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## Scrutinize the severe impact of aerobic dance on flexibility of lower back among college women

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### Abstract

The aim of this study was to determine to scrutinize the severe Impact of Aerobic Dance on Flexibility of lower back among college Women. Forty (N=40) women students aged between 19 to 23 randomly selected from Kerala University of Fisheries and Ocean Studies Kochi as the subjects of this study. The subjects were divided into two groups of experimental (EXP) or a control (CON) group of twenty each (n=20). Experimental group underwent Aerobic dance training program. The duration of the training period is restricted to 12 week and the number of sessions per week will be confined to 4. Control group did not take part in any kind of the treatment stimuli. Pretest and posttest were done before and after the training period. Flexibility of lower back was the criterion variable and it was measured by Sit and reach test methods. Data was analyzed by using the statistical package program. Descriptive statistics were used to determine the mean, standard deviation values of the groups. "Paired t-test" were used for comparisons. Results were evaluated according to significances level of "0.05". The results of the study showed that there were significant improvements in Flexibility of lower back due to the 12 week Aerobic Dance training applied to college women. There for it is recommended to increase the objectivity by considering these issues in future researches.

**Keywords:** Aerobic dance, flexibility of lower back, women and sit and reach test

### 1. Introduction

Everyday life or routine life comprises the ways in which people usually act, think and feel on a regular basis it is possible to characterized day to day life as dull, routine, natural, habitual, or regular. The human body activity means that most people sleep at last night and are busy throughout the day. The bulk of them eat two or three meals a day. Working time (other than shift work) primarily requires a daily routine, starting in the morning. Busy at work and everybody ignores their well-being and welcomes sedentary lifestyle. Any prolonged sitting behind a desk at work or behind a wheel can be dangerous, sitting like a disease of our time. Now I'm sure it's no surprise that sitting behind a desk, commuting or relaxing on the couch for so many hours a day can be detrimental to your wellbeing, but what you may find shocking is the magnitude of the havoc it create on your body<sup>[1]</sup>.

Regular physical activity, nutrition and exercise are important to the health wellbeing of people of all ages. Whether they are engage in intense exercise or any form of mild physical activity that improves their health even among young and very old adults, agility and functioning can be enhanced by physical activity<sup>[2]</sup>.

The basic movements of a human being, achieved by their prehuman ancestors, are walking, running, jumping, climbing, throwing, drawing, moving, etc. by the permutation and combination of these basic fundamental movements, man has established numerous secondary movements which are important for day to day living and for use in games and sports. Physical health is important to all human beings regardless of age. A particular work cannot do if the necessary physical strength is present. Fitness is the first and foremost thing you have to enjoy the life<sup>[3]</sup>.

Aerobic exercise to music or dance aerobics was especially popular during the last few years of the 20th century, primarily among women. A characteristic of this kind of exercise is that all of the people who are participating in the exercise to music program realize certain movements in the same rhythm and tempo, activating different muscle groups at the same time.

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Aerobic dance exercises have typically been developed as an aerobic exercise to reduce body compositions as well as improve physical fitness and performance [4].

Sedentary lifestyles pose a danger to the health of individuals as they may contribute to a rise or progression in the risk of hypertension, obesity, muscle weakness, posture defects, diabetes and coronary heart disease (CHD) in middle aged people. Regular physical activity contributes to major improvements in the reduction of health-related risks [5].

Fitness for living in the home or on the farm, in the office or in the factory or in the workplace or in any kind of service means freedom from sickness, adequate stamina, endurance and other physical ability to meet the demands of daily living. Going physical activity on a daily basis leads to optimal health and quality of life. Life style can be changed to improve health and wellness by physical exercise [6].

**2. Materials and Method**

**2.1 Participants**

Forty (N =40) women students randomly selected from Kerala University of Fisheries and Ocean Studies Kochi, voluntarily participated in the study. The participants were split into two equal groups as experimental group (n=20) and control group (n=20). Their age ranged (18 to 23) the mean age of the athletes was 19.16 ± 0.37 years. The groups were informed before the study and "Informed Consent Form" was obtained from each of them and their participation was ensured.

**2.2 Materials**

**2.2.1 Measurement of flexibility of lower of back**

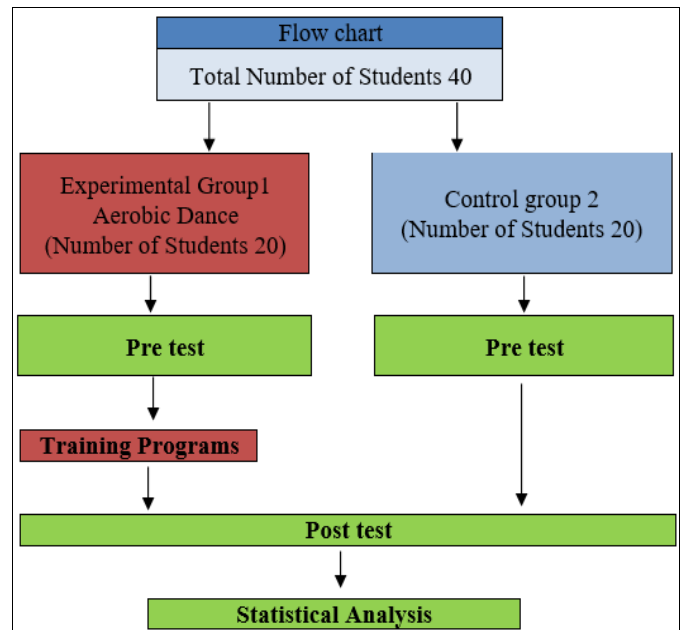
The subject is asked to remove the shoes and place his or her feet against the testing box while sitting on the floor with straight knees. Now subjects are asked to place one hand on top of the other so that the middle fingers of both hands are together at the same length. The tester keeps his hand on the knees of the subject to keep them straight not allowing any binding of the knees. The subject is instructed to lean forward and place his hand or the measuring scale lying on the top of the box. Then the subject asked to slide his hands along the measuring scale as far as possible without bouncing and hold the position for at least once seconds. Each subject gave three trails and top score nearest to inch or centimeter is recorded and 10 inches are deducted from the recorded reading to obtain the flexibility score [7].

**2.3 Procedure**

A 12 weeks Aerobic dance training program 4 days a week 60 minutes a day was given to Experiments group (Aerobic dance) and the control group did not involve in any type of training". Sit and reach test" was used to determine flexibility of lower back in both groups as at the beginning of the training period "pre-test" and "post-test" at the end.

**Table 1:** Aerobic dance training

1	Practice	1 to 3 weeks	3 to 6 weeks	6 to 9 weeks	9 to 12 weeks
2	Warm-up	15 minute	15 minute	15 minute	15 minute
3	Aerobics	35 minute	35 minute	35 minute	35 minute
4	Warm down	10 minute	10 minute	10 minute	10 minute
5	Intensity of work	60 to 65%	65 to 70%	70 to 75%	75 to 80%



**Fig 1:** The flow chat

**3. Experiments and results**

**Table 2:** The mean, standard deviation and t-test scores of Aerobic dance groups

Variable	test	N	Mean	Std. Deviation	t value	df	Sig
Flexibility of the Lower Back	Pre FLEX	20	25.35	5.174	-7.592	19	0.000
	Post FLEX	20	27.25	5.210			

\*Significant at .05 level

**Table 3:** The Mean standard deviation and t-test scores of control group

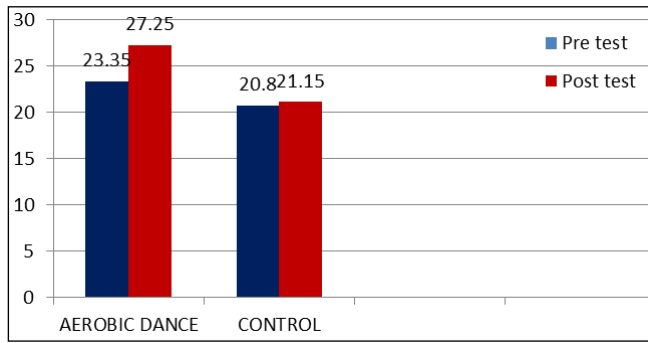
Variable	test	N	Mean	Std. Deviation	t value	df	Sig
Flexibility of the Lower Back	Pre FLEX	20	20.80	5.773	-1.505	19	0.149
	Post FLEX	20	21.15	4.987			

\*Significant at .05 level

**4. Discussion**

The above table 2 shows that the post-test mean value 27.25 of the experimental group is greater than the pretest mean 25.35. The ‘t’ value of the experimental group -7.592 with19 degree of freedom and p value is 0.00. The obtained p value is less than the level of significant value of 0.05 for the flexibility of the lower back due to the effect of 12 weeks Aerobic dance session. It shows that there is significant improvement between pre and post-test in flexibility of the lower back among college women in aerobic dance group.

The above table 3 shows that the post-test mean value 21.15 of the control group is greater than the pretest mean 20.80. The ‘t’ value of the experimental group -1.505 with19 degree of freedom and p value is 0.149. The obtained p value is higher than the level of significant value of 0.05 for the flexibility of the lower back. It shows that there is no significant improvement between pre and post-test in flexibility of the lower back among college women in control group.



**Fig 2:** Graphical presentation Mean value on flexibility of the lower back of Aerobic dance and control group

## 5. Conclusions

The finding of this study shows that aerobic dance training increased lower back flexibility in the college women. This study supports the use of aerobic dance training for women. Initially, they will start with light programs and moves in to more intensive program.

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