

# Comparative Study of Abdominal Strength between B.P. Ed. Boys and B.Ed. Boys

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**Abstract** – The purpose of this study was to compare the abdominal strength between B.P. Ed. Boys and B.Ed. Boys. For the purpose of the study forty (40) male students who were pursuing Bachelor of Physical Education course from Department of Physical Education, Dr. R.M.L. Awadh University, Faizabad, U.P., India and Bachelor of Education course from Department of Education, Dr. R.M.L. Awadh University, Faizabad, U.P., India who had participated in different intercollegiate tournaments were randomly selected as the subject for this study. The subject age was ranged between 20 to 25 years. All the subjects were physically fit and thus were capable of performing the test efficiently. The necessary data of abdominal strength was collected at the time of match practice session. The data of abdominal strength was collected with the help of bent knee sit-ups and score was recorded in numbers. In order to find out the abdominal strength between B.P. Ed. Boys and B.Ed. Boys “Independent T-Test” was applied and the level of significance was set at 0.05. The study reveals that there was significant difference found in abdominal strength between B.P. Ed. Boys and B.Ed. Boys.

**Keywords:** Abdominal Strength and Bent Knee Sit-ups.

## INTRODUCTION:-

Physical fitness is a general concept defined in many ways by differing scientists. Here two major categories are considered: general fitness (a state of health and well-being), and specific fitness (a task-oriented definition based on the ability to perform specific aspects of sports or occupations). Physical fitness is generally achieved through correct nutrition, exercise, hygiene and rest. Physical fitness has been defined as a set of attributes or characteristics that people have or achieve that relates to the ability to perform physical activity. In previous years, fitness was commonly defined as the capacity to carry out the day's activities without undue fatigue.

All movements in sports are caused by muscle contractions and, therefore, strength is a part and parcel of all motor ability, technical skills and tactical actions. Strength and strength training, therefore, assume high importance for achieving good posture and for prevention of injuries is usually overlooked which in the long run can prove harmful. Zimmermann (1989) has very rightly pointed out the positive effects of strength training on muscles, bones, joints, heart, circulatory system, metabolism and nervous system.

Abdominal muscles support your posture by supporting skeletal structures, such as your pelvis and

lower back. Abdominal muscles surround more than sixty percent of your lower, says The American Academy of Spine Physicians. Abdominal strength and endurance increases spinal stability and reduces your risk of spinal injury. Abdominal weakness imposes additional stress on your lower back muscles, which can hyperextend your lower spine and cause backache. Abdominal strength is most important in childhood because if he have more abdominal strength he able to do more work.

## METHODOLOGY:

### Selection of Subjects:

In this study forty (40) male students were selected through simple random technique by drawing lots from Department of Physical Education, Dr. R.M.L. Awadh University, Faizabad, U.P., and Department of Education, Dr. R.M.L. Awadh University, Faizabad, U.P., India as subjects for this study.

### Selection of Variable:

The variable selected for this study was as follows:-

1- Abdominal Strength

**Criterion Measure:**

The following test was selected and score was considered as criterion measure for this investigation.

**Abdominal Strength:**

Abdominal strength was measured by bent knee sit-ups and performance was recorded in numbers.

**Tools of the Study:**

Stopwatch, pen and pencil, floor mattress were used for the data collection.

**Collection of Data:**

The data was collected by administering the respective test i.e. bent knee sit-ups.

**Statistical Technique:**

To compare the abdominal strength between B.P. Ed. Boys and B.Ed. Boys. The independent ‘t’ test was applied at 0.05 level of significance.

**RESULTS OF THE STUDY:**

The analysis of data on selected variable that was abdominal strength collected on forty (40) male students. Twenty (20) students from each group i.e. B.P.Ed. Boys and B.Ed. Boys from Department of Physical Education, Dr. R.M.L. Awadh University, Faizabad, U.P., India and Department of Education, Dr. R.M.L. Awadh University, Faizabad, U.P., India. The data was analyzed by independent ‘T’ test to compare the abdominal strength between B.P.Ed. Boys and B.Ed. Boys.

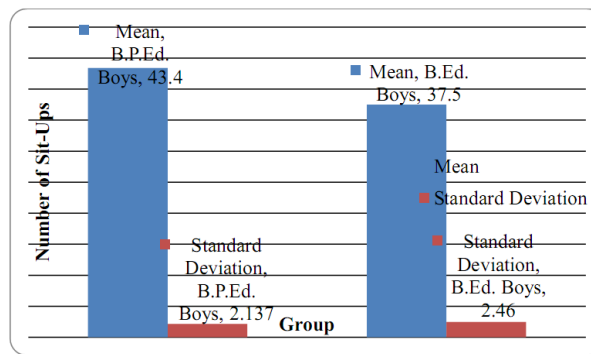
**Table No.1**

**Significance of Differences of Mean, Standard Deviation and ‘T’ Value in Abdominal Strength between B.P.Ed. Boys and B.Ed. Boys**

Group	Sample	Mean	Standard Deviation	‘T’ Value
B.P. Ed. Boys	20	43.40	2.137	8.096*
B.Ed. Boys	20	37.50	2.460	

\*Significant at 0.05 level tab ‘T’ (0.05)(38) = 2.04

Table no.1 indicates mean and standard deviation of B.P.Ed. Boys is 43.40, 2.137 and B.Ed. Boys is 37.50, 2.460 and ‘T’ value is 8.096. Graphical representation of above table is made in figure no.1.



**DISCUSSION OF FINDINGS:**

The statistical findings of the present study revealed that the abdominal strength between B.P.Ed. Boys and B.Ed. Boys are significantly different. Because B.P.Ed. Boys are participating physical activity per day due to need and requirement of the course, but B.Ed. Boys are not participating any physical activity per day (except participating intercollegiate tournaments, if any) due to their different nature of course.

**CONCLUSIONS:**

Within the limitations of the present study the following conclusion was drawn: There was significant difference found in abdominal strength between B.P.Ed. Boys and B.Ed. Boys.

**REFERENCES:**

Demont, R.G., Lephart, S.M., Giraldo, J.L., Giannantonio, F.P., Yuktanandana, P. (1999). ‘‘Comparison of Two Abdominal Training Devices with an Abdominal Crunch using Strength and EMG Measurements’’, (PMID:10573670) Neuromuscular Research Laboratory, University of Pittsburgh, PA 15261, USA. The Journal of Sports Medicine and Physical Fitness [39 (3): pp. 253-258].

Grant, S., Hasler, T., Davies, C., Aitchison, T.C., Wilson, J., Whittaker, A. (2001). ‘‘A Comparison of the Anthropometric, Strength, Endurance and Flexibility Characteristics of Female Elite and Recreational Climbers and Non-climbers’’, J Sports Sci. 2001 July;19(7):499-505. Institute of Biomedical and Life Sciences, University of Glasgow, UK.

Kansal, Devinder K. (1996). Test and Measurement in Physical Education (New Delhi: D.V.S. Publications).

Maria, H., Diener, Lawrence, A., Golding & Don Diener (1995). ‘‘Validity and Reliability of a One-Minute Half Sit-Up Test of Abdominal Strength and Endurance’’, Sports Medicine,

Training and Rehabilitation, Volume 6, Issue 2.

Sanya, A. O., Olajitan, A. (1999). "Comparison of Abdominal Muscle Strength in Post-parous and Nil Parous Subjects", *Afr J Med Med Sci.* 1999 Mar-June; 28(1-2): pp. 49-53. Department of Physiotherapy, College of Medicine, University of Ibadan, Nigeria.

Singh, Hardayal (2006). *Science of Sports Training* (New Delhi: D.V.S. Publications).

Van, Hoogmoed L., Snyder, J.R., Stover, S.M., Drake, C., Taylor, K., Harmon, F.A., McDuffee, L. (1996). "In Vitro Biomechanical Comparison of the Strength of the Linea Alba of the Llama, using Two Suture Patterns", *Am J Vet Res.* 1996 Jun;57(6):938-42. PMID: 8725826 [PubMed - indexed for MEDLINE].

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