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## Comparative study of selected physical variables, of University level students

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### Abstract

**Objectives:** The purpose of present study was to compare the physical variables of physical education students of Punjab and Jammu Kashmir states.

**Methods:** To obtain data for this study, the investigator had selected two hundred (N=200) subjects, out of which one hundred (N=100) from Punjab state and one hundred (n=100) from Jammu Kashmir state who were studying under the Department of Physical Education Punjabi University, Patiala (Punjab) and Department of Physical Education & Sports, University of Kashmir (J&K). The age of all subjects ranged from 21 to 28 years. According to their manuals. Keeping in view the limited facilities available to the investigator, the physical, variables selected for the study were; 50 meter dash (Speed); pull-ups (Arms and Shoulder girdle strength); bent knee sit-ups (abdominal strength); standing broad jump (explosive strength); shuttle run (agility); Cooper's 12 minute run and walk (cardio-respiratory endurance); bridge-up test (spine flexibility); t-test was applied to determine the significance of difference and direction of difference in mean scores of variables between Punjab and Jammu Kashmir states. The level of significance was set at 0.05.

**Results:** The results revealed no significant difference between physical education students of Punjab and Jammu Kashmir states. The subjects belonging to the Punjab state are superior to subjects from J&K state in pull-ups (arms and shoulder girdle strength); bent knee sit-ups (abdominal strength); standing broad jump (explosive strength); shuttle run (agility); bridge up test (spine flexibility). No statistically significant difference was found in 50 meter dash (speed) and Cooper's 12 minute run and walk (cardio-respiratory endurance) among both the groups.

**Keywords:** Kashmir Punjab strength, cardio vascular endurance

### Introduction

This Greek Philosopher Aristotle had a great sense of physical fitness. The statement is more appropriate for the modern people than the primitive because of scientific developments, the man is moving towards more sedentary life and fast losing their health effluence and globalization had made a different life style for common man in general and sports person in particular. The physical education majors are supposed to be highly skilled personal either sufficient scientific knowledge to Under Take the challenging task of physical education discipline. It can be possible only when they keep up their own fitness, which does not means just moving certain, limbs, carrying out some drills or other physical activities in their institutions rather they have to impart scientific knowledge to maintain specific fitness for the specific skill or game with the help of specific training schedule.

The striving after sports performance, top class performance in particular, ought to be achieved according to what it means to man as a whole, for his development and his maturing. This is a field of direct confrontation with the animate and inanimate environment, a chance to gain extensive and deep reaching experiences, a field of self-realization and maturing. Man can here ascertain for himself in direct physical, but not moral combat, what really he is capable of; he can learn how difficulties may be overcome and goals achieved, by appropriate preparation and corresponding effort. The endeavor to achieve performance at any level, leads to recognition of ones own possibilities and limitations and so through a correct evaluation to a healthy, vigorous, but not unrealistic self-aspiration. Sports training and performance is best achieved by community with others.

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**Material and Métodos**

For the purpose of the study 100 students from Jammu and Kashmir and 100 students from Punjab state were selected randomly. The selection of subjects were made from government college of physical education Ganderbal, Department of Physical Education & Sports, University of Kashmir (J&K) and govt physical education College Patiala Department of Physical Education Guru Nanak Dev University (Punjab). The requirement of the study was explained to them. They all undergo voluntarily to undergo the tests. The procedure of the testing was explained to them so that there was no ambiguity regarding the efforts on their part and the hardships they might have to endure. The subjects were oriented with the need and requirement of the study. They were thoroughly acquainted with the testing procedure as well as the purpose of the study. It was heartening to note that subjects took this as a challenge and were very enthusiastic to take part in their project to prove their mettle. According to the official records the ages ranged from 21-28 years.

The purpose of the present study was to compare the PG level students of physical education of Punjab and J&K states in selected physical, variables that are considered to be relevant for the development of the students of physical education to achieve high level performance both at academic as well as in practical field. Keeping in view the limited facilities available to the investigator, the physical, variables selected for the study were; 50 meter dash (Speed); pull-ups (Arms and Shoulder girdle strength); bent knee sit-ups (abdominal strength); standing broad jump (explosive strength); shuttle run (agility); Cooper’s 12 minute run and walk (cardio-respiratory endurance); bridge-up test (spine flexibility); cardio-pulmonary index (Adynamic, dynamic and restoration phases); aerobic capacity; recovery rate; forced expiratory volume

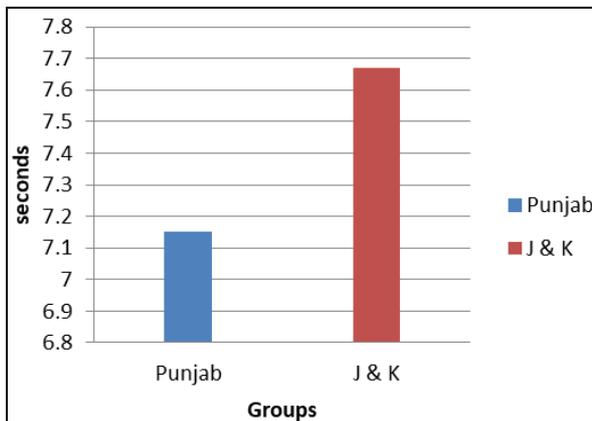
**Results**

**Table 1:** Mean, standard deviation and t-value of Punjab and J&K students of variable 50 mt.

S. No	Group	N	Mean	Std. Deviation	t value
1	Punjab	100	7.15	.327	10-80
2	J & K	100	7.67	.368	

Mean difference in the score of speed of Punjab and Kashmir are presented in the table 1 and graphic representation has been shown in the figure 1

A glance at the result depicted in the table 1 shows the mean and standard deviation values of Punjab and Kashmir students of the variable speed, the mean of the score of Punjab was found to be 7.15 and S.D = .327 respectively, and the mean of the J&K was found to be 7.76 and S.D= .368 respectively. Calculated t value was found to be .890 which was not found to be significant



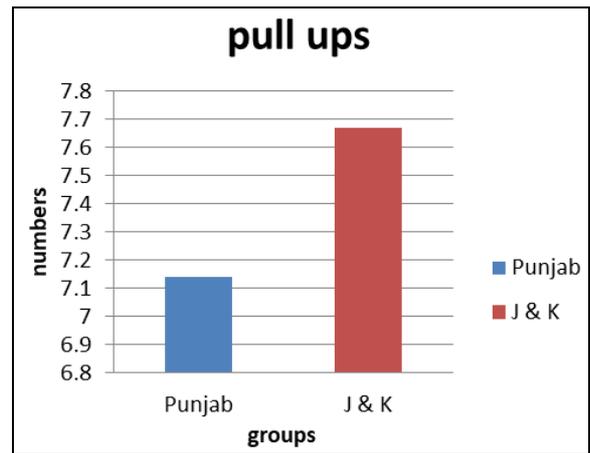
**Fig 1:** Comparison of mean of pull ups (shoulder strength) between Punjab and Kashmir

**Table 2:** Mean, standard deviation and t-value of Punjab and J&K students of variable

S. No	Group	N	Mean	Std. Deviation	t-value
1	Punjab	100	7.14	.32	8.338
2	J & K	100	8.45	1.52	

Mean difference in the score of speed of Punjab and Kashmir are presented in the table 1 and graphic representation has been shown in the figure 2

A glance at the result depicted in the table 1 shows the mean and standard deviation values of Punjab and Kashmir students of the variable speed, the mean of the score of Punjab was found to be 7.15 and S.D = .327 respectively, and the mean of the J&K was found to be 7.76 and S.D= .368 respectively. Calculated t value was found to be .890 which was not found to be significant



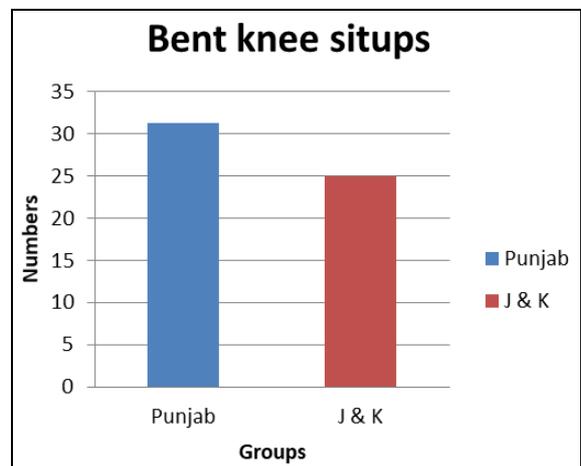
**Fig 2:** Comparison of mean of pull ups (shoulder strength) between Punjab and Kashmir

**Table 3:** Mean, standard deviation and t-value of Punjab and J&K students of variable

S. No	Group	N	Mean	Std. Deviation	t value
1	Punjab	100	31.240	5.07	9.46
2	J & K	100	24.980	4.24	

Mean difference in the score of speed of Punjab and Kashmir are presented in the table 1 and graphic representation has been shown in the figure 3

A glance at the result depicted in the table 1 shows the mean and standard deviation values of Punjab and Kashmir students of the variable speed, the mean of the score of Punjab was found to be 7.15 and S.D = .327 respectively, and the mean of the J&K was found to be 7.76 and S.D= .368 respectively. Calculated t value was found to be .890 which was not found to be significant



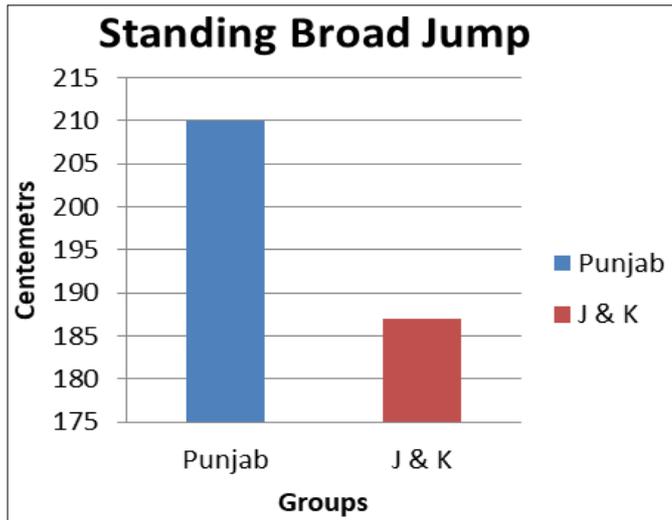
**Fig 3:** Comparison of mean of pull ups (shoulder strength) between Punjab and Kashmir

**Table 4:** Mean, standard deviation and t-value of Punjab and J&K students of variable standing broad

S. No	Group	N	Mean	Std. Deviation	t-value
1	Punjab	100	210.20	20.64	8.206
2	J & K	100	187.31	18.3	

Mean difference in the score of speed of Punjab and Kashmir are presented in the table 1 and graphic representation has been shown in the figure 4

A glance at the result depicted in the table 1 shows the mean and standard deviation values of Punjab and Kashmir students of the variable speed, the mean of the score of Punjab was found to be 7.15 and S.D = .327 respectively, and the mean of the J&K was found to be 7.76 and S.D= .368 respectively. Calculated t value was found to be .890 which was not found to be significant



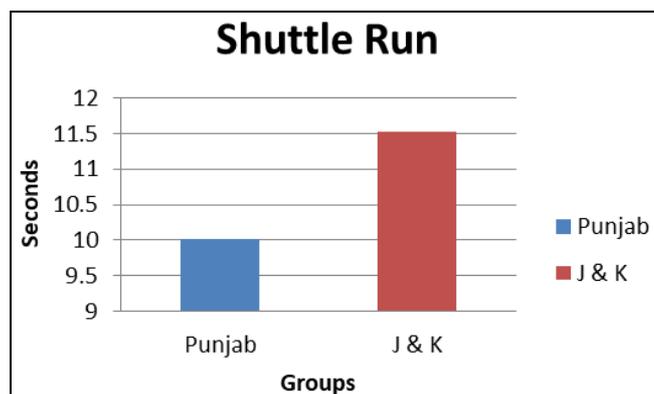
**Fig 4:** Comparison of mean of pull ups (shoulder strength) between Punjab and Kashmir

**Table 5:** Mean, standard deviation and t-value of Punjab and J&K students of variable Shuttle Run

S. No	Group	N	Mean	Std. Deviation	t-value
1	Punjab	100	10.01	.60	11.577
2	J & K	100	11.53	1.15	

Mean difference in the score of speed of Punjab and Kashmir are presented in the table 1 and graphic representation has been shown in the figure 5

A glance at the result depicted in the table 1 shows the mean and standard deviation values of Punjab and Kashmir students of the variable speed, the mean of the score of Punjab was found to be 7.15 and S.D = .327 respectively, and the mean of the J&K was found to be 7.76 and S.D= .368 respectively. Calculated t value was found to be .890 which was not found to be significant



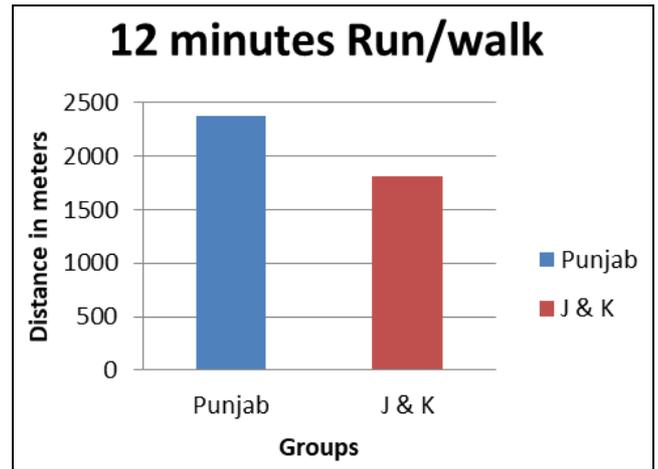
**Fig 5:** Comparison of mean of pull ups (shoulder strength) between Punjab and Kashmir

**Table 6:** Mean, standard deviation and t-value of Punjab and J&K students of variable 12 minute Run/walk

S. No	Group	N	Mean	Std. Deviation	t-value
1	Punjab	100	2372.70	251	17.61
2	J & K	100	1808.7	198	

Mean difference in the score of speed of Punjab and Kashmir are presented in the table 1 and graphic representation has been shown in the figure 6

A glance at the result depicted in the table 1 shows the mean and standard deviation values of Punjab and Kashmir students of the variable speed, the mean of the score of Punjab was found to be 7.15 and S.D = .327 respectively, and the mean of the J&K was found to be 7.76 and S.D= .368 respectively. Calculated t value was found to be .890 which was not found to be significant



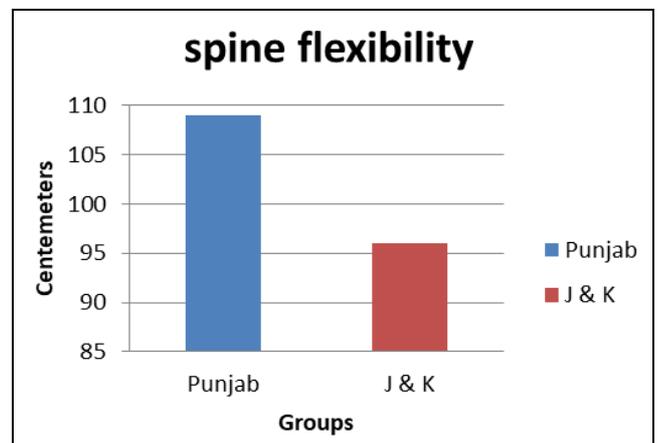
**Fig 6:** Comparison of mean of pull ups (shoulder strength) between Punjab and Kashmir

**Table 7:** Mean, Standard Deviation and t value of Punjab and J&K students of variable spine flexibility

S. No	Group	N	Mean	Std. Deviation	t-value
1	Punjab	100	109.07	10	10.20
2	J & K	100	96.89	5.44	

Mean difference in the score of speed of Punjab and Kashmir are presented in the table 1 and graphic representation has been shown in the figure 7

A glance at the result depicted in the table 1 shows the mean and standard deviation values of Punjab and Kashmir students of the variable speed, the mean of the score of Punjab was found to be 7.15 and S.D = .327 respectively, and the mean of the J&K was found to be 7.76 and S.D= .368 respectively. Calculated t value was found to be .890 which was not found to be significant



**Fig 7:** Comparison of mean of pull ups (shoulder strength) between Punjab and Kashmir

### Discussion

Punjab state subjects were significantly higher than those of J&K state subjects in pull ups (arms and shoulder girdle strength); bent knee sit-ups (abdominal strength); standing broad jump (explosive strength); shuttle run (agility); bridge up test (spine flexibility). However, the mean gains by both the groups were not found statistically significant in 50 meter dash (speed) and Cooper's 12 minute run and walk (cardio-respiratory endurance).

### Conclusions

The subjects belonging to the Punjab state are superior to subjects from J&K state in pull-ups (arms and shoulder girdle strength); bent knee sit-ups (abdominal strength); standing broad jump (explosive strength); shuttle run (agility); bridge up test (spine flexibility).

No statistically significant difference was found in 50 meter dash (speed) and Cooper's 12 minute run and walk (cardio-respiratory endurance) among both the ground

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