

Comparative Study on Selected Physical Fitness Components of Arba Minch University 1st And 3rd Year Sport Science Students

AyichewAbay (MSc), MogesAyal (MSc)
(Department of sport science, Arba Minch University, Ethiopia)
(Department of sport science, Arba Minch University, Ethiopia)
Corresponding Author: AyichewAbay (MSc).

Abstract: The purpose of the present study was to compare the selected physical fitness variables of male 1st and 3rd year Arba Minch university sport science students who have learned practical class three days a week. Total sixty (60) (30 from male 1st year and 30 from male 3rd year Arba Minch university sport science students) were selected for this study. 1st year age ranged between 18-20 years and 3rd year 20-22 years. Some youth physical fitness test was utilized to measure selected physical fitness components. It was hypothesized that no significant difference would be found between selected physical fitness variables for both male 1st year and 3rd students. For analysis of the data Mean & SD were calculated and to examine the significance difference between the group mean of different physical fitness variables, 'T' test was applied, and level of confidence was set at .05 levels. Study concluded that no significant difference found between the means of selected physical fitness variables such as speed (60 m speed test), upper strength (push up test), standing long jump test, and flexibility (sit and reach test).

Keywords: Physical Fitness, push up, flexibility, and students

Date of Submission: 30-12-2018

Date of acceptance: 15-01-2019

I. INTRODUCTION

Physical fitness is a multidimensional state of being. It is the body's ability to function efficiently and effectively and a state of being that consists of at least five health-related and six skill-related physical fitness components, each of which contributes to total quality of life (Charles B. Corbin, et al, 2008a). Physical fitness is associated with a person's ability to work effectively, enjoy leisure time, be healthy, resist hypokinetic diseases or conditions, and meet emergency situations.

In the history of human kind, physical fitness has been considered as a vital element of everyday life of an individual. In being so, the ancient people were mainly dependent up on their individual strength, vigor and vitality for physical survival (Manmeet Gill, et al, .2010). These involved performances of some basic skills like strength, speed, endurance, flexibility, agility for running, jumping, throwing and climbing for the persistence of hunting, gathering food and building shelter for their living (Mehtap Ozdirenc, Nihal Gelecek, 2005).

The skill-related components of physical fitness are associated more with performance than with good health. The components of skill-related physical fitness are agility, balance, coordination, power, reaction time, and speed. They are called skill-related because people who possess them find it easy to achieve high levels of performance in motor skills, such as those required in sports and in specific types of jobs. Power is sometimes referred to as a combined component of fitness, since it requires both strength (a health-related component) and speed (a skill-related component) (Charles B. Corbin, et al, 2008b). Sports science is a discipline that studies how the healthy human body works during exercise, and how sport and physical activity promote health and performance from cellular to whole body perspectives.

This aspect of physical fitness concerns with the development of qualities necessary to function efficiently and maintain a healthy life style. The components of health related fitness are cardio respiratory endurance, muscular strength and endurance, flexibility and body composition. (Tanored, 1987). Vigorous exercises properly adhered to on a regular basis appears to have much potential for adding more life to our years and probably more years to your life. (Morehouse and Miller, 1976).

Purpose of the study

Purpose of this study was to compare on selected physical components of Arba Minch University 1st year and 3rd year sport science students.

II. METHODS AND DATA COLLECTION

Subjects: - Total population of 1st year and 3rd year 120. From the total population 60 subjects were selected for this study. 30 students each from Arba Minch University male 1st and 3rd year male students by using purposive (selecting males from females) followed by random sampling (from males selecting) techniques. The test was conducted when they were learning three days practical class per week.

Table 1:- list of variables tested and recorded

No.	Subjects	Numbers of students	Test	Equipment's
01	1 st year students	N=30	60m speed	Stop watch/Nearest 0.001 seconds
	3 rd year students	N=30		
02	1st year students	N=30	Push up	-
	3rd year students	N=30		
03	1st year students	N=30	Standing long jump	Meter in Cm
	3rd year students	N=30		
04	1st year students	N=30	Sit and reach test	Meter in CM
	3rd year students	N=30		

For the measurement of selected physical fitness component variables of Arba Minch University 1st and 3rd year male sport science students AAHPER Youth physical fitness test was utilized. The entire Test on Players was conducted at Arba Minch university Abaya campus 5cm height natural grass football field.

Statistical Procedures

Mean and Standard Deviation was computed. Comparison was made on the basis of activity i.e. Arba Minch University 1st and 3rd year male sport science students. For this purpose 'T' test was applied. All analyses were performed using the IBM SPSS Statistics (v. 21, New York, U.S.A.) and data are shown as mean \pm SD. An alpha value of $p < 0.05$ was set as the criterion level of significance.

III. RESULTS AND FINDINGS OF THE STUDY

Table 2: Comparison of Means of Selected Physical Fitness Variables of 1st year and 3rd year sport science students

Components	Students	Mean	N	Std. Deviation	Std. Error Mean
60 meter in seconds	3rd year	8.38	30	.40	.07
	1st year	8.7	30	.41	.08
Push up in numbers	3rd year	35.37	30	15.60	2.85
	1st year	17.90	30	20.11	3.67
standing long jump in meter	3rd year	2.36	30	1.82	.33
	1st year	2.09	30	.23	.04
Sit and reach test in cent meter	3rd year	18.63	30	8.36	1.53
	1st year	35.83	30	14.96	2.73

Table II - shows the comparison of means of selected physical fitness variables of 1st and 3rd year Arba Minch university sport science students

The 60 meter speed mean of Arba Minch university male 1st year sport science students is 8.75 the deviation of .41 and 3rd year is the mean of 8.38 the deviation of .40. When we compare the two groups 3rd year male students are better than 1st year. When we see the 60 meter speed variation of the two groups is almost the same.

- The mean push up test of male 3rd year sport science students is around 35.37 for the deviation of 15.60 and 1st year is 17.90 for the deviation of 20.11. When compare the two groups 3rd year students are better than 1st year but more variation in 1st year students.
- The standing long jump tests mean of male 3rd year sport science students is 2.36m for the variation of 1.82 and 1st year is 2.09 for the variation of .23. When we compare to the two groups male 3rd year sport science students are better than 1st year very much and 1st year variation is less than 3rd year.
- Sit and reach test mean of 3rd year male sport science is 18.63cm for the variation of 8.36 and 1st year is 35.83 for the variation of 14.96. It shows that male 1st year sport science students are better than 3rd year students and more variation than it.

- Generally speaking, male 3rd year sport science students are better in 60 meter speed, and push up (strength) whereas in standing long jump and sit and reach test 1st year students are better than male 3rd year students.

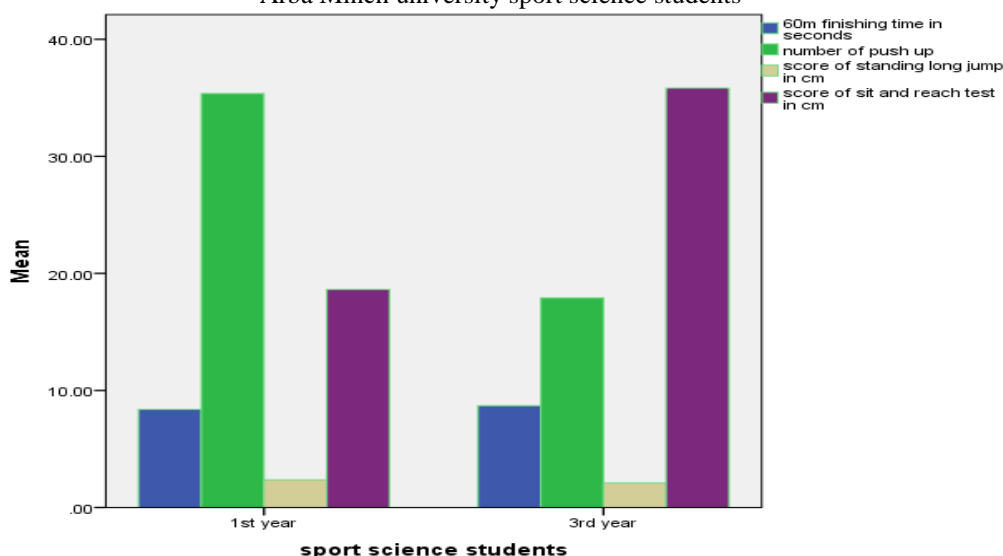
Table 3:- The correlation between Selected Physical Fitness Variables of male 1st year and 3rd year Arba Minch University sport science students

Tests	Students	N	Correlation	Sig.
60 meter speed test	1 st and 3 rd year	30	-.20	.29
Push up test	1st and 3rd year	30	-.16	.40
Standing long jump test	1st and 3rd year	30	-.03	.88
Sit and reach test	1st and 3rd year	30	-.10	.62

The correlation between 1st year and 3rd year students of 60 meter speedtest is (-.20) negative weak correlation and significance of 0.29, push up test (-.16) negative weak correlation and the significance of .40, standing long jump (-.03) negative weak correlation and significance of .88, sit and reach test (-.1) weak negative correlation and significance of .62.

Generally of them is not significance difference .it means there is no guaranties to say the correlation of the sample is negative and the negative correlation comes by chance.

Figure 1:- Graphical representation of Selected Physical Fitness Variables test of male 1st year and 3rd year Arba Minch university sport science students



IV. CONCLUSION

- There is no Significant difference found between the means of selected physical fitness variables tests such as , speed (60m), strength of legs (standing long jump test), upper body strength(push) and flexibility (sit and reach test) of male 1st and 3rd year Arba Minch university sport science students..
- mean value indicates that 60-meter speed test and sit and reach test 1st year students are better than male 3rd year sport science students but in standing long jump and push up male 3rd year sport science students are better than first year.

ACKNOWLEDGMENT

The authors would like to acknowledge the subjects for their contribution to the study. The researcher did not received from external financial assistance. None of the authors have any conflict of interest.

REFERENCES

- [1]. Bosco C, Luhtanen P, Komi PV. A simple method for measurement of mechanical power in jumping. *Eur J of ApplPhysiolOccupPhysiol*, 1983; 50(2): 273–282
- [2]. Charles B. Corbin. , et al 2008. Concepts of physical fitness active lifestyles for wellness. New York : McGraw-Hill, _

- [3]. Corbin, C. B., et al. 2004. Definitions: Health, Fitness and Physical Activity. In C.B. Corbin et al. *Toward a Better Understanding of Physical Fitness and Activity, Selected Topics*, Volume II. Scottsdale, AZ: Holcomb Hathaway.
- [4]. Manmeet Gill, Nishan Singh Deol and RamanjitKaur, (2010).Comparative studyof physical fitness components of rural and urban female students of PunjabiUniversity, Patiala.
- [5]. Manmeet Gill, Nishan Singh Deol and RamanjitKaur, (2010).Comparative studyof physical fitness components of rural and urban female students of PunjabiUniversity, Patiala.
- [6]. MehtapOzdirenc, NihalGelecek 2005. Physical fitness in rural children compared with urban children in Turkey. *Pediatrics International*, 47(1): 26-31.
- [7]. Morehouse, Miller. 1976. *Physiology of exercise*. Saint Louis: Mosby.

AyichewAbay (MSc). "Comparative Study on Selected Physical Fitness Components of Arba Minch University 1st And 3rd Year Sport Science Students. "IOSR Journal of Humanities and Social Science (IOSR-JHSS). vol. 24 no. 1, 2019, pp 92-95.