercise and some are like dance activities. Both are effective for the maintain the health. Hence the researcher has taken this study to show the results of dance activities on health related components. It needs small area; peoples can do these activities in home also. Today the curriculum of Physical Education is having sports and games and some aerobics exercises but we have to include some more dance activities in the curriculum. These activities are attract the students to participate in the physical activities. According to WHO (2017 report), over 61% of all deaths in India are due to non communicable diseases including life style diseases. Hence we have to promote physical activity and dance programs for the society.

Aerobic training

Aerobics dance integrates exercises and dance movements in to routines that are practiced with the music. Many dance ways are used, including ballet, Jazz and disco. Aerobic dance classes integrate fat –burning Aerobics with development of the muscles and stretching exercises.

Dollu Kunita

Dollu Kunita (dance) is a major popular dance of Karnataka. Accompanied by singing, it provides spectacular variety and complexity of skills. Usually this dance program started with prayer of Beereshwar or Beeralingeswar, worshipped by the Kuruba Gowda or Halumathasthas of Karnataka. This dance activity helps both entertainment and spiritual edification.

Problem

To assess the Effects of Aerobic dance and Dollu Kunita training on health related fitness among high school boys.

Objective of the study

The present study was undertaken for the following objectives in view.

1. To find the effect of six weeks intervention on posttest scores on cardio vascular

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endurance (12 min Kooper run and walk (in meters)), muscular endurance (Push-ups), muscular strength (Bench Press (in Kg)), flexibility (Sit and Reach (in centimeters) and Body Mass Index (BMI) of high school boys with influence of pre-test as a covariate

- To know the influence of six week intervention (pretest and posttest) on cardio vascular endurance (12 min Kooper run and walk (in meters)), muscular endurance (Push-ups), muscular strength (Bench Press (in Kg)), flexibility (Sit and Reach (in centimeters) and Body Mass Index (BMI) of high school boys in Aerobics and Dollu kunita dance training group.

Delimitations

- Researcher selected only the male students aged between 14-16 years for the study.
- The study was conducted only for high school children of Belagavi district of Karnatak, India.
- The training period was confined to 06 weeks and the number of the days per week was restricted to six days.
- Selected samples were divided in to Three groups, Experimental Group I (AEG=30) underwent Aerobic dance training, Experimental Group II (DEG=30) underwent Dollu kunita training and Group III were served as Control group (CG=30).
- The level of the significance was considered at 0.05 (5%) levels.
- The data's were collected immediately after completion of the training period.

Hypothesis: There is no significant difference between pretest and posttest of cardio vascular endurance (12 min Kooper run and walk (in meters)), muscular endurance (Push-ups), muscular strength (Bench Press (in Kg)), flexibility (Sit and Reach (in centimeters) and Body Mass Index (BMI) scores of high school boys in three groups (Control, Aerobics training, Physical exercise).

Methodology

Variables: Health related fitness components.

- Cardio vascular endurance
- Muscular endurance
- Muscular strength
- Flexibility
- Body Mass Index

Tools

In the present study control and two experimental groups (Aerobics training and Dollu Kunita) are independent (Predictor) variables and health related fitness components are dependent variables. in order to measure these variables the following tools will be used.

- 12 min Kooper run and walk (in meters)
- Muscular endurance (Push-ups)
- Muscular strength (Bench Press (in Kg))
- Flexibility (Sit and Reach (in centimeters))
- Body Mass Index (BMI = weight in kg/(height in mtr)²)

Collection of Data

The standardized tests are administered on Aerobics and Dollu kunita dance training and data have been collected from Government High schools of Belagavi districts of Karnataka state.

Samples

Total Sample Size	Non Practitioner	Aerobics	Physical Exercises
90	30	30	30

Statistical Techniques

In pursuance of the objectives of the study as well as to test the research hypothesis, "t" test, has used to assess its effects on selected Aerobics and Dollu kunita trainings of high school boys.

Analysis of Data and results

In this section, we compared pretest and posttest scores on cardio vascular endurance (12 min Kooper run and walk (in meters)), muscular endurance (Push-ups), muscular strength (Bench Press (in Kg)), flexibility (Sit and Reach (in centimeters) and Body Mass Index (BMI) from high school boys in three groups (Control, Aerobics training and Physical exercise,) by dependent or paired t test and the results are presented in the following tables.

To achieve this hypothesis, the dependent t test was applied and the results are presented in the following table

Hypothesis

There was no significant difference between pretest and posttest cardio vascular endurance (12 min Cooper run and walk (in meters)) scores of high school boys in Aerobics training and Dollu Kunita.

Table 1: Results of paired 't' test between pre test scores and post test cardio vascular endurance (12 min Cooper run and walk (in meters)) scores of high school boys in Aerobics training and Dollu Kunita.

Groups	Time	Mean	SD	Mean Diff.	SD Diff.	Paired t	P-value
Control group	Pretest	2203.97	209.64				
	Posttest	2215.90	213.84	-11.93	36.97	-1.7678	0.0876
Aerobics training	Pretest	2262.97	203.39				
	Posttest	2562.73	216.05	-299.77	92.34	-17.7814	0.0001*
Dollu Kunita	Pretest	2274.20	221.14				
	Posttest	2683.67	211.03	-409.47	97.43	-23.0192	0.0001*

* $p < 0.05$

From results of the above mentioned table, it can be explained in the followings

- No-significant difference was found between pretest and posttest scores of cardio vascular endurance (12 min Cooper run and walk (in meters)) of high school boys in control group ($t = -1.7678$, $p > 0.05$) at 5% level of significance. So, the null hypothesis is accepted and

alternate hypothesis is rejected. It shows that, pretest and posttest scores of cardio vascular endurance (12 min Cooper run and walk (in meters)) of high school boys are similar in control group.

- Significant difference was found between pretest and posttest scores of cardio vascular endurance (12 min Cooper run and walk (in meters)) of high school boys in

Aerobics training group ($t=-17.7814, p<0.05$), and Dollu Kunita group ($t=-23.0192, p<0.05$) at 5% level of significance. So, the null hypothesis is rejected and alternate hypothesis is accepted. It shows that, posttest scores of cardio vascular endurance (12 min Cooper run and walk (in meters)) are significantly higher as compared to pretest scores (Aerobics training group and

Dollu Kunita training) of high school boys.

Hypothesis: There was no significant difference between pretest score and posttest score of Muscular Endurance (Push-ups) scores of high school boys in five groups (Control, Aerobics training and Dollu Kunita).

Table 2: Results of paired 't' test between pretest and posttest Muscular Endurance (Push-ups) scores of high school boys in Aerobics training and Dollu Kunita.

Groups	Time	Mean	SD	Mean Diff.	SD Diff.	Paired t	P-value
Control group	Pretest	9.73	4.09				
	Posttest	10.20	4.01	-0.47	0.86	-2.9709	0.0059*
Aerobics training	Pretest	11.50	3.41				
	Posttest	16.37	3.59	-4.87	1.14	-23.4514	0.0001*
Dollu Kunita	Pretest	11.67	4.96				
	Posttest	16.37	5.08	-4.70	1.29	-19.9473	0.0001*

* $p<0.05$

From results of the above table, it can be seen that the followings

- No significant difference was observed between pretest and posttest scores of Muscular Endurance (Push-ups) of high school boys in control group ($t=-2.9709, p<0.05$) at 5% level of significance. Therefore, the null hypothesis is accepted and alternate hypothesis is rejected. It shows that, pretest and posttest scores of Muscular Endurance (Push-ups) of high school boys are similar in control group.
- Significant difference was found between pretest and posttest scores of Muscular Endurance (Push-ups) of high school boys in Aerobics training group ($t=-23.4514,$

$p<0.05$) and Dollu Kunita group ($t=-19.9473, p<0.05$) at 5% level of significance. Therefore, the null hypothesis is rejected and alternate hypothesis is accepted. It shows that, posttest scores of Muscular Endurance (Push-ups) are significantly higher as compared to pretest scores of high school boys.

Hypothesis: There was no significant difference between pretest and posttest Muscular strength (Bench Press (in Kg)) scores of high school boys in five groups (Control, Aerobics training and Dollu Kunita)

Table 3: Results of paired t test between pretest and posttest Muscular strength (Bench Press (in Kg)) scores of high school boys in Aerobics training, and Dollu Kunita.

Groups	Time	Mean	SD	Mean Diff.	SD Diff.	Paired t	P-value
Control group	Pretest	0.57	0.09				
	Posttest	0.58	0.09	0.00	0.02	-0.8749	0.3888
Aerobics training	Pretest	0.60	0.07				
	Posttest	0.70	0.08	-0.10	0.03	-19.2001	0.0001*
Dollu Kunita	Pretest	0.62	0.12				
	Posttest	0.72	0.14	-0.10	0.03	-21.8987	0.0001*

* $p<0.05$

From results of the above mentioned table, it can be seen that the followings:

- No-significant difference was found between pretest and posttest scores of Muscular strength (Bench Press (in Kg)) of high school boys in control group ($t=-0.8749, p>0.05$) at 5% level of significance. Therefore, the null hypothesis is accepted and alternative hypothesis is rejected. It shows that, pretest and posttest scores of Muscular strength (Bench Press (in Kg)) of high school boys are similar in control group.
- Significant difference was found between pretest and posttest scores of Muscular strength (Bench Press (in Kg)) of high school boys in Aerobics training group ($t=-19.2001, p<0.05$) and Dollu Kunita group ($t=-21.8987,$

$p<0.05$) at 5% level of significance. Therefore, the null hypothesis is rejected and alternative hypothesis is accepted. It shows that, posttest scores of Muscular strength (Bench Press (in Kg)) are significantly higher as compared to pretest scores of high school boys.

Hypothesis: There was no significant difference between pretest and posttest Flexibility (Sit and reach (in centimeters)) scores of high school boys in five groups (Control, Aerobics training, Physical exercise, Kamsale training and Dollu Kunita)

Table 4: Results of paired t test between pretest and posttest Flexibility (Sit and reach (in centimeters)) scores of high school boys in Aerobics training and Dollu Kunita)

Groups	Time	Mean	SD	Mean Diff.	SD Diff.	Paired t	P-value
Control group	Pretest	38.93	6.99				
	Posttest	38.99	7.00	-0.07	0.14	-2.5673	0.0214*
Aerobics training	Pretest	40.19	6.94				
	Posttest	42.51	7.11	-2.32	1.01	-12.5213	0.0001*
Dollu Kunita	Pretest	41.44	8.10				
	Posttest	43.87	8.32	-2.43	1.20	-11.0963	0.0001*

* $p < 0.05$ **From results of the above mentioned table, it can be seen that the followings:**

- No Significant difference was found between pretest and posttest scores of Flexibility (Sit and reach (in centimeters)) of high school boys in control group ($t = -2.5673$, $p < 0.05$) at 5% level of significance. Therefore, the null hypothesis is rejected and alternative hypothesis is accepted. It shows that, pretest and posttest scores of Flexibility (Sit and reach (in centimeters)) of high school boys are different in control group.
- Significant difference was found between pretest and posttest scores of Flexibility (Sit and reach (in

centimeters)) of high school boys in Aerobics training group ($t = -12.5213$, $p < 0.05$ and Dollu Kunita group ($t = -11.0963$, $p < 0.05$) at 5% level of significance. Therefore, the null hypothesis is rejected and alternative hypothesis is accepted. It shows that, posttest scores of Flexibility (Sit and reach (in centimeters)) are significantly higher as compared to pretest scores of high school boys.

Hypothesis: There was no significant difference between pretest and posttest Body Mass Index scores of high school boys in Aerobics training and Dollu Kunita.

Table 5: Results of paired t test between pretest and posttest Body Mass Index scores of high school boys in Aerobics training and Dollu Kunita.

Groups	Time	Mean	SD	Mean Diff.	SD Diff.	Paired t	P-value
Control group	Pretest	16.64	2.01				
	Posttest	16.63	2.02	0.01	0.06	1.2386	0.2254
Aerobics training	Pretest	16.35	2.07				
	Posttest	15.92	2.08	0.43	0.08	28.5454	0.0001*
Dollu Kunita	Pretest	16.60	1.74				
	Posttest	16.13	1.79	0.47	0.38	6.7622	0.0001*

* $p < 0.05$ **From results of the above mentioned table, it can be seen that in the followings:**

- No- Significant difference was found between pretest and posttest scores of Body Mass Index of high school boys in control group ($t = 1.2386$, $p > 0.05$) at 5% level of significance. Therefore, the null hypothesis is accepted and alternative hypothesis is rejected. It shows that, pretest and posttest scores of Body Mass Index of high school boys are similar in control group.
- Significant difference was found between pretest and posttest scores of Body Mass Index of high school boys in Aerobics training group ($t = 28.5454$, $p < 0.05$) and Dollu Kunita group ($t = 6.7622$, $p < 0.05$) at 5% level of significance. Therefore, the null hypothesis is rejected and alternative hypothesis is accepted. It shows that, pretest scores of Body Mass Index are significantly higher as compared to posttest scores of high school boys.
- The above all the five tables say that A non-significant difference is observed between pretest and posttest scores of all the five health related components tested in controlled group.

Conclusion

The Participation of different physical activities plays a significance influence on developing the health related fitness among the participants, Hence we the teachers always creative to awareness among the peoples, students and children to improve their Health and fitness. Dollukunita is a Karnatakas popular traditional dance event which has been performed since from thousand years back. Dollu kunita is

also called Datti Kunita. It is originated in Karnataka, so we have to study on this event and create awareness among the people of Karnataka. It is also a physical activity. So we the people of Karnataka have to promote and protect this type of events in the modern world.

References

1. Barry Johnson L, Jack Nelson K. Practical Measurements for Evaluation in Physical Education. 2012, 142-165, 165-187, 119, 76-93.
2. Dr. Anand Nadiger, Daihik Shikshanadalli Moulyamapan. 2002, (107-183)
3. Sharon Plowman A, Denise Smith L. Exercise physiology for Health, Fitness and Performance, 2007.
4. Byrne BM. The general/ academical self –concept nomological network; A Review of construct validation research. Review of Educational Research. 1984, 54, 427-456.
5. Ellis K, Lieberman L, Fittipauldi-Wert J, Dummer G. Health related fitness, 2005.
6. ACSM's health-related physical fitness assessment manual; Leonard A. Kaminsky, American College of Sports Medicine.
7. Exercise physiology: theory and application to fitness and performance; Scott Kline Powers, Edwar T. Howley, (ISBN:0697257983,9780697257987)
8. Scientific principles of practical of health –related fitness ISBN 0873228642 Allen W. Jackson- 1994
9. Concepts of Health-Related Fitness; Thomas M.li Adams 2002 3,60-72 ISBN 0787294071,9780787294076 Carol Hensel's Aerobic dance & exercise book; Carol

Hensel, 1983.

10. Kothari CR. Research Methodology Methods and Techniques, 2004
11. Aerobic Training. Gudrun Paul (11 Jun 2010), 48-98
12. Effects of Aerobic and circuit training on fitness and Body image among women.
13. A handbook of Karnataka; S. R. Honnalingaiah; (4 Sep 2008), 256.