International Journal of Physical Education, Exercise and Sports
www.physicaleducationjournal.com
Online ISSN: 2664-9896, Print ISSN: 2664-9888
Received: 29-03-2023, Accepted: 14-04-2023, Published: 29-04-2023
Volume 5, Issue 1, 2023, Page No. 46-49

A study of flexibility and cardiovascular endurance between government and private physical education teachers of Jammu

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DOI: https://doi.org/10.66856/ijpees.2023.5.1.8051

Abstract
The aim of this study was to find out the difference in flexibility and cardiovascular endurance between government and private male physical education teachers of Jammu. Fifty male physical education teachers (25 government + 25 non-government) were selected from Jammu for this study. The age of the subjects was ranged between 30 to 40 years. Selected variables: flexibility was measured by sit and reach test and cardiovascular endurance was measured by cooper's 12 minutes run-walk test. Descriptive statistics and independent t-test was employed by 'SPSS Version-23'. The results showed that there was an insignificant difference in flexibility and cardiovascular endurance between government and private physical education teachers of Jammu.

Keywords: Fitness, flexibility, cardiovascular endurance

Introduction
Physical fitness has always been a very important aspect of human life. One of the key goals of physical education is the promotion of health and wellness through exercise, recreation activity, games and sports. A large number of individuals from childhood to old age are now carrying out daily physical exercise to improve health and physical well-being. Physical fitness is an important component of an individual's natural growth and development to lead a healthy lifestyle. A serious threat to an individual's wellbeing is physical inactivity and unconstructive lifestyle behaviors. Scientific evidence has been generated to demonstrate that people's general health and physical performance abilities rely primarily on their level of physical fitness.

Health-related fitness relates to the ability to perform activities of daily living without undue fatigue and is conducive to a low risk of premature hypokinetic diseases. Components of health-related fitness are classified into cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition.

The physical fitness parameters associated with health i. e. cardiorespiratory endurance, flexibility, body structure, muscular strength and endurance (Morrow, 2005). Health-related fitness, also known as general fitness, is a general term that refers to a person's ability to carry out their lifestyle without being too tired, with high energy levels, enjoy fun and socialize and also to meet unexpected emergencies. It is a general aspect of life; in other words, it is a form of the whole organism characterized by energy and goodness, but guided by attitudes and habits that contribute to mental and emotional balance. In simple terms, a health-related fitness can be defined as a lifestyle in which each individual tries to protect himself from diseases; solving problems with obesity (overweight); managing complex problems and relationships; try to be mentally balanced; and good social adjustment (Stanisic Zoran, 2012). The organized training expands physical fitness and organ function. The stronger the organ, the better its performance. (Leonard A. Lanson, 1971)

Aim of Study
The aim of the present study was to find out the difference in flexibility and cardiovascular endurance between government and private physical education teachers of Jammu.

Material and Methods
Total fifty male physical education teachers (25 government + 25 private) were selected as subjects from Jammu for this study. The age of subjects was ranged between 30-40 years. Selected variables: flexibility was measured by sit and reach test and cardiovascular endurance was measured by cooper's 12 minutes run-walk test.

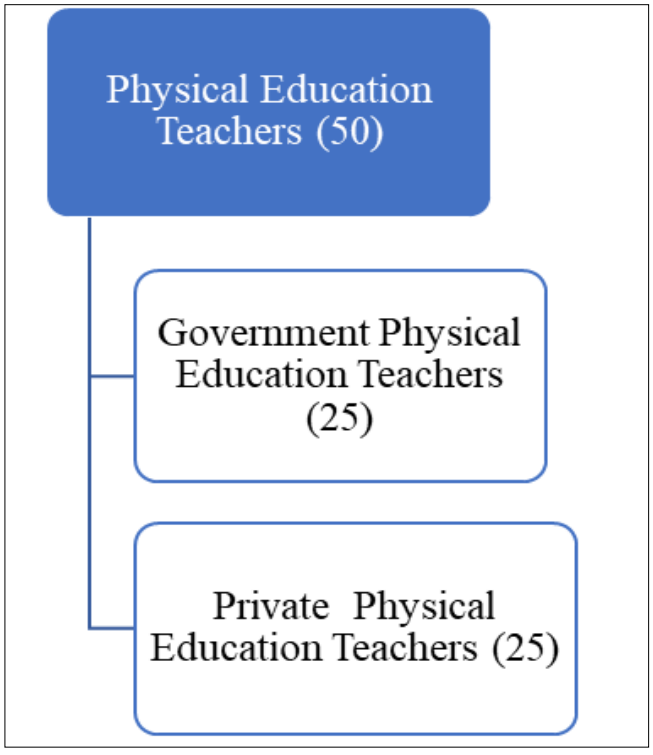

Fig 1: Description of Sampling Plan

Procedure

Before the data collection, consent was taken from the subjects and purpose of the study was explained. Demonstration of the testing protocol was given to the subjects by the researcher. Proper time was given to the subjects for warm-up.

Statistical Technique

Descriptive statistics i.e., mean and standard deviation were calculated. As per objective of the study, 't-test' was applied to find out the difference between various groups. All tests were employed with the help of SPSS-software version 23. Level of significance was set at 0.05.

Results

Table 1: Descriptive Statistics and T-Value for Flexibility Variable

Group Name	Mean	SD	t-value	Sig.
Government Physical Education Teachers	25.33	3.38	-1.55	.085
Private Physical Education Teachers	26.12	3.95		

*Significant at 0.05 level

Table-1 shows the Mean and SD values with regard to government physical education teachers is 25.33 ± 3.38 whereas in the case of private physical education teachers is 26.12 ± 3.95 respectively. The calculated t-value (1.55) which is less than the tabulated t-value (1.984) at .05 level. So, it demonstrates that there is an insignificant difference between government and private physical education teachers of Jammu for their flexibility variable.

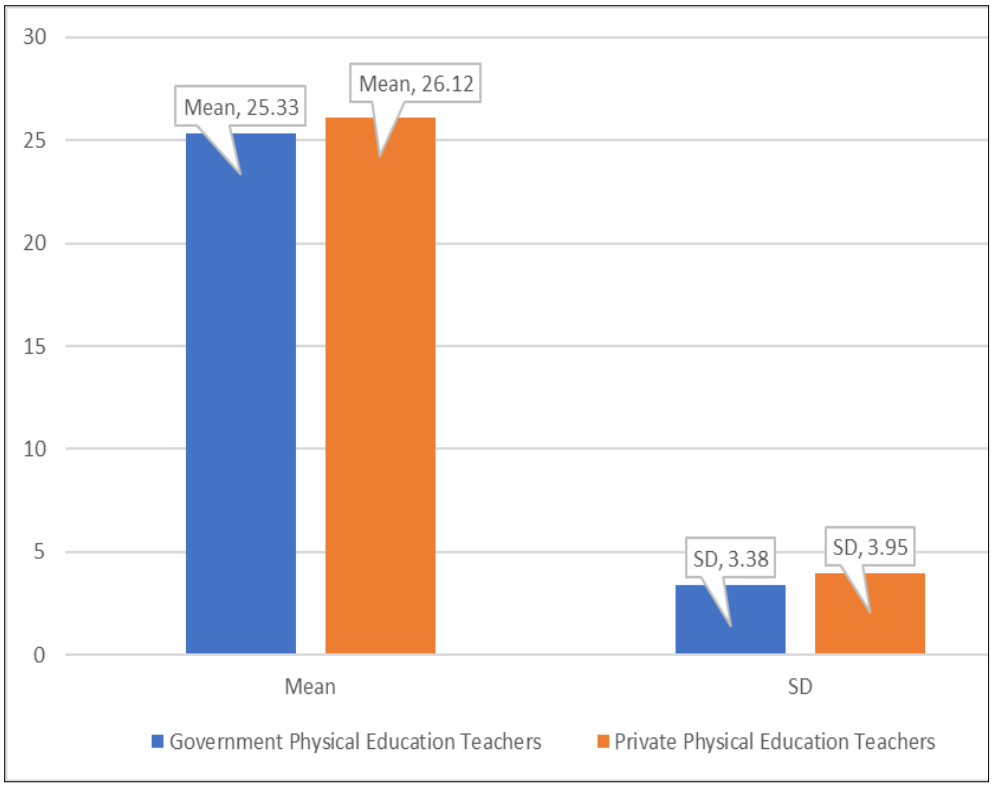

Fig 2: Graphical Represntation of Descriptive Statistics for Flexibility Variable

Table 2: Descriptive Statistics and T-Value for Cardiovascular Endurance Variable

Group Name	Mean	SD	t-value	Sig.
Government Physical Education Teachers	1.16	0.25	-.91	.375
Private Physical Education Teachers	1.22	0.35		

*Significant at 0.05 level

Table-2 shows the mean and SD values with regard to government physical education teachers is 1.16 ± 0.25 whereas in the case of private physical education teachers is 1.22 ± 0.35 respectively. the calculated t-value (0.91) which is less than the tabulated t-value (1.984) at .05 level. so, it demonstrates that there is an insignificant difference between government and private male physical education teachers of Jammu for their cardiovascular endurance variable.

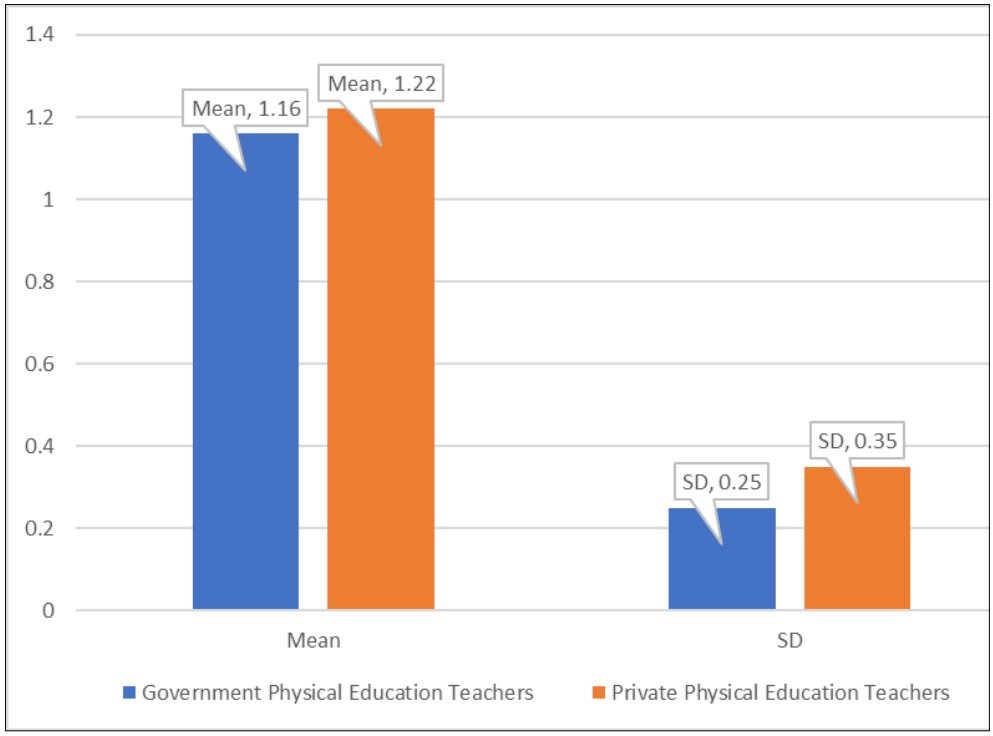

Fig 3: Graphical Represntation of Descriptive Statistics for Cardiovascular Endurance Variable

Discussion

The aim of the present study was to find out the difference in flexibility and cardiovascular endurance between government and private male physical education teachers of Jammu.

The result of the study showed that there was an insignificant difference between government and private male physical education teachers of Jammu in case of flexibility variable. Flexibility is an important component of physical fitness in the personality of physical education teachers. Physical education teacher requires to perform various kinds of practical activities i.e. 'aerobics, yoga, gymnastics etc. The reason behind insignificant statistical difference between government and private sector physical education teachers might be that both sector teachers perform same activities prescribed by educational boards who does not discriminate between government and private schools' curriculum activities. The result of this finding is supported by the study conducted by Salim and Rajbal (2018) who compared the flexibility and strength between attacker and defender players of soccer of Amravati city. For this study hundred (50 defender and 50 attacker) soccer players were randomly selected from Amravati. The age of the subjects was ranged between 25-35 years. Goniometer and dynamometer equipment's were used to measure the flexibility and strength of leg and back. of both attacker and defender players of soccer. For statistical analysis of data 't'- test was used. The results of the study showed that there was no significant difference among attackers and defenders soccer players of Amravati city for their strength and flexibility variables.

The results of the study showed that there was an insignificant difference between government and private male physical education teachers of Jammu in case of cardiovascular endurance variable. Cardiovascular endurance is a vital component of physical fitness of physical education teachers' personality. A physical education teacher is the only teacher who performs strenuous duty in school times because he teaches students' in classroom and playgrounds and tries to maintain healthy environment in the school and also take various teams to various extramural tournaments where a normal person can feel exhausted during long travel and lengthy matches schedules. The reason behind insignificant statistical difference between government and private physical education teachers might be that both sector teachers have to follow almost same schedule. The result of this finding is supported by the study conducted by Ahmad Mir and Abdul Bari (2020) who studied the differences of cardiovascular endurance and explosive strength among inter-university men handball and hockey players. For this purpose, data was collected from 100 men Handball and Hockey players of different universities of western India who's representing in West zone inter university Handball and Hockey championships. The subjects were divided into two age groups, 18–22 years (50 samples) and 23–28 years (50 samples). Queen's College step test and standing broad jump test was used for measuring cardiovascular endurance and explosive strength respectively. Mean, standard deviation, and t-test were used for data analysis purpose. The result of this study revealed that handball men player and hockey men player age of 18–22 years found no significant difference in cardiovascular endurance and a significant difference was found in explosive strength. The result also revealed that handball men player and hockey men player age group of 23–28 years found no significant difference in cardiovascular endurance and explosive strength.

Conclusion

The present study concluded that male government and private male physical education teachers of Jammu do not differ in flexibility and cardiovascular endurance variables.

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