SUMMARY

The purpose of the study was to compare the physiological, body composition and psychomotor variables of basketball players at different levels of competition. One hundred fifty male basketball players from three different levels were selected (50 All India Interuniversity, 50 Inter College and 50 Under-19 Junior School Basketball Players). The age of the subjects ranged between 16 to 25 years. The subjects were explained about the objectives of the study. The data was obtained from Punjabi University, Patiala, Panjab University, Chandigarh, G.N.D.U, Amritsar, Kurukshetra University, Kurukshetra, Polo ground Patiala, Govt. M.P. School Patiala, Govt. Mohindra college, Patiala, govt. college sec-11, Chandigarh, new public school, Chandigarh, Punjab technical university and Chitkara university, Rajpura. On the basis of available literature in Exercise Physiology, Body Composition and Psychomotor Variables the following variables were selected for the study:

I. PHYSIOLOGICAL VARIABLES
   a. Vital Capacity
      i. FVC (Forced Expiratory Vital Capacity)
      ii. PEF (Peak Expiratory Force)
      iii. PIF (Peak Inspiratory Force)
   b. VO$_2$ max (Maximum Oxygen Consumption)

II. BODY COMPOSITION VARIABLES
   a) Body Fat%
   b) Visceral Fat
   c) Body Mass Index (BMI)
   d) Basal Metabolic Rate (BMR)
III. PSYCHOMOTOR VARIABLES
   a) Speed
   b) Agility
   c) Differentiation Ability
   d) Orientation Ability
   e) Balance ability
   f) Rhythm Ability
   g) Reaction Ability

   The purpose of study was further extended to find out the differences or to compare the physiological, body composition and psychomotor variables of basketball players at different levels of competitions. With regard to this purpose of the study statistical techniques of t-test, one-way ANOVA and Scheffe Post Hoc test was applied to find out mean differences. Level of significance was fixed at 0.05.

   The study revealed that the selected Physiological Variables that is Vital Capacity (Forced Vital Capacity, Peak Expiratory Flow and Peak Inspiratory Flow) and VO$_2$ max. have significant differences between all the three levels of basketball players i.e. All India Inter University, Inter College and Under-19 School Junior Basketball players.

   For Body Composition variables analysis it was found that there were significant differences for Body Fat% and Visceral Fat between all the three levels of basketball players. But insignificant differences were found for Body Mass Index and Basal Metabolic Rate between all the three levels of basketball players.

   The results showed that there were significant differences for Psychomotor Variables i.e. Speed, Agility, Differentiation Ability, Orientation Ability, Balance, Rhythm and Reaction Ability between All India Inter University, Inter College and Under-19 School Junior Basketball Players.
CONCLUSION:

1. It was observed that there were significant differences between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their Forced Vital Capacity (FVC).

2. There were significant differences between All India Inter University, Inter College and Under-19 School Junior Basketball Players for Peak Expiratory Flow (PEF).

3. Significant differences were observed between All India Inter University, Inter College and Under-19 School Junior Basketball Players for Peak Inspiratory Flow (PIF).

4. It was observed that there were significant differences between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their VO$_2$max.

5. Significant differences were found between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their Body Fat%.

6. It was observed that there were significant differences between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their Visceral Fat.

7. It was found that there were insignificant differences between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their Body Mass Index.

8. Insignificant differences were observed between All India Inter University, Inter College and Under-19 School Junior Basketball players for their Basal Metabolic Rate.

9. It was observed that there were significant differences between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their Speed ability.

10. Significant differences were observed between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their Agility Variable.
11. There were significant differences between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their Differentiation Ability.

12. It was found that there were significant differences between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their Orientation ability.

13. It was found that there were significant differences between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their Balance ability.

14. There were significant differences between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their Rhythm Ability.

15. Significant differences were found between All India Inter University, Inter College and Under-19 School Junior Basketball Players for their Reaction Ability.

**RECOMMENDATIONS:**

Based on the conclusions drawn in this study the following recommendations have been made:

1. Similar Studies can also be conducted on female basketball players.
2. The study may be undertaken with large number of variables.

3. Similar study may be under taken to analyze the other game players and athletes.
4. Similar study may be conducted by using more sophisticated equipments of different level.

5. This study can be conducted on International teams.