

Impact  
Factor  
2.147

ISSN 2349-638x

Reviewed International Journal



**AAYUSHI  
INTERNATIONAL  
INTERDISCIPLINARY  
RESEARCH JOURNAL  
(AIIRJ)**

Monthly Publish Journal

VOL-III

ISSUE-  
III

Mar.

2016

Address

•Vikram Nagar, Boudhi Chouk, Latur.  
•Tq. Latur, Dis. Latur 413512  
•(+91) 9922455749, (+91) 9158387437

Email

•aiirjpramod@gmail.com

Website

•www.aiirjournal.com

CHIEF EDITOR – PRAMOD PRAKASHRAO TANDALE

## **A Comparative Study of Body Composition and Motor Fitness Variables of the Students of Police Training Course**

**Dr. Vasistha A Khodaskar**

Nehru Mahavidyalaya, Nerparasopant

**Dr. Umesh Rathi**

Arts, & Science College, Kurha

### **Abstract**

The purpose of the investigation was to find out differences in body composition and motor fitness of the students of the police training courses and B.P.E. courses. 30 male students of B.P.E. course from Degree College of Physical Education, Amravati were selected for the investigation. For selection of the subjects those students were considered who sought admission for these courses in the current session who has passed their eligibility examination (10+2) in the same session. Age, Body-weight, height, also were taken to calculate Body Density, Fat Percentage, Fat weight, Lean Body Mass, Scores of 600 Yards Run, Bent Knee Sit Ups, Shuttle Run, Standing Broad Jump, Pull Ups, 50 Yards Dash Run were taken on each subjects. It was noted that there was no difference in linear measurements such as between both the students of the BPE and Per police training courses. B.P.E Students are found better in body composition and Motor fitness of the B.P.E students found better than Pre police training students.

### **Introduction**

To promote any particular field, there is a need to search a good input quality or talent to get better output in the future course after professional preparation of the students of that field. Professional preparation of teachers is intended for developing their professional competencies, so to produce good professional leaders these is need to search talented or skilled students to upgrade their professional functions.

On the other hand, the organizations which conduct such courses, select a particular curriculum for each course. The curriculum is framed according to the requirement of these courses, the level of the courses and other factors. Curriculum are specific to the courses and further to the type of mental and physical load of each course. The admission criteria for these courses should be made considering these aspects. Admission in these courses with the different competencies required in term of physical characteristics, body build, body composition and motor fitness variables possessed by the students are comparable and effective for these courses.

The investigator of the present study has made an attempt to compare selected body composition variables and motor fitness variables of the students of two physical exercises education courses, considering it as a guideline to decide body composition characteristics of these students who undergo physical education and police training programmes and study subjects.

Hence, the investigator has made an effort to compare, body composition and motor fitness variables between BPE and police training students.

**Methods**

For the present study 30 male students of police training course from H V P Mandal, Amravati and 30 male students and B.P.E. course from Degree College of Physical Education, Amravati were selected for the investigation. For selection of the subject those students were considered who sought admission for these courses in the current session. These students had passed their eligibility examination i.e. (10+2) in the same session.

**Analysis and Result**

Finding of the present studies are analyzed and interpreted in different tables as follows:

**Table No.1**

**Comparison of Body Composition of the B.P.E. and Police Training Course Students**

Variables	BPE Course		Police Training Course		MD	SE	t-ratio
	Mean	SD	Mean	SD			
Height	168.86	6.51	168.00	5.17	1.29	1.51	0.85
Body Density	1.070	0.008	1.075	0.005	0.005	1.01	0.005
Fat Percentage	12.572	3.44	10.267	2.17	2.305	0.75	3.06**
Fat Weight	7.044	2.92	5.364	1.51	1.679	0.609	2.75**
Lean Body Mass	47.556	5.341	46.23	3.146	1.32	1.146	1.15

\*Significant at 0.05 level of Confidence

\*\* Significant at 0.001 level of Confidence

N=30, t=0.05(58)2.00, t=0.01(58)2.66

Table - 1 shows the mean scores. SD, MD, SE and 't' ratio value of BPE and Police training students for the comparison of Body Composition.

Row 2 shows the comparison of body density which is one of the variable of body composition. The t value ( 0.005) is not found significant. This means that there is no significant difference in body density between the students of BPE and police training courses.

Row 3 indicates comparison of fat percentage possessed by the students of BPE and police training courses. The t value (3.06) is found significant at 0.01 level of confidence. The mean score of BPE students is 12.572 where as for police training students it is 10.267. This means that BPE students are having more fat percentage as compare to the police training students.

Row 4 indicates the comparison of fat weight possessed by the students of BPE and police training courses. The 't' value (2.75) is found significant at 0.01 level of confidence. This means that there is significant difference in fat weight between the students of BPE and

police training courses. The mean value of BPE studnets is (7.044) where as for police training students, the mean value is 5.364. This shows that BPE students are having more fat weight as compare to the police training students.

Row 5 indicates the comparison of Lean body mass of the students of BPE and police training courses. The 't' ratio value (1.15) is not found significant. This means that there does not exist significant difference in lean body mass between the students of BPE and police training courses

**Table -2  
Comparison of Motor Fitness Variables Between The B.P.E. and Police Training Course Students**

Variables	BPE Course		Police Training Course		MD	SE	t-ratio
	Mean	SD	Mean	SD			
<b>600 Yard Run</b>	1.53	0.12	1.89	0.25	0.36	0.050	7.248**
<b>Bent Knee Sit Ups</b>	38.37	6.95	26.67	8.48	11.70	2.00	5.847**
<b>Shuttle Run</b>	9.74	0.31	10.44	0.67	0.70	0.14	5.191**
<b>S B J</b>	1.96	0.32	2.24	0.24	0.28	0.074	3.847**
<b>Pull Ups</b>	10.97	1.97	9.33	2.55	1.63	0.588	2.774**
<b>50 Meter Dash</b>	7.15	0.41	7.47	0.37	0.32	0.10	3.198**

\*Significant at 0.05 level of Confidence

\*\* Significant at 0.001 level of Confidence

N=30, t=0.05(58)2.00, t=0.01(58)2.66

Table - 2, Row No. 1 shows the mean scores SD, MD, SE, and 't' ratio value of BPE and police training course students on 600 yard run test. The 't' ratio value of 600 yard run (7.248) is found significant at 0.01 level of confidence. This means that there is a significant difference in endurance between BPE and police training students. The mean score of BPE students is 1.530. where as for police training students it is 1.896. The mean score of B.P.E. students are less than the police training students. This means that BPE students are having better endurance than the police training students.

Table - 2, Row No. 2 shows the mean scores, SD, MD, SE and 't' ratio value of BPE and police training students on Bent Knee Sit Ups test. This test item of motor fitness measured the maximum explosive abdominal strength of the subjects. The 't' ratio value (5.847) is found significant at 0.01 level of confidence. This means that there is a significant difference in maximum explosive abdominal strength between the BPE and police training students. The mean score of BPE student is 38.37 where as for police training students it is 26.67. The mean score of BPE student is higher than the police training students. It implies that BPE students are having better maximum explosive abdominal strength than the police training course students.

Table - 2, Row No. 3 shows the mean scores, SD, MD, SE and 't' ratio value of BPE and police training students on 4x10 yard shuttle Run. This test item of the motor fitness measured the agility and speed of the subjects. The t ratio value (5.191) is found significant at 0.01 level of confidence. This means that there is a significant difference in agility and speed

between the BPE students and police training students. The mean score of BPE students is i.e. 9.74 sec where as for police training students it is 10.44 sec. The mean score of BPE students is lesser than the police training students. This means that BPE students are having better agility and speed than the police training course students.

Table - 2, Row No. 4 shows the mean scores, SD, MD, SE and t ratio value of BPE and police training students on standing broad jump test. This test item of motor fitness measured power and maximum explosive leg strength of the subjects. The 't' ratio value (3.847) is found significant at 0.01 level of confidence. This denotes that there is a significant difference in terms of power and maximum explosive leg-strength. The mean score of BPE students is 1.96 mts where as for police training students it is 2.241 mts. The mean score of BPE students is less than the police training students. This means that the police training course students are having better power than the BPE students.

Table - 2, Row No. 5 shows the mean scores, SD, MD, SE and t ratio value of BPE and police training students on pull ups test. This test items of the motor fitness measured maximum arm strength of the subjects. The 't' ratio value (2.774) is found significant at 0.01 level of confidence. This means that there is a significant difference in maximum arm strength. The mean scores of BPE students is 10.97 whereas for police training students it is 9.33. The mean score of the BPE students is more than the police training students. This means that the BPE students are having better arm strength as compare to the police training course students.

Table - 2, Row 6 shows the mean's scores, SD, MD, SE and 't' ratio value of BPE and police training students on 50 yard dash run test. This test item of the motor fitness measured the maximum explosive speed of the subjects. The 't' ratio value (3.198) is found significant at 0.01 level of confidence. This means that there is a significant difference in explosive speed. The mean score of BPE students is 7.15 where as for police training students it is 7.475 sec. The mean score of BPE students is lesser than the police training students. This means that the BPE students are having better maximum explosive speed than the police training course students.

### **Conclusion**

1. Body Composition to conclude the findings from the results that the BPE students are found possessing higher percentage of fat and fat weight than police training students. It may be due to heavy engagement in sports activities and physical education curriculum and might be using higher diets..
2. Motor Fitness the analysis of the study clearly indicates that out of six motor fitness variables such as endurance, maximum explosive abdominal strength, agility, arm strength and maximum speed are observed better than the police training students. But in case of power or maximum explosive leg strength of the police training students found better as compare the BPE students. It implies that the students of BPE courses are better in the five motor variables as mentioned above, is also due to early engagement in training schedule, exercises and participation in sports activities as a result of this, the BPE students are found better in motor fitness than the police training courses students.

**Reference**

1. Ahmad Azad, Reza Gharakhanlou, Alireza Niknam, Amir Ghanbari (2011) Effects of Aerobic Exercise on Lung Function in Overweight and Obese Students. National Research Institute of Tuberculosis and Lung Disease, Iran.
2. Best J. W & Kahn. V. J (2008) Research in Education, Edition tenth Pub. Dorling Kindersley, India Pvt. Ltd.
3. Barton T.A (1963) "A study to investigate the strength decrement of selected muscle group during treadmill walking at different grade levels while back-packing a prescribed load." M. S. in physical education. P.40
4. Baldwin S. B.(1991). "An evaluation of the physical fitness of a high school aerobic dance curriculum." Master's Thesis in Exercise and Sports Science, Slippery Rock University.
5. Belman MJ, Geasser GA (1991) Exercise training below and above the lactate threshold in the elderly. Med Sci Sports Exerc 23:562±568.
6. Blaak EE, Westerterp KR, Bar-Or O, Wouters LJM, Saris WHM (1992) Effect of training on total energy expenditure and spontaneous activity in obese boys. Am J Clin Nutr 55:777±782
7. Park, S.K., Park, J.H., Kwon, Y.C., Kim, H.S., Yoon, M.S. and Park, H.T. 2003. The effect of combined aerobic and resistance exercise training on abdominal fat in obese middle-aged women. Journal Physiolog. Anthropol. and Appl. Human Science, 22(3):129-135.
8. Westerterp KR, Meijer GAL, Janssen EME, Saris WHM, Ten Hoor F (1992) Long term effect of physical activity on energy balance and body composition. Br J Nutr 68:21±30
9. Wilmore JH, Stanforth PR, Hudspeth LA, Gagnon J, Daw EW, Leon AS, Rao DC, Skinner JS, Bouchard C (1998) Alterations in resting metabolic rate as a consequence of 20 wk of endurance training: the HERITAGE Family study. Am J Clin Nutr 68:66±71
10. Dishman, R. K. (1985). Medical psychology in exercise and sport. Medical Clinics of North America, 69, 123-143.
11. Dishman, R. K. (1987). Exercise adherence and habitual physical activity. In W. P. Morgan & S. E. Goldston (Eds.), Exercise and mental health (pp. 57-83). Washington, DC: Hemisphere.
12. Browning R, Kram R. Effects of obesity on the biomechanics of walking at different speeds. Med Sci Sports Exerc. 2007;39:1632-1641.
13. Liu B, Balkwill A, Banks E, Cooper C, Green J, Beral V. Relationship of height, weight and body mass index to the risk of hip and knee replacements in middle-aged women. Rheumatology (Oxford). 2007;46:861-867