International Journal of Physical Education, Sports and Health 2016; 3(2): 214-215

P-ISSN: 2394-1685
E-ISSN: 2394-1693
Impact Factor (ISRA): 4.69
IJPESH 2016; 3(2): 214-215

www.kheljournal.com
Received: 11-01-2016
Accepted: 15-02-2016

Prakash M Chopade
HOD, Department of Physical Education & Sports, G. S. College of Commerce Wardha, Maharashtra, India

Correspondence
Prakash M Chopade
HOD, Department of Physical Education & Sports, G. S. College of Commerce Wardha, Maharashtra, India

Comparison of muscular endurance, speed and agility among swimmers, wrestlers and judo players

Prakash M Chopade

Abstract
The main purpose of the study is to find the comparison of muscular endurance, speed and agility among swimmers, wrestlers and judo players. To achieve the purpose of this study, the investigator randomly selected (60) sixty male from inter collegiate players age ranging from 16 to 18 years. In that each game contends twenty (20) players were selected as subjects for the study. Mainly three tests are used for these study push-ups, 100m run test and 6 X 10 Meters Shuttle Run respectively for the three groups. The data on muscular endurance, speed and agility obtained from the subjects was statistically analyzed by using one-way analysis of variance. Post–Hoc test was applied f-ratio was found significant. For the hypothesis, level of significance was set at .05 level. There was no significant difference in muscular endurance and agility of swimmers, wrestlers and judo players groups. There was significant difference in speed of swimmers, wrestlers and judo players groups.

Keywords: muscular endurance, speed, agility, swimmers, wrestlers, judo players

Introduction
Our ancestors did not have to think much about fitness. Physical activity was built into their lifestyles. They worked in their gardens, plowed fields, and took care of livestock. They hand-washed their clothes and dishes, gathered firewood, and made their own clothes. And they walked to get from one place to another. They even spent their leisure or free time in some kind of physical activity. In some less developed countries, this is still the way of life. For instance, in many countries, cycling is still the means of everyday transportation.
Developing skill-related fitness components improves a person's ability in any physical activity. These components are especially important in playing sports or in recreational activities. They include agility, balance, coordination, power, reaction time, and speed. As a person increases skill in these components, performance in sports, games, and recreational activities will improve. When developing the skill-related fitness components, understanding these laws will help to achieve the most benefits. The laws state the relationship between force and motion. This knowledge of physics helps coaches and athletes master their games [1].

Methodology
To achieve the purpose of this study, the investigator randomly selected (60) sixty male from inter collegiate players age ranging from 16 to 18 years. In that each game contends twenty (20) players were selected as subjects for the study. Mainly three tests are used for these study push-ups, 100m run test and 6 X 10 Meters Shuttle Run respectively for the three groups.

Table 1: Games and Number of players

S. No.	Games	Number of players
1.	Swimming	20
2.	Wrestling	20
3.	Judo	20

Table 2: Selected Variables and Tests

S. No.	Muscular Endurance	Tests
1.	Muscular endurance	Push-ups
2.	Speed	100m run test
3.	Agility	6 X 10 Meters Shuttle Run

Results and Discussion

The data on muscular endurance, speed and agility obtained from the subjects was statistically analyzed by using one-way analysis of variance. Post–Hoc test was applied f-ratio was found significant. For the hypothesis, level of significance was set at .05 level.

Table 3: Analysis of Variance in muscular endurance among swimmers, wrestlers and judo players

Source of Variation	SS	df	MS	F
Between Groups	45.700	2	22.850	1.624
Within Groups	801.950	57	14.069	

* Significant at .05 level of significance F .05 (2, 57) = 3.159

The analysis of data in table-III revealed that there was no significant difference in muscular endurance of swimmers, wrestlers and judo players groups as the obtained F-ratio was 1.624 which was lesser than that of required tabulated 'F' value of 3.159 at .05 level significance with (2, 57) degree of freedom.

Table 4: Analysis of Variance in speed among swimmers, wrestlers and judo players

Source of Variation	SS	df	MS	F
Between Groups	25.575	2	12.787	13.015*
Within Groups	56.003	57	0.983	

* Significant at .05 level of significance
F .05 (2, 57) = 3.159

The analysis of data in table-IV revealed that there was significant difference in speed of swimmers, wrestlers and judo players groups as the obtained F-ratio was 13.015 which was greater than that of required tabulated 'F' value of 3.159 at .05 level significance with (2, 57) degree of freedom. Since the one-way analysis of variance was found significant in related to speed, the least significant difference (L.S.D.) was applied to the paired means difference among the different groups.

Table 5: Post hoc test for comparison of the means of speed in swimmers, wrestlers and judo players

Swimming	Wrestling	Judo	M.D.	C.D.
12.072	13.642		1.570*	0.624
12.072		13.123	1.051*	0.624
	13.642	13.123	0.519	0.624

*Significant at .05 levels.

Table-V clearly revealed that significant difference was found between the means of swimmers and wrestlers, swimmers and judo players groups, as the mean difference of above two was greater than the critical differences. Insignificant difference was found between the means of wrestlers and judo players as the mean difference was less than the critical difference. The sequence of speed performance in all three groups was (13.642) wrestlers > (13.123) judo players > (12.072) swimmers. From the table clearly indict that low mean value having high speed and high mean value have low speed level. The speed level of swimmers is comparatively more than wrestlers and judo players.

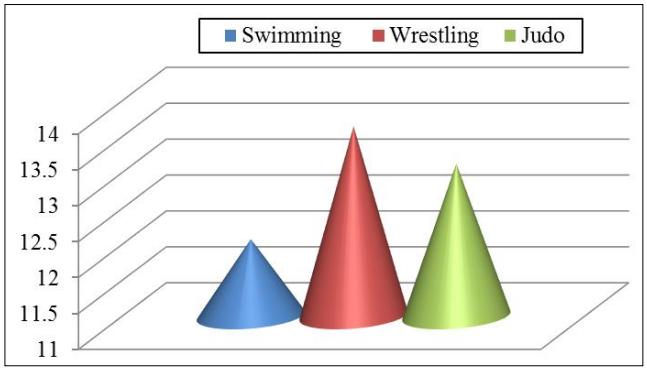

Table 6: Analysis of Variance in agility among swimmers, wrestlers and judo players

Source of Variation	SS	df	MS	F
Between Groups	0.180	2	0.090	0.232
Within Groups	22.122	57	0.388	

* Significant at .05 level of significance
F .05 (2, 57) = 3.159

The analysis of data in table-VI revealed that there was no significant difference in agility of swimmers, wrestlers and judo players groups as the obtained F-ratio was 0.232 which was lesser than that of required tabulated 'F' value of 3.159 at .05 level significance with (2, 57) degree of freedom.

Conclusion

On the basis of the result drawn with the mentioned methodology the following conclusion were soughed out.

1. There was no significant difference in muscular endurance and agility of swimmers, wrestlers and judo players groups.
2. There was significant difference in speed of swimmers, wrestlers and judo players groups.

References

1. Bureau of Instructional Support and Community Services. Personal Fitness. Florida Department of Education, 2002.
2. Kuriakose Santhosh K, Abraham George. Comparison of motor fitness abilities of rural and urban school students. International Journal of Multidisciplinary Research and Development. 2015; 2(11):445-447. www.allsubjectjournal.com
3. Tesfaye Abate. Comparison of Physical Fitness Components of Rural and Urban Secondary School Female Students in Hadiya Zone. Master Thesis, Addis Ababa University, Partial, 2013.
4. Vishaw G, Singh A, Singh S. Comparison of physical fitness variables between individual games and team games athletes. Indian Journal of Science and Technology. 2011; 4(5):547-549. Available online at http://www.indjst.org
5. Awati Sanjayakumar S. A Comparative Analysis on Physical Fitness of Rural and Urban High School Students: A Case of Bagalkot, New Man International Journal of Multidisciplinary Studies. 2014; 1(4):122-134. www.newmanpublication.com
6. Singh Ningombam A. Comparison of Selected Physical Fitness and Physiological Parameters of Footballers belonging to North-East and Other States. International Journal of Interdisciplinary and Multidisciplinary Studies (IJIMS). 2014; 1(5):158-160. Available online at http://www.ijims.com.
7. Kuroda Y, Suzuki N, Dei A, Umebayashi K, Takizawa K, Mizuno M. A comparison of the physical fitness, athletic performance, and competitive achievements of junior and senior tennis players, Movement, Health & Exercise. 2015; 4(1):39-50.