

EFFECTS OF CLASSICAL DANCE AND CALLISTHENIC EXERCISE ON PHYSIOLOGICAL VARIABLES

Research
Paper

INTRODUCTION

Recently there has been an increased concern regarding physical fitness. The life style of today's young people includes television, computer games, and fast food. Hours formerly spent, as playing out of doors with neighborhood friends are now being spent as more sedentary activity. This change in lifestyle has produced a nation of unfit children who are unaware of their poor fitness. They do not realize the necessity of maintaining a healthy body, and they lack knowledge of how to improve. As educators, we have the opportunity to initiate healthful changes in young people that will enrich lives. To do this we must motivate children to care for themselves and their well being. We must help them become excited about fitness by showing them that becoming fit means learning now and exciting concepts and that exercising really can be fun and rewarding. The physical fitness programmes can be dancing or doing exercise. In this study, Bharatha Natyam and callisthenic exercise are taken as physical fitness programmes.

Bharatha Natyam, as Balasaraswati puts it is an artistic yoga (Natya yoga), for revealing the spiritual through the corporal. It is the most widely practiced of Indian classical dances in South India and has its origin in Tamil Nadu. It is the most ancient of all the classical dance forms in India, which are based on Natya Shastra, the Bible of classical Indian dance. The term "Bharatha Natyam" was introduced in the midthirties of the last century by E. Krishna Iyer and later spread by Rukminidevi Arundale, and is taught to derive from the four syllables, BHA VA (expression) RAGA (Music) TALA (rhythm) NATYAM (dramatic art).

Balasaraswati has said "Bharata Natyam, in its highest movement, is the embodiment of music in its visual form. For more than thousand years, the sastras have confirmed that an individual dedicated to music and must receive thorough training in both the arts. If we approach

Bharatha Natyam with humility, learn it with dedication and practice it with devotion to God. Sringara which brings out the great beauties of this dance can be portrayed with all the purity of the spirit. The flesh, which is considered to be an enemy of the spirit and the greatest obstacle to spiritual realization, had itself been made a vehicle of the divine in the discipline of the dance. Sringara is an instrument of uniting the dancer with the Divinity.

The word "Exercise" refers to conscious and purposeful physical activity usually with sufficient intensity to increase to some degree of respiratory and circulatory function. It refers only to the actual movement process at the time it occurs and should not be confused with conditioning or training.

According to Websters Universal Dictionary, callisthenics is a Franch term as well as Greek term, Kalli and Athences; strength, art and practice of bodily exercises calculated to produce strength and grace.

Callisthenics, which generally are referred to as 'warm-up' exercises in athletic activity, have a definite purpose in competitive sports. They are exercises that are used as a warm-up preliminary to more strenuous activity, and to obtain this purpose they must be carried out energetically and with complete dedication. Callisthenics was probably in practice from the fourth and fifth century B.C. Modern callisthenic exercises started from about 1786. The free hand exercises and exercises with apparatus are inclusively termed as callisthenics. It is performed for the purpose of attaining development and maintenance of body health, good body mechanics, body suppleness and body control.

J. Janet Rani Lecturer in Physical Education,
Dr. Sivanthi Aditanar College of Education, Tiruchendur.
Dr. K. Sureshkutty Reader, School of Physical
Education and Sports Sciences, Kannur University, Kerala.

Callisthenic exercises are simply formed as free hand exercises. They are freely performed individual type of physical activity, designed to stretch, supple and generally create a sense of muscular readiness before more severe exercise is undertaken. They assist in gently loosening the joints and stretching the muscles so that the performer acquires fluency and grace of movement in the execution of the skills of various games from the easy to the harder,

the minor to the major. The exercises must be selected so as to be of very definite value to the performer.

Though it has been stated earlier that callisthenic exercises be performed freely, they are yet classified as being performed in any one or more forms of performing the exercises when attempted individually not in any particular order or rhythm. It is termed as the "at will method". The group of exercise programme is usually done rhythmically with the group leader setting rhythm and the others following his timing. When it is performed to a specific count rhythm, with the aid of music, it is termed as the "cadence method" There is yet again another method, the "dynamic method" which involves forceful, concentrated action. This may be rhythmic otherwise, but it is directed towards specific muscular development.

Having gone through the importance, principles and the need apart from the latest trends of classical dance and callisthenic exercise the investigator is interested to make a detailed study of the effects of classical dance and callisthenic exercises on physiological variables of college women students.

STATEMENT OF THE PROBLEM

The purpose of the study was to find out the effects of classical dance and callisthenic exercises on physiological variables of college women students.

HYPOTHESES

Based on the research findings two types of hypothesis were formulated.

1. There would be significant improvement on the selected criterion variables due to the effect of classical dance and callisthenic exercises.

2. There would be significant difference between classical dance and callisthenic exercises on the selected criterion variables.

METHODOLOGY

Thirty six women subjects were selected from Dr. Sivanthi Aditanar College of Education Tiruchendur. Their age ranged from 20 to 25 years. The thirty six subjects were divided into three groups, as classical dance group I, callisthenic Exercise Group II and control group III. Training was given to group I and group II for a period of 4 months. The following physiological variables were considered for the study: Resting pulse rate and breath holding time.

The collected data were analyzed statistically by using dependent 't' test to determine the differences, if any among the groups prior to and immediately after the training period on the selected criterion variables separately. Analysis of covariance (ANCOVA) was used to determine the differences, if any, among the adjusted post test means on selected dependent variables separately. The level of significance was fixed at 0.5 level of confidence, which was considered as appropriate.

ANALYSIS OF THE DATA

The influence of independent variables on each criterion variable was analyzed and the results are presented in tables.

TABLE - 1
MEANS AND DEPENDENT 't' - TEST FOR THE PRE AND POST TESTS ON CRITERION VARIABLES OF THE EXPERIMENTAL AND CONTROL GROUPS

Criterion Variables	Mean and 't' test	Classical Dance Group	Exercise group Control Group
Resting Pulse Rate	Pre test	81.90	83.80
	Post test	82.80	84.20
	't' test	0.358	0.264
Breath Holding Time	Pre test	29.80	21.40
	Post test	25.50	19.70
	't' test	0.671	0.517

(Table value required for significance at .05 level of significance value for df 19 is 2.26)

From Table 1 dependent 't' - test values of resting pulse rate and breath holding time between the pre and post tests means of classical dance group and callisthenics exercise group & control group were lesser than the table value 2.26 with df 19 at 0.5 level of confidence.

TABLE - 2
ANALYSIS OF COVARIANCE ON
CRITERION VARIABLES OF
EXPERIMENTAL AND CONTROL
GROUPS

Criterion Variables	Adjusted post test means			Source of variance	Sum of squares	Df	Mean squares	'F'-Ratio
	Classical Dance group	Exercise Group	Control Group					
Resting Pulse Rate	82.77	84.22	80	B W	10.11 396.87	1 17	10.11 23.34	0.433
Breath Holding Time	23.25	19.95	16	B W	127.38 1638.53	1 17	127.38 96.38	1.32

(The table value required for significance at .05 level with df (1, 17) is 4.45)

From Table 2, the obtained F-ratio of resting pulse rate and breath holding time of adjusted post test means were lesser than the table value of 4.45 for df 1 and 17 required for significance and 0.05 level of significance. The results of the study indicate that there is no significant difference among the adjusted post test means of the classical dance group and the callisthenic exercise group on the development of group resting pulse rate and breath holding time.

FINDINGS

1. Significant difference is not found between the classical dance group and the callisthenic exercise group towards improving the selected variables such as resting pulse rate and breath holding time.
2. Significant difference is not found among classical dance group, Exercise group, Control group towards improving the selected variables such as resting pulse rate and breath holding time.

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To live is not merely to breathe. It is to act, to make use of our organs, senses, our faculties and of all those parts of ourselves, which give us the feeling of our existence.

- Rousseau

Personality is two-third and his intellect and words are only one-third in making the real man

- Vivekanandha