

# Impact of Nutritional Knowledge Status of Adolescents on their Health

Jyoti Rani

*S.R.F, Department of Sociology, College of Basic Science & Humanities.  
C.C.S.H.A.U*

Dr. Rashmi Tyagi

*Assistant Professor, Department of Sociology, College of Basic Science & Humanities.  
C.C.S.H.A.U*

Dr. Sangeeta Chahal

*Assistant Professor, Department of Food & Nutrition, College of Home-science.  
C.C.S.H.A.U*

Bhateri

*Scholar, Department of Food & Nutrition, College of Home-science.  
C.C.S.H.A.U.*

**Abstract - The present study was conducted in the Hisar district of Haryana state. Government and Public schools were selected for the purpose of the study. From the total number of adolescents, a sample of two hundred adolescents was selected proportionately on the basis of total number of adolescents in the school. The adolescent groups of respondents were selected randomly from the class VIIIth, IXth and Xth. The data were collected from the selected respondents with the help of questionnaire distributed to them in the class room. Evaluation of data was done with the help of mathematical tools i.e. frequencies and percentage etc. The study reported that majority of the students comes under the category of under weight having low and medium level of nutritional knowledge. The comparison of nutritional knowledge of the students with Body Mass Index range of the students shows that nutritional knowledge have great impact on the health status of the adolescents. To improve the nutritional knowledge of the adolescents need of nutritional education is recommended and few basic steps are advice to be taken by the school: make them aware about their health status. Impart basic nutritional knowledge to them. Encourage them to change their fast food habits. Guide their parents in parent-teacher association.**

**Key Words: Nutrition, knowledge, adolescents, Body Mass Index, under weight, over weight.**

## I. INTRODUCTION

Adolescence is a period of transition between childhood and adulthood that demands extra nutrients and energy rich food. It is a very dynamic and active period of life and is a period of growth and life stress. Since the period demands high level of activity and growth, dietary requirements both quantitatively as well as qualitatively are of great importance. A failure to consume an adequate diet during adolescence can potentially retard growth (Johnson et al., 1994) and the over consumption of some nutrients can put the adolescents at increase risk for chronic disease e.g. heart disease in case of over consumption of fat. Adolescence is a stage at which the nutritional deficiency has far reaching effect on health. Much work in nutrition education has concentrated on the association between knowledge, attitude and practice (or behavior). Knowledge is seen as influencing behavior through attitudes; hence increasing knowledge will be likely to influence behavior (Shepherd and G. Towler, 2007). Nutritional knowledge can influence the consumption pattern and enhance the nutritional status as it improve the behavior and change the attitude towards wrong practices of food consumption and improve the health of the consumer. Nutritional status of

adolescents can be improved by making them aware of their increased nutritional needs by imparting nutrition education and by supplementing their diet with different nutrients.

## II. METHODOLOGY

The present study was conducted in the Hisar district of Haryana state. Government and Public schools were selected for the purpose of the study. From the total number of adolescents, a sample of two hundred adolescents was selected proportionately on the basis of total number of adolescents in the school. The adolescent groups of respondents were selected randomly from the class VIII, IX and X. The data were collected from the selected respondents with the help of questionnaire distributed to them in the class room. Evaluation of data was done with the help of mathematical tools i.e. frequencies and percentage etc.

## III. RESULT AND DISCUSSION

Nutrition education affects the overall health status of the individual. So, knowledge level of the students was calculated through the collected data. The data in Table 1a revealed that half of the majority of boys(50.88%) have low level of nutritional knowledge and more than half (61.62%) of girls having medium level of nutritional knowledge. So as compared to boys, girls have more nutritional knowledge. But to improve the knowledge level up to high need of education is required.. It may be delineated from Table 1b that more than two third (78.07%) of the boys and more than half (52.33%) of the girls comes under the category of underweight. As compared to the boys, girls comes more under the normal category. Higher majority (78.07%) of the boys comes under the category of the underweight i.e. below 18 level of BMI. Similarly M.Samson Singh and R.K.Neeta Devi (2013) reported a high prevalence of underweight (30.21%) and overweight (3.12%) in the present study was found among children and adolescent boys, respectively. Among girls, the prevalence of both underweight (33.86%) and overweight (5.18%) was reported higher among children than adolescents and the difference in the distribution were significant at 0.05 levels. The overall prevalence of underweight (28.29%) was found more or less the same among boys and girls, but overweight (5.10%) was reported higher among girls than boys(2.34%). Singh,S.et.al. (2011) analyzed that 26.6% of adolescent girls were undernourished (BMI<18.5)and 16.3% adolescent girls were at high risk of developing obesity in near future due to increased BMI>25.9.Shivaramakrishna et.al(2011) reported that there is higher prevalence of under nutrition in adolescent girls. Shepherd and Towler (2007) also studied that female had higher nutritional knowledge score and more negative views of the foods than did males.

The data in Table 2a reflected that near about two third (63.5%) of the private school students have medium and high level of nutritional knowledge where as in government school more than half (60%) of the students have low levels of nutritional knowledge. Only 38% of the students come under the category of medium level of nutritional knowledge. The data showed that government school students need more nutritional education as compared to the public school.and Table 2b shown that there is slight difference in Public school health status as compare to the Government school as 4% of Public school students, out of 200 total students comes under the category of overweight that may because of socio-economic status of the students. Similarly Shaaban,S.Y. (2009)studied that the private schools have significantly better knowledge than governmental schools as regard to CHO resources, function and CHO content in certain food ( $p<0.05$ ) and Oldewage Theron W.H. (2010) determined the nutritional knowledge and nutritional status of primary school children and observed malnutrition and average nutrition knowledge.

An examination of Table 3a showed that the students having high level of nutritional knowledge were from class eight. Whereas students having whereas students having medium level of nutritional knowledge were near about half, majority belongs to tenth class. The values in low level of nutritional knowledge were inversely proportionate to the level of class.It can be interpreted from the table 3b that health status according to BMI of IX class is comparatively better than VIII and X classes as about 37% of the students comes under the category of normal and overweight. Boora, P. and Khetarpaul, N. (2000) analyzed that 43 percent of lower nursery and 60 percent of upper nursery children had adequate nutritional knowledge and all children in labour had inadequate nutrition knowledge.

## IV. CONCLUSION

Majority of the students comes under the category of under weight having low and medium level of nutritional knowledge. The comparison of nutritional knowledge of the students with Body Mass Index range of the students shows that nutritional knowledge have great impact on the health status of the adolescents. To enhance the nutritional knowledge of the adolescents some educational programmes should be planned as to improve the health status of the adolescents as they are the future of the nation. To improve the nutritional knowledge of the adolescents need of nutritional education is recommended and few basic steps are advice to be taken by the school: make them aware about their health status. Impart basic nutritional knowledge to them. Encourage them to change their fast food habits. Guide their parents in parent-teacher association.

## REFERENCES

- [1] Boora, P. and Khetarpaul, N.(2000). Food consumption pattern and nutrient intake of school going children of Panchkula district of Haryana. *Journal of Family Ecology. (India).* 2: 31-40.
- [2] Johnson F., Wardle J., and J Griffith.( 2002) The Adolescent Food Habits Checklist: reliability and validity of a measure of healthy eating behavior in adolescents. *European Journal of Clinical Nutrition* (2002) 56, 644–649.
- [3] Oldewage Theron W.H. (2010). [www.ajol.info/index.php/sajcn/article/download/59892/48166](http://www.ajol.info/index.php/sajcn/article/download/59892/48166)
- [4] Shepherd and Fowler(2007). Nutrition knowledge, attitudes and fat intake: application of the theory of reasoned action. *Journal of Human Nutrition and Dietetics*; 5, 387–397.
- [5] Shaaban S.Y., Nassar M.F., Abd Elhamid D.M., El-Batrawy., S.R. and Lasheen R.A.(2009) Nutritional Knowledge and Attitude of Adolescent School Girls Living in Cairo. *Research Journal of Medicine and Medical Sciences*, 4(2): 421-427, 2009.
- [6] Shivaramakrishna H.R, Deepa A.V.,Srithareddy M. Nutritional status of Adolescent Girls in Rural Area of Kolar district-A Cross-Sectional Study. *AI Ameen J Med Sci* (2011)4(3):243-246.
- [7] Singh,M.S., and Neeta Devi,R.K.(2013). Nutritional status among the Urban Meitei Childern and Adolescents of Manipur, Northeast India. *Journal of Anthropology* volume 2013(2013). Article ID983845,Page-5.
- [8] Singh S., Kansal S. and Kumar A. The Indian Journal of Research Anvikshiki.[www.anvikshikijournal.com/veiwpaper.aspx?pcode=3ad49f8d-4eee-932d-...](http://www.anvikshikijournal.com/veiwpaper.aspx?pcode=3ad49f8d-4eee-932d-...)

Table1a. Nutritional Knowledge of school students in relation to gender

| Level of Knowledge          | Boys (%)    | Girls (%)  | Total       |
|-----------------------------|-------------|------------|-------------|
| High level of Knowledge     | 4(3.51)     | 1(1.16)    | 5(2.50)     |
| Medium Level of Knowledge   | 48(42.10)   | 53(61.62)  | 101(50.50)  |
| Low Level of Knowledge      | 58(50.88)   | 32(37.22)  | 90(45.00)   |
| Very low Level of Knowledge | 4(3.51)     | 0.00       | 4(2.00)     |
| Total                       | 114(100.00) | 86(100.00) | 200(100.00) |

Table1b. Health Status Comparison of Boys and Girls According to BMI Index.

| Body Mass Index      | Boys      | Girls     | Total       |
|----------------------|-----------|-----------|-------------|
| Overweight(30-35)    | 4(3.51)   | 5(5.81)   | 9(4.50)     |
| Normal(18-28.9)      | 21(18.42) | 36(41.81) | 57(28.50)   |
| Underweight(below18) | 89(78.07) | 45(52.33) | 134(67.00)  |
| Total                | 114(      | 86(       | 200(100.00) |

Table2a.Nutritional Knowledge of school students in relation to type of school

| Level of Knowledge          | Government School | Public School | Total(%)    |
|-----------------------------|-------------------|---------------|-------------|
| High Level of Knowledge     | 0                 | 5             | 5(2.50)     |
| Medium Level of Knowledge   | 38                | 63            | 101(50.50)  |
| Low Level of Knowledge      | 60                | 30            | 90(45.00)   |
| Very low Level of Knowledge | 2                 | 2             | 4(2.00)     |
| Total                       | 100               | 100           | 200(100.00) |

Table2b. Health Status Comparison of Government and Public School Girls According to BMI Index.

| Body Mass Index       | Government School | Public School | Total       |
|-----------------------|-------------------|---------------|-------------|
| Overweight(30-35)     | 1                 | 8             | 9(4.50)     |
| Normal(18-28.9)       | 28                | 29            | 57(28.50)   |
| Underweight(below 18) | 71                | 63            | 134(67.00)  |
| Total                 | 100               | 100           | 200(100.00) |

Table3a.Nutritional Knowledge of school students in relation to their class level

| Level of Knowledge          | VIII (%)  | IX (%)    | X (%)     | Total (%)   |
|-----------------------------|-----------|-----------|-----------|-------------|
| High level of Knowledge     | 5(6.66)   | 0(0.00)   | 0(0.00)   | 5(2.50)     |
| Medium Level of Knowledge   | 28(37.34) | 25(49.01) | 48(64.86) | 101(50.50)  |
| Low Level of Knowledge      | 42(56.00) | 26(50.99) | 22(29.73) | 90(45.00)   |
| Very Low Level of Knowledge | 0(0.00)   | 0(0.00)   | 4(5.40)   | 4(2.00)     |
| Total                       | 75(37.50) | 51(25.50) | 74(37.00) | 200(100.00) |

Table3b. Health Status Comparison of Different Classes According to BMI Index.

| Body Mass Index       | VIII      | IX        | X         | Total      |
|-----------------------|-----------|-----------|-----------|------------|
| Overweight(30-35)     | 3(4.00)   | 3(5.88)   | 3(4.50)   | 9(4.50)    |
| Normal(18-28.9)       | 20(26.67) | 16(31.37) | 21(28.38) | 57(28.50)  |
| Underweight(below 18) | 52(69.33) | 32(62.74) | 50(67.57) | 134(67.00) |
| Total                 | 75(       | 51(       | 74(       | 200(100)   |