

# “Study on Cognitive Ability of Sports children and Non-sports Children”

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## Abstract

Cognitive ability is generally called as mental skill. Cognitive process is very essential attribute to every individual in learning period. It is primary characteristic to students; it accomplishes things very easily and effectively. Objective of the study is to find out whether cognitive ability of sports children and Non-sports children in Karnataka students are significantly different or not. 800 Children (400 Sports children and 400 Non-sports Children) served as a subject of the study. CAT (Cognitive Ability Test) questionnaire which was developed by Gottfield (1997) used as the tool to gather the data. Independent sample T-Test is used as the statistical tool to find out the significance difference between groups. Critical t-value  $\pm 1.962$  for 798 degrees of freedom and 0.05 level of significance was fixed for study. The results ( $t\text{-value} < \text{critical } t\text{-value}$ ) indicate that there is no significant difference of cognitive ability among sports children and non-sports children. The cause may be the fact that schools and colleges offer holistic development programmes to students, including yoga sessions, vacation classes, extra classes, and online platforms. Through apps for learning, tools to increase cognitive function, online courses, and courses on personality development offered through the aforementioned venues, parents show more care for their children's education, and kids who play sports and those who don't are both utilising and enhancing their cognitive abilities.

**Key Words:** Cognitive, Child, CAT, Sports and Non-Sports.

## Introduction

A general mental skill called Reasoning, problem-solving, planning, abstract thought, comprehending difficult concepts, and experience-based learning are all examples of a general mental ability known as cognitive capacity (Gottfredson, 1997). The most comprehensive taxonomy now in use is undoubtedly the three-strategy Carroll model of cognitive abilities (1993). The first stratum is made up of narrow and limited skills, the second is made up of group dynamics and broad skills, and the third is made up of general intelligence, or g. (ones et al., 2012). Since motor accomplishments serve as the foundation for cognitive abilities, individual differences in a baby's achievement of their motor milestones may be a credible predictor of eventual cognitive ability. In fact, self-produced mobility in the form of crawling boosts a number of cognitive capacities, according to Joseph Campos and colleagues. For instance, self-generated movement enhances the capacity for perspective-taking. There have been previous examples of these ideas. Bayley and Shirley both found that the age of first walking was a predictor of preschool mental capacity; later walking was associated with poorer ability scores. The association was statistically significant, but its strength was weak, and its critics later asserted that it was primarily due to the influence of a small number of instances when growth was

considerably delayed. It is more debatable whether variation within the normal range of motor development predicts inferior later outcomes than whether significant delays in infant motor development do. The ability to notice and collect environmental input and mix it with already existing information is referred to as cognitive ability.

## Methodology

Cognitive ability questionnaire which consists of 40 questions was administered for samples. It is developed by Dr. Madhu Gupta and Ms. Bindiya Lakhan (CAT (GMLB)). The sample of the Study was selected randomly. Total 400 samples collected in research. In that 400 were from sports remaining 400 were from non-sports children. Subject age category was between 14 to 18 years. Sports children mean one who participated in active, sports competitive events. Non-sports children mean one who not so actively & participate in physical activity and Competitive sports.

## Statistical technique

IBM SPSS 22 software was used for data analysis. To find out significant difference between groups researcher applied independent sample t-test. Critical t-value is  $\pm 1.962$  for 798 degrees of freedom. Level of significance was kept 0.05 for tests.

## Statistical Analysis and Discussion

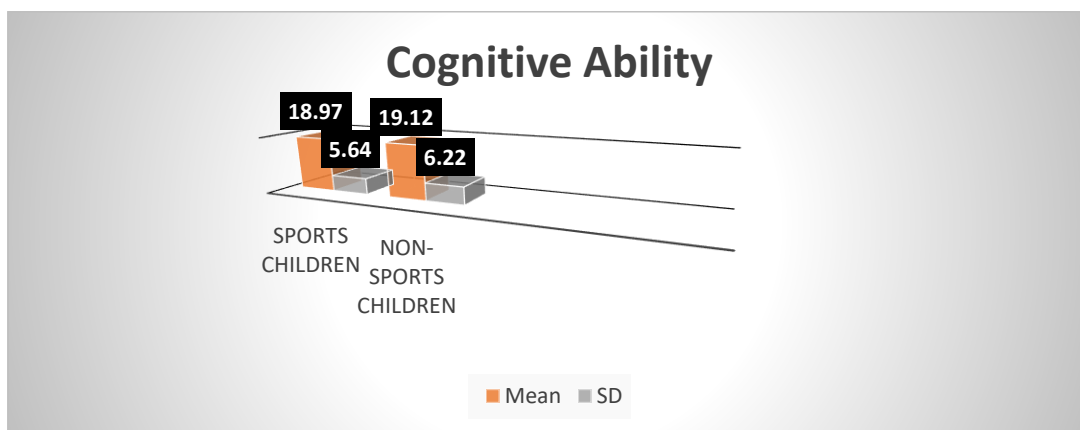
Table:1 Descriptive And T-Test Table for cognitive ability of sports children and non-sports Children.

| Particulars         | Samples | Mean  | Std deviation | T     | Df  | Sig  |
|---------------------|---------|-------|---------------|-------|-----|------|
| Sports Children     | 400     | 18.97 | 5.64          | -.351 | 798 | .726 |
| Non-sports Children | 400     | 19.12 | 6.22          |       |     |      |

\* $\leq 0.05$

The data in the table no.1 comparing cognitive ability of sports children & non-sports children. When we observe mean and SD of both the groups sports children (Mean 18.97, Sd 5.67) is more than the non-sports children (Mean 19.12, Sd 6.22). To find the weather mean differences among two groups are different at the significant level then data is subjected to independent sample T-Test. Independent Sample T-Test result reveals that calculated t-value is .351 so it is less than the critical t-value  $\pm 1.962$  for 798 degrees of freedom and 0.05 level of significance. So, Statistics results indicates that there is no significance difference exist between sports children and non-sports children when their cognitive ability are compared. We may conclude that there is no significant difference in cognitive ability between sports children and non-sports children.

Graphical representation of mean, SD of both the group has been presented in bar chart no.1.



## Conclusion

According to the findings, there are no significant differences in cognitive ability between sports children and non-sports children. The cause may be the fact that schools and colleges offer holistic development programmes to students, including yoga sessions, vacation classes, extra classes, and online platforms. Through apps for learning, tools to increase cognitive function, online courses, and courses on personality development offered through the aforementioned venues, parents show more care for their children's education, and sports children and non-sports children are both utilizing and enhancing their cognitive abilities.

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