An Analytical Study Of Speed And Agility Among The College Students Of Different Stream In Agra Division

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Abstract
Introduction: The objective of this study was to investigate the speed and agility among the college students of different stream in Agra Division. Another purpose of the study was to find out the speed and agility among the college students of different stream in Agra Division.
Methods: The subjects was selected through simple random sampling in which total 400 male students were taken as sample and 200 students were selected in Agra Division. Further 200 students sub-divided in to four streams equally i.e Physical Education, Arts & Humanities, Science and Commerce (50 each).The age of the subject was range from 18 to 24 years. All subjects were the resident of India. A stand and progressive matrices organizational selected Speed was measured using the 50 meter Dash Run and the scores wear recorded in seconds using a stopwatch and Agility was measured using the 4X10 meter shuttle run and the scores wear recorded in seconds using a stopwatch. To find out significant different of speed and agility among the college students of different stream in Agra Division, the one-way analysis of variance was used. The level of significance was set at .05 levels.
Results and Discussion: The result reveals the one-way analysis of variance that there was significant (p>.05) for speed and agility among the college students of different stream.

Keywords: Speed, Agility, Stream and Students.

INTRODUCTION

Physical education is an educational process that has as its aim, the improvement of human performance through the medium of physical activities selection to realize this outcome. Physical education includes the acquisition and refinement of motor skills, the development and maintenance of fitness for optimal health and well being the attainment of knowledge the growth of positive attitude towards physical activity. (Bucher, 1989)

Physical fitness is the ability to carry out daily task with vigor and alertness without undue fatigue and ample energy to enjoy leisure time pursuits and to meet unforeseen emergencies.

Physical fitness the capacity to carry out every day activities without excessive fatigue and with enough energy in reserve for emergencies. Emphatically this definition is inadequate for a modern way of life. By such a definition almost anyone can classify himself as physically fit. (Gatchell, 1977)

Physical fitness is "the ability of an individual to live a full and balanced life. It involves physical, mental, emotional, social and spiritual factors and the capacity for their wholesome expression". Physical fitness refers to practical performance of exercise that calls for the number of experiences, they are the feeling of happiness in the process of correct performance of movement, feeling of "confidence, self satisfaction, surprise and unhappy in the process of confusion and disappointment etc.

The speed of an object is the magnitude of its velocity (the rate of change of its position) it is thus a scalar quantity. The average speed of an object in an interval of time is the distance travelled by the object divided by the duration of the interval the instantaneous speed is the limit of the average speed as the duration of the time interval approaches zero.

Speed is the ability to move quickly across the ground or move limbs rapidly to grab or throw. Speed is not just how fast someone can run (or cycle, swim etc.), but is dependent on their acceleration (how quickly they can accelerate from a stationary position), maximal speed of movement, and also speed maintenance (minimizing deceleration). Movement speed requires good strength and power, but also too much body weight and air resistance can act to slow the person down.

Agility is one of the key components of fitness and is valuable in many sports and physical activities. Think of the sports where you have to use agility. In team sports such as football, soccer, basketball, hockey, volleyball and rugby you must quickly respond to movements of the other players and of the ball.

Coordination is the body's ability to perform smooth and efficient movements. Coordination is about our motor skills and can be broken up into fine or gross motor skills. Fine motor skills are about our coordination in relation to small movements and the ease they are performed. Coordination also includes hand-eye coordination and foot-eye coordination. This type of coordination relates to the movement of the hands or feet in response to eye movement, as it tracks moving objects or people.

METHODOLOGY

The subjects was selected through simple random sampling in which total 400 male students were taken as sample and 200 students were selected in Agra Division. Further 200 students sub-divided in to four streams equally i.e Physical Education, Arts & Humanities, Science and Commerce (50 each).The age of the subject was range from 18 to 24 years. All subjects were the resident of India. A stand and progressive matrices organizational selected Speed was measured using the 50 meter Dash Run and the scores wear recorded in seconds using a stopwatch and Agility was measured using the 4X10 meter shuttle run and the scores wear recorded in seconds using a stopwatch. To find out significant different of speed and agility among the college students of different stream in Agra Division, the one-way analysis of variance was used. The level of significance was set at .05 levels.

FINDINGS OF THE STUDY

Speed:

To find out speed among different stream college students in Agra Division, analysis of variance was used and presented in table no.-1.

Table No.-1 Analysis of variance of speed among different stream college students in Agra Division

Source of Variance	df	SS	MSS	F-ratio
Between Group	3	99.62	33.207	114.947*
Within Group	196	56.62	.289	

*Significant at .05 level
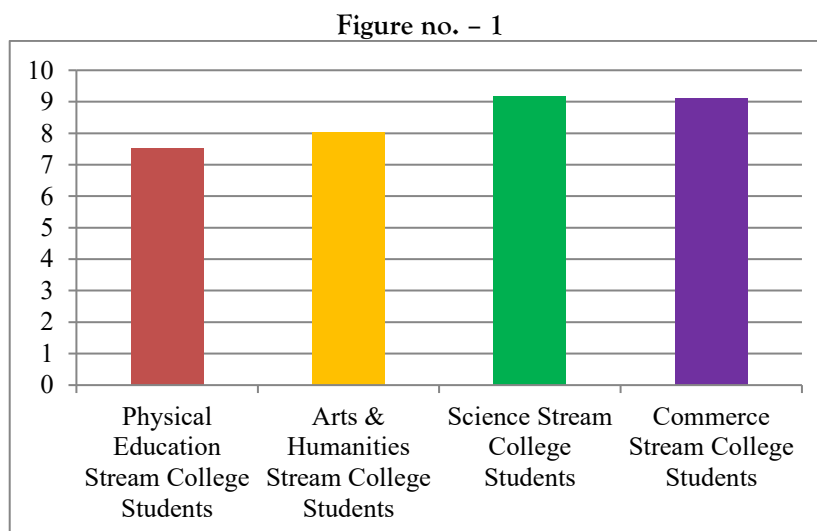F-Value required to be significant (3, 196) = 2.65

The values shown in table no. 1 clearly show that the calculated F-value is much higher than the value required for significance. Therefore, post hoc test has been used to find out the difference in speed among different stream college students in Agra Division. The calculation of which is presented in table no. 2 and shown by figure no. 1.

Table No. 2 Comparison of speed among different stream college students in Agra Division

Physical Education	Arts & Humanities	Science	Commerce	M.D	C.D
7.53	8.04			-.51	
7.53		9.18		-1.65	
7.53			9.12	-1.59	.211*
	8.04	9.18		-1.14	
	8.04		9.12	-1.08	
		9.18	9.12	.06	

The post hock test is to compare the speed among different stream college students in Agra Division. It has clearly revealed the significant difference between the students of Physical Education and Art & Humanities where the calculated mean difference found (-.51), Physical Education and Science where the calculated mean difference found (-.1.65), Physical Education and Commerce where the calculated mean difference found (-1.59), Art & Humanities and Science where the calculated mean difference found (-.1.14) and Art & Humanities and

Commerce where the calculated mean difference found (-1.08) was higher than the required critical difference value .211. But insignificant difference between the students of Science and Commerce where the calculated mean difference found (.06) was lower than the required critical difference value .211 at .05 level of significant. The scores are also illustrated in the figure no.- 1

Figure no. – 1

Agility:
To find out agility among different stream college students in Agra Division, analysis of variance was used and presented in table no.-3.

Table No.-3 Analysis of variance of agility among different stream college students in Agra Division

Source of Variance	df	SS	MSS	F-ratio
Between Group	3	39.168	13.056	29.972*
Within Group	196	85.379	.436	

*Significant at .05 level
F-Value required to be significant (3, 196) = 2.65

The values shown in table no. 3 clearly show that the calculated F-value of agility is much higher than the value required for significance. Therefore, post hoc test has been used to find out the difference in agility among different stream college students in Agra Division. The calculation of which is presented in table no. 4 and shown by figure no. 2.

Table No. 4 Comparison of agility among different stream college students in Agra Division

Physical Education	Arts & Humanities	Science	Commerce	M.D	C.D
9.07	9.49			.42	
9.07		10.16		-1.09	
9.07			10.07	1	.259*
	9.49	10.16		-.67	
	9.49		10.07	-.58	
		10.16	10.07	.09	

The post hock test is to compare the agility among different stream college students in Agra Division. It has clearly revealed the significant difference between the students of Physical Education and Art & Humanities where the calculated mean difference found (.42), Physical Education and Science where the calculated mean difference found (-1.09), Physical Education and Commerce where the calculated mean difference found (1), Art

& Humanities and Science where the calculated mean difference found (-.67) and Art & Humanities and Commerce where the calculated mean difference found (-.58) was higher than the required critical difference value .259. But insignificant difference between the students of Science and Commerce where the calculated mean difference found (.09) was lower than the required critical difference value .259 at .05 level of significant. The scores are also illustrated in the figure no.-2

Figure no. – 2
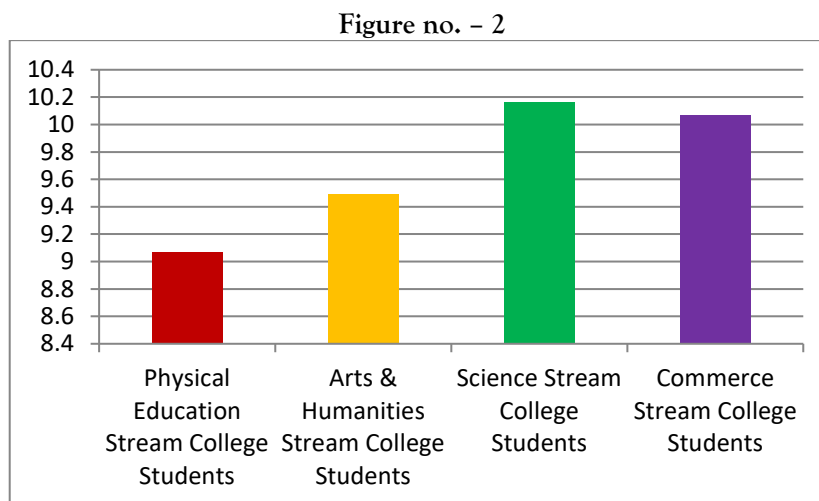
DISCUSSION OF THE RESULTS

The present investigation was designed to know the speed and agility among the college students of different stream in Agra Division. The purpose of this study was revealed some specific differences for speed and agility among the college students of different stream in Agra Division. The research scholars did not intend to explore personal life of students. Various tools have been used to find out the important differences in aspects of speed and agility of students to achieve the purpose of this research.

The result of the study revealed significant difference among the mean scores of different stream college students in Agra Division in relation to speed and agility. The This fact can be attributed to the different academic streams of the students, as all the students live in Agra Division and study in different streams (physical education, arts and humanities, science and commerce), due to which differences have been found in the speed and agility of all these students. The result of present study is also on the line of the studies conducted by Umasankar V. (2023), "A Comparative Study on Selected Physical Fitness Variables among Government Aided and Private School Hockey Players".

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