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COMPARATIVE STUDY OF INDIVIDUAL GAMES, TEAM GAMES AND HEALTH CLUBS ON CARDIO-RESPIRATORY ENDURANCE

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Whereas significant difference was not found between the participants of individual games and health clubs.

KEYWORDS: Individual Games , Cardio-Respiratory Endurance , health clubs.

INTRODUCTION

The sports performance depends largely on physical fitness. Strength, muscular endurance, flexibility and cardio-respiratory endurance are the basic components of physical fitness. Although all the physical fitness characteristics are important but cardio-respiratory endurance is more effectively linked to the strength of heart and lungs. Hence, it is most essential physical fitness components as the efficient functioning of heart and lungs is required for the optimal performance. The statement is also supported by Johnson and Nelson, they states that cardio-respiratory endurance is unquestionably one of the key components of physical fitness and to some physical educator it is the single most indicative measure of Pearson's

ABSTRACT

The purpose of the study was to compare the cardio-respiratory endurance among the participants of individual games, team games and health clubs. The youth of Lucknow district who had either represented university in any individual or team games for two years or participated in health club activities for two years were chosen as subjects for this study. Their age group range from 20-25 years. Eight individual games, Eight team games and Eight health clubs were selected for this study. The subjects comprises of 48 sports men from each discipline making a total of 144. Six sportsmen from each individual games, team games and health club were selected

for the study, using random sampling techniques. To assess the cardio-respiratory endurance 600-yard run/walk test was employed. The elapsing time from the starting signal until the runner completed the 600-yard distance was recorded in minutes and seconds. To compare the participants of selected groups in the dimension of cardio-respiratory endurance analysis of variance was used. Scheffe's post hoc test was applied were ever F-ratio was find significant. Level of significant was kept at 0.05 level of confidence. Based on the findings of the study it was concluded that participant of team games have better cardio-respiratory endurance then the participant of the individual games and health clubs.

physical condition.

METHODOLOGY:-

For the purpose of the study sportsmen of age group between 20-25 years of Lucknow district who have either represented university in an individual game or team game for two years or participated in health club activities for two years were chosen as subjects. Eight individual game (Athletics, Swimming, Gymnastics, Badminton, Table tennis, Wrestling, Judo and Lawn tennis), Eight team games (Hockey, Football, Volleyball, Basketball, Handball, Cricket, Kho-kho, and Kabaddi) and Eight health clubs were selected. Subjects were comprised of 48 sports men making a total of 144. Six sportsmen from each individual games, team games and health clubs were selected for the study using the random sampling techniques. The criterion measure chosen for this study was the time recorded in minutes and seconds in completing 600-yard run/walk test. To ensure uniform testing conditions the subjects were selected during the evening session. To compare the participants of individual games, team games and health clubs in their cardio-respiratory endurance analysis of variance F-ratio was employed. Scheffe’s post hoc test was applied where ever significant difference existed between groups. The level of significant was set at 0.05 level of confidence.

FINDINGS:-

Findings pertaining to the cardio-respiratory endurance of the selected groups are presented below:-

**TABLE-1
ANALYSIS OF VARIANCE FOR THE MEANS OF THE PARTICIPANTS OF INDIVIDUAL GAMES, TEAM GAMES AND HEALTH CLUBS IN THEIR CARDIO-RESPIRATORY ENDURANCE**

Source of variance	Degree of freedom	Sum of squares	Mean sum of square	F-ratio
Between group	2	8.1312	0.18	22.59*
Within group	141	25.7464	4.0656	

* Significant at 0.05 level of confidence $F_{0.05}(2,141) = 3.06$

It is evident from the above table that there was significant difference among the three study groups in their cardio-respiratory endurance as the obtained F-ratio value of 22.59 is more than the required value of 3.06. as the F-ratio was found to be significant the post hoc test was applied to determine the significant of difference between the paired means. The analysis regarding the post hoc test is given in Table-2.

**TABLE-2
PARED MEANS AND DIFFERENCE BETWEEN MEANS OF THE PARTICIPANTS OF INDIVIDUAL GAMES, TEAM GAMES AND HEALTH CLUBS IN THEIR CARDIO-RESPIRATORY ENDURANCE**

Individual games	Team games	Health clubs	Difference between means
2.04	1.57		0.47*
2.04		2.10	0.06
	1.57	2.10	0.53*

* Significant at 0.05 level of confidence Confidence Interval = 0.22

It is evident from the table that the difference between the paired means for the participants of individual games and health clubs (0.06) were not found to be significant, where as difference between the paired means for the participants of individual games and team games (0.47) and team games and health clubs (0.53) were found to be significant as the confidence interval of (0.22) was less than these values.

This indicated that the participants of the individual games and health clubs did not differ significantly were as participants of the team games and health clubs and the individual games and team games showed significant difference between them on the scores of cardio-respiratory endurance.

DISCUSSION OF FINDINGS:-

In the dimension of cardio-respiratory endurance significant difference were observed between the participant of the team game and individual games and team games and health clubs, where as no significant difference was found between individual games and health clubs participants. It indicated that participants of team games have better cardio-respiratory endurance then the participants of individual game and health clubs. This may probably be because individual games are played in small areas as a result in which participants neither able to achieve their maximum speed nor they run continuous for longer duration. Participants of health clubs are engaged in performing exercises with weight and other equipments, where the element of running is almost nil, where as team games put more load and pressure on the participants comparing to individual games and health clubs. As in team games participants are required to sprint as well as to run continuous to meet the demand of the nature of the activity. This may be the reason for possessing better cardio-respiratory endurance by the team games participants in comparison to individual games and health clubs participants. Insignificant difference between individual games and health clubs participants may be attributed to the fact that in case of individual games very less demand is put on the cardio-respiratory endurance of the participants which may not be sufficient to create significant difference between the participants of individual games and health clubs.

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