



IMPACT OF DANCING AND RHYTHMIC ACTIVITIES ON PHYSIOLOGICAL VARIABLES OF SPORTS PERSONS

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ABSTRACT

This study was conducted to find out that to what extent the activities like in dancing and rhythmic activities can affect the physiological variables of sports persons. The present study was conducted to know about the effect of dancing and rhythmic activities on physiological variables of sportspersons. The study was conducted on a sample of 200 students of Ch. Devi Lal University before and after participation in dancing activities. It has been found in the study that there exist a significant difference in physiological variables like endurance, vital capacity and fat percentage of sportspersons before and after taking part in co-curricular activities of dance.

KEYWORDS: Rhythmic activity, physiology, vital capacity, cardiovascular efficiency.



INTRODUCTION:

For more than a century, Physical education has been a fundamental part of the Indian society. Education contributes to the development, advancement and perpetuation of the nation's culture. Education must meet the challenges present in the society. Our nation's schools and colleges should be concerned with the well-being of the individual student in his preparation for a productive, long and happy life in which his potentialities as an individual are enlarged and fulfilled and where his freedom will be assured. Physical education, as a phase of

the total educational process, helps in realizing these purposes. The effective physical education programme helps the students to understand and appreciate the value of good as a means of achieving their greatest productivity, effectiveness and happiness as individuals. In the past, physical education has achieved only low educational status and a low degree of academic responsibility because it has emphasized the physical rather than the academic aspects and that physical education has been 'too far removed from the main educational stream.' Physical education must

be identified as an important part of the education of each student.

Physical education is concerned with the "relationship between human movements and other areas of education, i.e., with relationship of body's physical development to the mind and the soul, as they are being developed" (Freeman, 1982). According to Williams (1984), "It is sum of man's physical activities selected as to the kind and conducted as to outcome". When body and mind were thought as two separate entities, physical education was an education of physical part only but in the modern concept, physical education is known as education through physically involve concerns like emotional responses, personal relationship, group behavior, mental learning and other intellectual, social,

emotional and athletic outcomes. According to Jenny (1964), "The unique contribution that physical education has to make to general education is that general body should be developed through physical activities". A number of sports educators and coaches are emerged in analyzing and evaluating the relationship between human behavior and related variables like physical strength, attitudes, interest, intelligence, adjustment, personality characteristics, self-concept and socio-economic status.

Dancing reflects the value of nature in people's life. Many of the folk, tribal and ritual dances are intimately connected with nature's patterns. A bumper harvest calls for rejoicing while the growth of crops is supposedly encouraged through rites for rain or invoking of the spirits of fertility. Everyday tasks like planting, winnowing and fishing or occupational activity like rowing a boat or pounding the earth are also seen in dances. Dancing can help a sports person in maintaining his physical fitness as well as physiological variables.

PHYSIOLOGICAL VARIABLES

Physiological variables are the physical and physiological characteristics of a sports person that contribute to performance in particular sports and the most effective methods to make a best performer of sports is to manipulate these characteristics to increase the likelihood of success. Let us discuss a few physiological variables:

Cardiovascular efficiency: endurance vary from person to person and in different physiological conditions. cardiovascular endurance can differ among different people and the same person under different situations. It shows the endurance level of a person.

Lung Capacity: The maximum volume of gas that can be expelled from the lungs following a maximal inspiration is called lung capacity.

The successful sportsman however, not only possesses the apparently ideal physique but also certain physical and psychological developed by the specific events, he is competing in different motor abilities, play decisive role in various sports disciplines. Dancing and rhythmic activities can play important role in developing physical fitness and to maintain physiological variable of sports persons.

OBJECTIVES OF THE STUDY

To find out the impact of rhythmic and dancing activities on percentage of fat in the body of students.

To find out the impact of rhythmic and dancing activities on lungs capacity in the body of students.

To find out the impact of rhythmic and dancing activities on heart rate of students.

METHODOLOGY

Delimitations of the study

Only a few physiological variables were considered for the study

This study was of rhythmic and dancing activities folk and general dance only.

This study was conducted only on 200 students.

All the subjects of the present study were from Sirsa district.+

Tool to be used

Data was collected on the chosen variable at the pre and post experimental stage. The following test was used to collect the data.

Physiological Test

Physiological test will be conducted with following tools:

Vital Capacity of lungs RMS Medspiror (Spiro meter)

Cardio- Vascular condition Harvard Step Test

Fat percentage Clipper

Procedure to be used

200 students were taken from Ch. Devi Lal University, Sirsa. Data was taken at previous stage when these sports persons were not involved in any kind of rhythmic activities and hence they act as control group in first stage. Then the data was taken after youth festival and others kind of activities in which all the subjects of study

participated. Data was taken from two different years and tests were made.

Statistical technique for analysis of data

The difference between the pre and post result of the group was tested by "t-test". Further for testing the hypothesis the level of confidence was be set at 0.5 level

Analysis and interpretation

To attain the above objective mean and standard deviation of vital capacity are calculated before and after participation in dancing and rhythmic activities of sportsperson. The data collected for the vital capacity through Spiro-meter was analysed according to the norms of measuring physiological variables. Mean and S.D. scores achieved by 200 sportspersons before and after participation in dancing and rhythmic activities are shown in table below

TABLE-1
Comparison of vital capacity of sportspersons before and after participating in dancing and rhythmic activities.

Groups	N	Mean	S. D.	t-value
Before participation	200	4420.73	136.95	12.61*
After participation	200	4576.31	107.95	

*significant at 0.05 level of significance

It could be observed from table-1 that obtained t-value of 12.61 is more than the table value, at 0.05 level of significance. Therefore null hypothesis is rejected. Thus it is concluded that there is significant difference between the vital capacity of sportspersons before and after participation in dancing and rhythmic activities. Therefore we may conclude that dancing and rhythmic activities play very significant role in increasing the vital capacity of sportspersons.

GRAPHICAL INTERPRETATION OF DIFFERENCE IN MEAN AND STANDARD DEVIATION OF VITAL CAPACITY OF SPORTSPERSONS BEFORE AND AFTER PARTICIPATION IN DANCING AND RHYTHMIC ACTIVITIES



To attain this objective mean and standard deviation of pulse rate are calculated before and after participation of in dancing and rhythmic activities of sportsperson. The data collected for the pulse rate was analysed according Harvard Step Test. Mean and S.D. scores achieved by 200 sportspersons before and after participation in dancing and rhythmic activities are shown in below table.

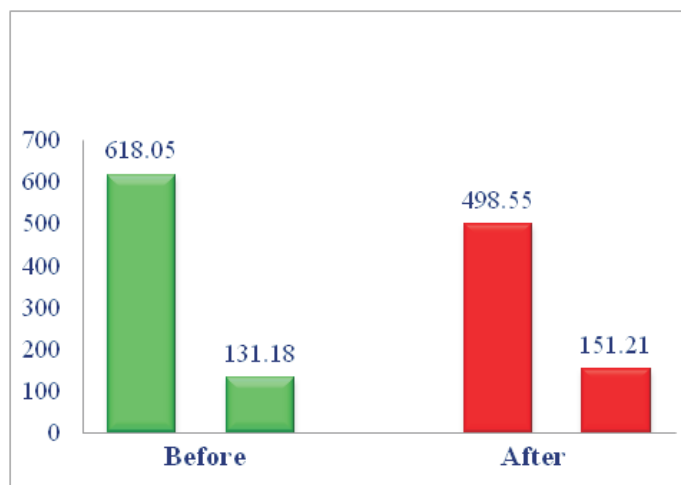
TABLE-2
Comparison of pulse rate of sportspersons before and after participating in dancing and rhythmic activities.

Groups	N	Mean	S. D.	t-value
Before participation	200	51.78	3.41	24.99*
After participation	200	44.00	2.78	

*significant at 0.05 level of significance

It could be observed from table-1 that obtained t-value of 24.99 is more than the table value, at 0.05 level of significance. Therefore null hypothesis is rejected. Thus it is concluded that there is significant difference between the pulse rate of sportspersons before and after participation in dancing and rhythmic activities. Therefore we may conclude that dancing and rhythmic activities play very significant role in increasing the pulse rate of sportspersons.

GRAPHICAL INTERPRETATION OF DIFFERENCE IN MEAN AND STANDARD DEVIATION OF PULSE RATE OF SPORTSPERSONS BEFORE AND AFTER PARTICIPATION IN DANCING AND RHYTHMIC ACTIVITIES



To attain the objective mean and standard deviation are calculated before and after participation in dancing and rhythmic activities of sportsperson. The data collected for the measurement of fat percentage through clipper was analysed according to the norms. Mean and S.D. scores achieved by 200 sportspersons before and after participation in dancing and rhythmic activities are shown in table 3

TABLE-3
Comparison of fat percentage of sportspersons before and after participating in dancing and rhythmic activities.

Groups	N	Mean	S. D.	t-value
Before participation	200	618.05	131.18	8.42*
After participation	200	498.55	151.21	

*significant at 0.05 level of significance

It could be observed from table 3 that obtained t-value of 8.42 is less than the table value, at 0.05 level of

significance. Therefore null hypothesis is rejected. Thus it is concluded that there is significant difference between the fat percentage of sportspersons before and after participation in dancing and rhythmic activities. Therefore we may conclude that dancing and rhythmic activities do play significant role in decreasing the fat percentage of sportspersons.

GRAPHICAL INTERPRETATION OF DIFFERENCE IN MEAN AND STANDARD DEVIATION OF PERCENTAGE OF FAT OF SPORTSPERSONS BEFORE AND AFTER PARTICIPATION IN DANCING AND RHYTHMIC ACTIVITIES



FINDINGS OF THE STUDY

After proper analysis and interpretation of data, the major findings and conclusion of the study are as follows:

There is significant difference in vital capacity of sportsperson before and after participating in dance and rhythmic activities.

There is significant difference in pulse rate of sportsperson before and after participating in dance and rhythmic activities.

There is significant difference in fat percentage of sportsperson before and after participating in dance and rhythmic activities.

CONCLUSION

We can conclude from this research work that co-curricular activities like dancing and rhythmic activities have significant effect on physiological variables of sportsperson hence we should promote the participation of sportspersons in such activities. Not only they have significant impact on physiological variables but they could also prove very beneficial in developing a number of good habits like moral values, social bonding etc.

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