

Comparative Study on Selected Physical Fitness Components Between Different Weight Categories of Mysore University Inter-Collegiate Male Wrestlers

OPEN ACCESS

Volume: 12

Special Issue: 1

Month: October

Year: 2024

E-ISSN: 2582-0397

P-ISSN: 2321-788X

Impact Factor: 3.025

Citation:

Ramani. "Comparative Study on Selected Physical Fitness Components Between Different Weight Categories of Mysore University Inter-Collegiate Male Wrestlers." *Shanlax International Journal of Arts, Science and Humanities*, vol. 12, no. S1, 2024, pp. 147–51.

DOI:

<https://doi.org/10.34293/sjash.v12iS1-i2-Oct.8431>

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Abstract

The aim of this study was to identify whether there is a significant differences of strength endurance (SE) ability in various weight categories like low, meddle & heavy of Mysore University Inter-Collegiate Male Freestyle Wrestlers. For the purpose of the study, 68 male freestyle wrestlers were selected randomly ranging between the age group of 18-25 years. And classify the samples as per the weight class method, total samples has been categorizing into three (3) category on the basis of their body weight; those were the low weight category (57 kg to 70 kg), the middle weight category (70 kg to 92 kg) and the heavy weight category (92 kg to 125 kg) to identify the considerable difference of SE ability. The Burffy test and T-jump test was used to measure the SE fitness ability. And, for Statistical analyses were performed using the ANOVA Statistical technique to identify the level of significant difference among various group of samples. This study revealed that the mean scores of the 32.55 and 22.72 (low weight), 30.60 & 21.20 (meddle weight), 27.78 & 17.31 (Heavy weight) with the standard deviation of 3.07 & 1.57 (LW), 3.51 & 1.82 (MW), 5.75 & 3.19 (HW) respectively in burffy ($f=6.55/p=0.003$) and T-jump test ($f=34.96/p=0.000$). The conclusion of the investigation was the low weigh group was had more strength endurance ability than the middle & heavy weight category of wrestlers. This study is recommending that probe the reasons for these significant differences were found in these three weight groups in free style wrestlers.

Keywords: Wrestlers, Different Weight Class, Physical Fitness

Introduction

Wrestling is one of the combat sports activity which is very popular one in ancient Olympic movement. This game is classified in to several groups on the basis of wrestler's body weight. The system of weight class helps to make balance the characteristics of physical between the Competitors. And, it helps to increase the performance which depends on their fitness efficiency and skill technics. There are two kinds of wrestling technics for men like freestyle which is very popular technic; it includes legs and taros of the body, and Gereco-

Roman skill, it is a classic style of the event which limited to only upper body moves. From the past few decades, many of the regulations were changed and modified by advanced wrestling techniques. Officially, the winner of the boat will be deciding by the scoring system which wrestler is more balancing controller and dominate on opponent during the competition or when the shoulder of a wrestler flatter on the mat 9, 2, 3, 4. These modifications also pressurised more changes in essential fitness requirements of achieved wrestlers. These results caused to evaluation in the training methods 2, 6, 9. The wrestling has been defined as it is intermittent physical event which is resistance oriented activities. It necessary the lower and upper body strengths demands of high metabolism and anaerobic energy 2, 3, 4, 5, 6. Many of the investments have also concluded and recommended that, the aerobic energy is a fundamental demand to the wrestlers which is not considered as a vital component of achievement of this event 2, 3, 6, 8, 9. Before the 1990's very few studies were evaluated the many of fitness dimensions for the wrestlers at different level of completions to identify. The significant differences which may very limited studies were conducted the studies to find out the differences in physical fitness characteristics which related to achievement in present performance of wrestlers. These modifications may include an overall enhances in performance at the elite level, the struggle for legality against illegal interventions of pharmacology an increase the competitions numbers per years, as well as the evaluation in training and assessment equipment. Furthermore, evaluation on fitness will be useful to enhancing the various types of strength training protocol for increase the performance of male wrestlers. Hence, the study was conducted on selected physical fitness to identifying the significant difference between various weight classes of male wrestlers in Mysore District. And also these findings help to strengthen the previous findings of the studies.

Statement of the Study

“The purpose of the investigation is undertaken as under: Comparative study on selected physical fitness components between different weight categories of Mysore University inter-collegiate (MUIC) male wrestlers”

Objectives of the Studies

To identify whether there is any significant differences of strength endurance among various weight classes of MUIC Male wrestlers.

Hypotheses

It was hypotheses that there is a significant mean difference between various weight class of MUIC Male Wrestlers.

Methodology

The subjects for the present study are male wrestlers drawn from Mysore District. The investigator was selected with parametric (simple random) sampling technique for the selection of the samples of Sixty eight (N, 68), ranging in age from 18 to 25 years and weight from 57 to 125kg. As per the weight class method, 68 male wrestlers has been categorizing into three (3) category on the basis of their body weight; those were the low weight category (57 kg to 70 kg), the middle weight category (70 kg to 92 kg) and the heavy weight category (92 kg to 125 kg) to identify the considerable variations in said fitness variables.

Selection of Variables

The researcher will be examining the selected variables with the references of scientific literature related to the selected components of physical fitness from different documents from libraries & experts.

Table No. 1 The selected physical fitness variables and their test tools of the study

Sl. No.	Selected Variables	
	Fitness variables	Testing tool
1	Strength Endurance (SE)	Buffy test
		T – jump

Procedure: The researcher was himself initiated to visit at wrestling tournament arena for the collection of the data. Firstly, they were reached to wrestling practice centres and seek the permission from the coaches and administrators. Then they were explained the aim and objectives of the study and oriented about the test procedure and requested to response for the test items to give the best effort. After of the all formalities, the researcher was used for the Buffy test and T-jump test which was standardised tools and techniques for identifying the strength endurance ability. And then, the investigator was given the sufficient time for getting worm-up to avoid unconditional injuries and uncomfortable for giving a right performance of selected variables. By the individual assessment system was applied to record the scores with assistance of his colleagues. Finally, the researcher was converted in to scale scores from raw scores for data describe. The ANOVA statistical technique has been used in order to explore the results of differences in selected fitness abilities in-between the category of heavy, Middle and low weight selected samples. The significance level had set at 0.05 %.

Result

The findigs on selected physical fitness components between various weight categories of Mysore District Male Wrestlers were given in table no. 2 & 3.

Table No. 2. Shows the Descriptive Data Analysis on Strength Endurance Ability of Male Wrestlers in Different Weight Category

		N	Mean	Std. Devia-tion	Minimum	Maximum
Brfy	Low	29	32.5517	3.07158	24.00	37.00
	Med	20	30.6000	3.51575	28.00	37.00
	High	19	27.7895	5.75016	19.00	36.00
	Total	68	30.3824	4.49221	19.00	37.00
T_Jmp	Low	29	22.7241	1.57880	18.00	25.00
	Med	20	21.2000	1.82382	18.00	24.00
	High	19	17.3158	3.19814	12.00	23.00
	Total	68	20.7647	3.13439	12.00	25.00

Table No. 2. Shows the ANOVA on Strength Endurance of Male Wrestlers in Different Weight Category

		Sum of Squares	df	Mean Square	F	Sig.
Brfy	Between Groups	226.929	2	113.464	6.555	.003
	Within Groups	1125.130	65	17.310		
	Total	1352.059	67			
T_Jmp	Between Groups	341.137	2	170.568	34.964	.000
	Within Groups	317.098	65	4.878		
	Total	658.235	67			

The table no. 2 and 3 demonstrated that the results of strength endurance ability of MUIC Male Wrestler. The mean of Buffy test and T-jump test for wrestlers with the low, medium and heavy weight are 30.55, 32.60 & 27.78, and 22.72, 21.20 & 17.31 respectively. One-way ANOVA revealed on significant mean difference between the time taken in Buffy test ($f=6.55/p=.003$), and T-jump test ($f=34.964/p=.000$), in other word these two were influenced to the wrestlers. ($p < 0.05\%$)

Discussion

In this research, investigated to highlight the difference of strength endurance ability between various weight categories of MUIC male Wrestlers. The SE was significantly not similarity nature between heavy, Middle and low weight category of wrestlers when the researcher was assessed that component with Burffy test and T-jump test. This study, revealed that low weight category wrestlers were had more strength endurance than the category of middle and heavy weight wrestlers. So, this result indicated that due to influence of body weight on strength endurance ability in different weight category of wrestlers. More body weight decreases the strength endurance than the low body weight category wrestlers. It means that more body weight wrestler will have required more endurance capacity than the low weight category wrestlers. Because, more body weight causes to get early lose of energy by using more no. of time carrying their body weight. Hence, the hypotheses which stated that there is a significantly differences of selected physical fitness components between various weight category of (heavy, Middle and low) wrestlers was fully accepted with SE at 0.05% level of significant.

Conclusion

The present investigation, concluded that the mean values of strength endurance more in low weight class wrestlers than the other two weight classes such as middle and heavy weight class of wrestlers. Then, this study recommended that farther study can be conducted to identify the influencing factors on these findings.

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