

**A STUDY OF PHYSICAL GROWTH, NUTRITIONAL STATUS AND
PHYSICAL ACTIVITY AMONG SCHOOL BOYS OF DELHI IN
RELATION TO THEIR EDUCATIONAL ACHIEVEMENT**

BY Hiralal Khatri, Supervisor Dr. Waseem Ahmad Khan, Associate Professor IASE, Co-supervisor Dr. D. K. KANSAL HEAD, DEPARTMENT OF PESS & PRINCIPAL, IGIPSS, Delhi University

- ❑ The subject of child development has attracted scientists from the time of ancient Greeks, and is both a compelling scientific problem and a matter of great practical significance for the proper care of the children.
- ❑ “child welfare means can mean nothing short of total well being of the child intended to give to each individual an equal opportunity for growth and development” (Third Five Year Plan, GOI)
- ❑ Adolescent is a significant period of growth and maturation, unique changes occur and many adult patterns are established during this period. In this period of rapid growth, of a child is not taken care of, this influences the state of his/her health not only as a child but throughout life. Hence, assessment of physical growth, nutritional status and physical activity is most essential.
- ❑ Although many researchers have been done in the field of physical growth and nutritional status but very limited studies that there have been carried out with regard to physical growth, nutritional status and physical activity among schoolboys in relation to their educational achievements.
- ❑ As educators, we have the responsibility to prepare the children properly for their future lives. The present piece of research, ‘A study of Physical Growth, Nutritional Status and Physical Activity among School Boys of Delhi in relation to their Educational Achievement’ has been conducted with a view to suggest the measures for better all-round development of the children in the context to the rapid growth of socio-demographic Indian society.

The specific objectives of the study were:

1. To study the physical growth pattern among the school boys of Delhi ranging in age from 11 to 17 years.
2. To determine the level of nutritional status among school boys of Delhi ranging in age from 11 to 17 years.
3. To determine the level of physical activity among school boys of Delhi during the age range of 11 to 17 years.
4. To study the educational achievements of the adolescent boys studying in Delhi state government and private school.
5. To study interrelationship between physical growth, nutritional status and physical activity in relation to the educational achievements among adolescent school boys belonging to government and private schools of Delhi.

6. To recommend and suggest changes needed in dietary habits and physical activity for school boys of Delhi state

The investigation was delimited to twenty selected government and private schools (affiliated to CBSE Delhi) by random sampling. The study was delimited to the age group of 11-17 year old boys students. The study was delimited to 700 boys. Out of which 50% (i.e. 350) children were from government schools and an equal number of children (350) from private schools.

Major Findings of the Study

1. A gradual increase in mean body weight has been observed at all successive period of growth among adolescent boys of Govt. and Private schools.
2. Similarly, a gradual and continuous growth was noticed in height of adolescent boys of both categories of school.
3. A steep rise in velocity of height at the age of 16 years was noticed among government and private adolescent school boys.
4. Among the age group of 11 years boys of Government school, the BMI was found to be on the lower side, which indicates more relative growth in body height as compared to that in body weight.
5. Among the private school boys at age group of 17 years were reported to show more relative growth in body weight as compared to that in body height. Finding of more weight among private school boys is result of the dietary habits.
6. The intakes of major nutrients like Protein, Carbohydrates and Fats have been found to be quite in line with the recommendation of ICMR.
7. Mineral intake among adolescent boys is as per the recommendation of ICMR except Zinc and Iron which found to be inadequate
8. Consumption of Thiamine was found to be lower than the recommended values of ICMR among boys of Government and Private schools
9. Riboflavin is one of the important vitamins. The study indicated that among adolescent boys in all age groups the consumption of Riboflavin was lower than the recommended value of ICMR.
10. It has been observed that the Niacin intake velocity at the age of 17 years in Government school boys was 0.49 mg less than the ICMR recommendation and in private schools at the age of 16 years dietary Niacin was 0.29 mg less than the ICMR recommended Niacin intake.
11. Lower intake of Niacin severely effects the several metabolic reactions which are important to metabolize carbohydrates, fats and protein. This might be a cause for increase in weight in adulthood.
12. Among Government school boys the energy expenditure was less than the energy intake (ranging from 6% to 11%) among different age groups.
13. In private school boys the energy expenditure was less than the energy intake (ranging from 10 to 17 %.)
14. In private school boys the **energy expenditure** was less than the **energy intake** (ranging from 10 to 17 %.)
15. The difference in the **energy expenditure and energy intake** was the main cause for having more growth in body weight among adolescent boys of both type of schools.
16. The energy expenditure can be increased by encouraging the students for more physical activities.

17. It has been observed that educational achievement in the private school boys is higher than the Government school boys. In Government school the educational achievement were on the average of 65 percent and in private school is about 81 percent.
18. **There was no significant relationship in between selected variables and educational achievement of adolescent boys of both types of schools.**
19. **There was no significant relationship in between selected variables and educational achievement of adolescent boys of both types of schools.**
20. The results have shown positive relationship between energy intake and energy expenditure and it is observed that the students have not shown any relationship of energy intake or energy expenditure with their educational achievements.