

Comparison of Health Related Physical Fitness between Tamil Nadu and Other State Labours Working at Fireworks Companies in Sivakasi

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Abstract

The purpose of the present study was find out the comparison of health related physical fitness between Tamil Nadu and other State labours working at fireworks companies in Sivakasi. To achieve the purpose of the study, the investigator selected thirty male subjects which consist of fifteen Labours of Tamil Nadu and fifteen labour of other States labours who were working in the firework companies in Sivakasi. Their age ranged between 21 to 35 years. The health related physical fitness variables namely Cardio respiratory endurance, Flexibility and Muscular strength were selected. The selected subject were tested with 12 minutes Run / Walk test, Sit and Reach test and Pull – ups test respectively. The “t” ratio was used to assess the collected data. From the analysis of data it was proved that there is significant difference found between labours of Tamil Nadu and other States in the selected Health related physical fitness variables namely Cardio respiratory endurance, Flexibility and Muscular strength. Further the analysis shows that the labours from other state were greater in Cardio respiratory endurance and Muscular strength when compared to labours of Tamil Nadu State. But in flexibility labours from Tamil Nadu state were greater when compared to labours of other State.

Key words: Health related physical fitness, Labours, Fireworks Companies.

Introduction

Sivakasi is a town in Virudhunagar District in the Indian state of Tamil Nadu. The town is known for firecracker and match factories that produce 70% of the country's produce. The industries in Sivakasi employ over 25,000 people. It is the capital of India's firecracker industry with about 8,000 factories, big and small, producing 90 percent of the total fireworks output. It is also known as "Kutti japan" meaning "small Japan" as its a small and active town. (Kitchlu, T.N, 1996).

There are labours from Tamil Nadu and rest of the county are working in the eight thousand companies in and around Sivakasi. The labours posses different levels of health status due to their different levels life style, food habits and nature of work.

Health related fitness relates to those components of fitness which make up our health status: strength, muscular endurance, aerobic endurance, flexibility, and body composition (Ray Barker, 2003).

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Health related fitness is defined as a state characterized by (a) an ability to perform and sustain daily activities and (b) demonstration of traits or capacities that are associated with low risk of premature development of diseases and conditions related to movement (Joseph & Francis, 1998).

Statement of the Problem

The purpose of the study was to find out the differences in health related physical fitness between Tamil Nadu and other State labours working at fireworks companies in Sivakasi.

Hypothesis

It was hypothesized that there would be significant differences on selected health related physical fitness variables such as Cardio respiratory endurance, Flexibility, Muscular strength between labours from Tamil Nadu and other State labours working at fireworks companies in Sivakasi.

Review of Related Literature

Hagsromer M et al. (2010) conducted a study on "Levels and Patterns Objectively Assisted Physical Activity – Comparison between Sweden and United States". The study used identical accelerometer metrics. From Sweden 1172 and United States 2925 subjects were compared. The result study shows Swedish and US male spent 36 and 33 minutes per day for exercise and women it was 32 and 19 minutes. Younger Swedish males had more sedentary behaviour time than young US males.

Stanford FC M et al. (2013) conducted a study on "Comparison of Physical Activity Levels in Physicians and Medical Students with the General Adult Population of the United States". The study used identical geographic in difference in physical activity levels exist. From survey respondents contained 631 attending physicians, 159 fellow physicians, 897 resident physicians, and 262 medical students were compared. The result study shows only 64.5% of the general US adult population meets DHHS guidelines for physical activity, but 78% of the survey participants fulfilled the guidelines. The percentage of US adults who do not engage in leisure-time physical activity is 25.4% compared with 5.8% of survey participants. Survey respondents in the southern region had the lowest physical activity levels and participants in the western region had the highest levels.. Regional differences in the general population's physical activity also persisted in physicians and medical students. Therefore, physicians who complete less physical activity may be less likely to encourage patients to engage in physical activity in geographic areas where the adult population is less active.

Methodology

To achieve the purpose of the study, the investigator selected thirty male subjects which consist of fifteen Laboursof Tamil Nadu and fifteen labour of other States labours who were working in the firework companies in Sivakasi. Their age ranged between 21 to 35 years. The following health related physical fitness variables namely Cardio respiratory endurance, Flexibility and Muscular strength were selected. They were tested with 12 minutes Run / Walk test, Sit and Reach test and Pull - ups test respectively. The "t" ratio was used to assess the collected data.

Results and Discussion

Table - I

"t" Ratio of Mean of selected Health Related Physical Fitness Variables such as Cardio respiratory Endurance, Flexibility, Muscular Strength among Labours from Tamil Nadu and other State Labours Working at Fireworks Companies in Sivakasi

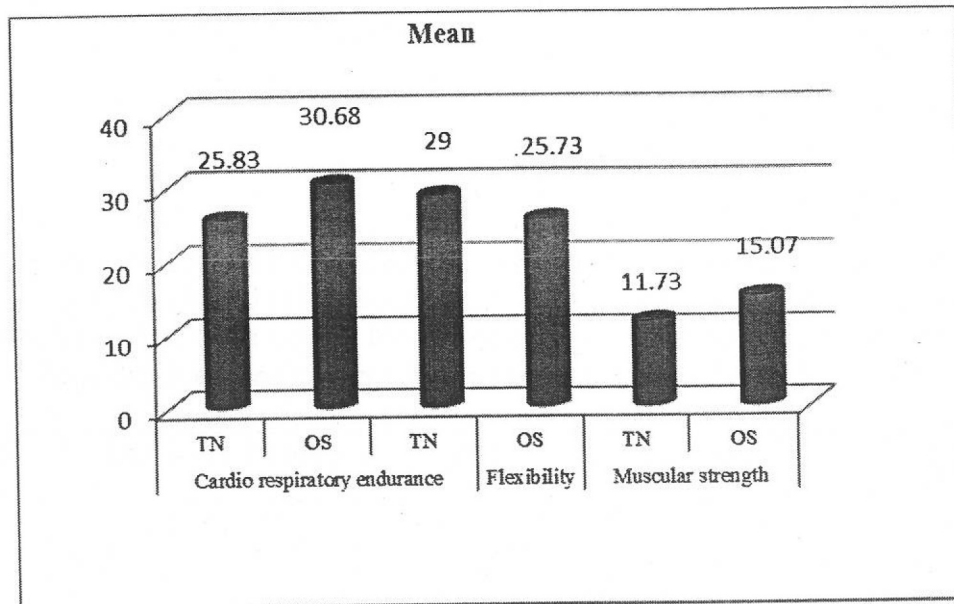
Variable	Group	Mean	SD	SEM	MD	t
Cardio respiratory endurance	TN	25.83	3.54	0.91	4.85	3.78*
	OS	30.68	3.50	0.90		
Flexibility	TN	29	2.71	0.70	3.27	3.49*
	OS	25.73	2.41	0.62		
Muscular strength	TN	11.73	1.29	0.33	3.33	6.81*
	OS	15.07	1.39	0.36		

*Significant at 0.05 level

From the analysis of data it wasproved that there is significant difference found between labours of Tamil Nadu and other States in all the selected Health related physical fitness variables namelyCardio respiratory endurance, Flexibility and Muscular strength as calculated't' value 3.78, 3.49 and 6.81 respectively were greater than therequired 't' value of 2.048. Further the analysis shows that the labours from other state were greater in Cardio respiratory endurance and Muscular strength when compare to labours of Tamil Nadu State. But in flexibility labours from Tamil Nadu state were greater when compare to labours of other State.

Figure - 1

Significant Difference between Selected Health Related Physical Fitness Variables such as Cardio Respiratory Endurance, Flexibility, Muscular Strength among Labours from Tamil Nadu and other State Labours Working at Fireworks Companies in Sivakasi



Conclusion

1. There is significant difference found between labours of Tamil Nadu and other States in the selected Health related physical fitness variables namely Cardio respiratory endurance, Flexibility and Muscular strength.
2. The labours from other state were greater in Cardio respiratory endurance and Muscular strength when compared to labours of Tamil Nadu State.
3. In flexibility labours from Tamil Nadu state were greater when compared to labours of other State.

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