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Assessment of nutritional knowledge of students of upper primary classes (6th to 8th standard) from state government schools of district Sitapur, Uttar Pradesh, India

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Abstract

Life cannot be sustained without adequate nourishment. The word “nutrition” is often paired with the word “food”. The biological importance of food is dictated by the nutrients it contains. Acquiring nutritional knowledge is essential for improved dietary practices. The significance of improving nutritional knowledge in order to have a positive influence on food choices and health should not be underestimated. The study assessed the nutritional knowledge of 427 students attending upper primary classes from four State Government schools in District Sitapur. The study population was purposively selected from four state government schools in Sitapur. The tool for the study included a questionnaire to determine the nutritional knowledge of the students. In this study, it was found that the nutritional knowledge of 78.7% students was poor. The result further revealed that the students were deficient in knowledge and understanding of the facts about different aspects of Nutrition.

Keywords: Nutrition, nutritional knowledge, students, upper primary classes

1. Introduction

One cannot imagine life without air, water and food but actually Life cannot sustain without proper and sufficient nourishment. The word ‘nutrition’ often corresponds with the word “food”. But in real sense the term Nutrition refers to the science of food and its relationship with health. It is mainly concerned with the function performed by the nutrients in the growth, development and maintenance of the body. “World Health Organization” defines Nutrition as “Nutrition is the intake of food, considered in relation to the body’s dietary needs.”

The word nutrition has been originated from Middle English *nutricion*, and from Latin *nūtrītus*, past participle of *nūtrīre*, which means to suckle. Nutrition refers to the process of nourishing or being nourished, especially the process by which a living organism assimilates food and uses it for growth and for replacement of tissues. It also corresponds to the act or process of nourishing or of being nourished or to the study or science of the dietary requirements of humans and animals for proper health and development.

Common belief is that acquiring nutritional knowledge will itself lead to improved dietary practices. Nutritional knowledge can be gained by means of nutrition education. Nutrition education can be defined as “the process of helping individuals to develop the knowledge, skills and motivation needed to make appropriate food choices throughout the life”. The health habits established affects the quality of life. By practicing wellness, healthy life can be achieved. Good habits for proper life management includes,

- Choosing and Eating Nutritious Food.
- Exercising Regularly
- Having Adequate Sleep
- Learning to handle stress
- Avoiding harmful substances

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Every child is precious not only to their parents but also to their family, society and nation and even to the world at large. In fact child is a citizen of world and thus it becomes the responsibility of the wide population of the whole universe to look after the interests of children all over. Children are assets of our country, so it is extremely important to ensure proper health care facilities as well as adequate nutritional intake for the children. It is now globally acknowledged that investment in human resource development is a pre-requisite for any nation.

Adequate and balanced nutritional intake is quite essential for children as it fosters growth and development, protects and maintains health, prevents from nutritional deficiencies and various other illnesses and to reserve for starvation and dietary stress. [1] According to Chung. *et al.*, 2004 [2] School age children do not have sufficient knowledge regarding their own health and nutrition and most often are unaware about the importance of health, therefore select foods on the basis of fondness and taste without judging the consequences of exaggerate unbalanced diets.

Hertzer 1983 [3] reported that although at the school age growth rate is slightly slowed down but dietary habit is formed and fixed during this period. The importance of nutrition in school age children has been emphasized because malnutrition during this period can decrease not only physical and mental development but also the learning ability of children Thus we say that if students have nutritional knowledge and awareness on nutrition, they improve not only their nutritional status but also whole world at large.

The aim of this study was to determine the nutritional knowledge of students, attending upper primary classes from state government schools of District Sitapur

2. Materials and Methods-

In this study, four hundred twenty seven (222 Boys, 205 Girls) Upper primary classes Students from the four State Government Schools of District Sitapur were selected as samples in the age group of eleven to fifteen years. A random sampling technique was used for schools selection in this study. Upper primary classes students were purposively selected. The selected schools were Government Girls Inter College, Government Inter College (Boys), Gandhi Nagar Vidyalaya (Co-edu.) and PAC Vidyalaya (Co-edu.) and selected classes were 6th (120 students), 7th (145 students) and 8th (162).

S. no.	Name of Schools	No. of students
1	Govt. Girls Inter College	147
2	Govt. Inter college (Boys)	178
3	PAC Vidyalaya (Co-edu.)	34
4	Gandhi Nagar Vidyalaya (Co-edu.)	68
	Total	427

Students' nutritional knowledge was assessed with the help of self-made Questionnaire. The Questionnaire which was developed by the investigator comprises of general information such as Name of Students, School name, Age, Class, Gender, Religion, Caste, Type of Family, Father Mother Name, Education, Occupation and salary, Meal Type, Total number of Family Members, Number of Children in Family, Favourite Game and Number of meal in taken in a day. The questionnaire also comprised 95 multiple choice questions to ascertain students' level of knowledge of nutrition. For assessment of Nutritional

Knowledge the Questions were asked about different aspects of Nutrition as Food and Nutrition, Nutrients, Sources of Nutrients, Functions and Advantages of Nutrition, Deficiency Diseases, Overdose Result of Nutrients, Sources of Nutrients Found In Foods, Types of Vitamin and Chemical Name, Food Groups and Colour Pigments. The respondents were requested to select the appropriate option as was applicable to them.

For assessment of Nutritional Knowledge of School students, a scoring scale was developed. In this scoring system scores of 0-15 number is very poor, 16-35 poor, 36-55 fair, 56-75 numbers was good and 76-95 numbers was marked to be excellent. For each correct answer one mark was given and each wrong answer was marked as zero.

S. No.	Range of Scores	Level of Nutritional Knowledge
1.	0-15	Very Poor
2.	16-35	Poor
3.	36-55	Fair
4.	56-75	Good
5.	76-95	Excellent

Data processing and analysis was done using Statistical Package for Social Sciences (SPSS Ver.16.0).

3. Findings and Discussion of the study

Table 1 represents Nutritional knowledge scores of school students. In this table 336 (78.7%) students scored between 16-35 which was assessed as the poor level of knowledge. 78 (18.3%) students were scored between 36-55 which was fair, 7 (1.6%) students gained 0-15 scores which was very poor, 6 (1.4%) students scored were between 56-75 which was good nutritional knowledge in scoring scale and none of the students were found to have 76-95 score which was excellent in scoring table.

This study revealed that 78.7% students performed poorly. Poor Nutrition knowledge among school students in QwaQwa, South Africa had also been reported By Oldewage Theron and Egal [4]. This showed that the students were deficient in knowledge and understanding of the facts about nutritive value of foods. Kostanjevec *et al.* [5] reported a similar observation among school students in Slovenia. This however, validates the need for adequate nutrition education at the Upper primary school level, which will go a long way to enhance the ability of the students to make good food choices and will positively influence their eating habits thereby ensuring better nutritional status.

Table 1: Nutritional knowledge Scores gained by Students

S. No.	Level of Knowledge and score	Number	Percentage (%)
1	Very Poor 0-15	7	1.6
2	Poor 16-35	336	78.7
3	Fair 36-55	78	18.3
4	Good 56-75	6	1.4
5	Excellent 76-95	00	00
	Total	427	100.0

Table 2 represents Class wise nutritional knowledge scores of school students. Result found that nutritional knowledge of students was poor in every class (6th, 7th and 8th). 96 (22.5%) 6th class students scored between 16-35 which was assessed as the poor level of knowledge. 18 (4.2%) students were scored between 36-55 which was fair, 3 (0.7%) students gained 0-15 scores which was very poor, also 3

(0.7%) students scored between 56-75 which was good nutritional knowledge in scoring scale and none of the students were found to have 76-95 score which was excellent in scoring table.

The result showed that the nutritional knowledge of 6th class was lowest compared to other class. On the other hand, in the study by Choi. *et al* 2008 [6] showed that knowledge of 6th class students was highest compared to other classes.

This table also showed that 108 (25.3%) 7th class students scored between 16-35 which was assessed as the poor level of knowledge. 33 (7.7%) students were scored between 36-55 which was fair, 2 (0.5%) students gained 0-15 scores which was very poor, also score of 2 (0.5%) students were between 56-75 which was good nutritional knowledge in scoring scale and none of the students were found to have 76-95 score which was excellent in scoring table.

This table also showed that 132 (30.9%) 8th class students scored between 16-35 which was assessed as the poor level of knowledge. 27 (6.3%) students scored between 36-55 which was fair, 2 (0.5%) students gained 0-15 scores which was very poor, 1 (0.2%) students score were between 56-75 which was good nutritional knowledge in scoring scale and none of the students were found to have 76-95 score which was excellent in scoring table.

This study revealed that 25.3% 7th class and 30.9 % 8th class students gained score 16-35 which was poor score. These results were similar in the study on Kendriya Vidyalaya school students in the Muzaffarpur area by Kumari Sweta [7].

Table 2: Class wise Nutritional knowledge Score gained by Students

S. no.	Range of Scores	6 th		7 th		8 th	
		No.	%	No.	%	No.	%
1	Very Poor 0-15	3	0.7	2	0.5	2	0.5
2	Poor 16-35	96	22.5	108	25.3	132	30.9
3	Fair 36-55	18	4.2	33	7.7	27	6.3
4	Good 56-75	3	0.7	2	0.5	1	0.2
5	Excellent 76-95	0	0	0	0	0	0
	Total	120	28.1	145	34	162	37.9

Table 3 represents Gender wise nutritional knowledge scores of school students. In this table 175 (41%) boys scored between 16-35 which was assessed as the poor level of knowledge. 40 (9.4%) boys were scored between 36-55 which was fair, 4 (0.9%) boys gained 0-15 scores which was very poor, 3 (0.7%) boys score were between 56-75 which was good nutritional knowledge in scoring scale and none of the boys were found to have 76-95 score which was excellent in scoring table.

This table also showed that 161 (37.7%) girls scored between 16-35 which was assessed as the poor level of knowledge. 38 (8.9%) girls were scored between 36-55 which was fair, 3 (0.7%) girls gained 0-15 scores which was very poor, 3 (0.7%) girls score were between 56-75 which was good nutritional knowledge in scoring scale and none of the girls were found to have 76-95 score which was excellent in scoring table.

This study revealed that 37.7% girls and 41% boys gained score between 0-15 which was poor score. These results were similar in the study on elementary school students in the Chuncheon area by Lee *et al.* 1997 [8] and also similar to those in the studies on elementary school students in the Seoul and Daejeon areas by Kim 2005 [8] and Jung 2002(9)

respectively. On the other hand, in the study by Lee *et al* 2000 [10] boys showed significantly higher knowledge than girls.

Table 3: Gender wise Nutritional knowledge Score gained by Students

S. no.	Range of Scores	Boys		Girls	
		No.	%	No.	%
1	Very Poor 0-15	4	0.9	3	0.7
2	Poor 16-35	175	41	161	37.7
3	Fair 36-55	40	9.4	38	8.9
4	Good 56-75	3	0.7	3	0.7
5	Excellent 76-95	0	0	0	0
	Total	222	52	205	48

Numerous studies have shown that well planed nutrition education can significantly influence the quality of nutrition knowledge of children [11-16]. Nutrition Education, which may take various forms of formal and informal education, can also significant change nutrition behaviour and dietary habits of school children [17-19]. Hernack *et al.* [20] stress that nutrition education is a key element to promoting lifelong healthy eating and should start at early stages of life. Nutrition Education is an accessible effective tool in the promotion of health nutrition in education programmes with focus on healthy eating [21, 22].

School nutrition education should focus on the provision of nutrition information, but also on the development of skills and behaviours related to areas such as food preparation, food preservation and storage; social and cultural aspects of food and eating; enhanced self-esteem and positive body image and other aspects [23].

4. Conclusion-

The poor nutritional knowledge and nutritional status of the study population had revealed the need for adequate nutrition education interventions. Nutrition knowledge is needed for better dietary choices. Childrens are becoming more autonomous and behavioral patterns acquired during this phase of life, such as dietary intake behavior, may influence long-term behaviors. It is, therefore, recommended that a nutrition education programs be developed and implemented for this group of students, as nutrition education can be an accessible and effective tool for improving food choices. Since most students spend most of their time in school, school based nutrition education, combined with physical activity programs can be employed to reinforce the message for healthy eating.

5. References-

1. Sharma S, Gernand AD, Day RS. Nutrition Knowledge predicts eating behavior of all food groups except fruits and vegetables among adults in the Paso del Norte region: Que Sabrosa vida. JNEB. 2008; 4(6):361-368.
2. Chung SJ, Lee YN, Know SJ. Factors associated with breakfast skipping in elementary school children in Korea. Korean Journal of Community Nutrition. 2004; 9:3-11.
3. Hertzler AA Children Food Patterns, A review, I. Food preferences and feeding problems. Journal Am. Diet Assoc. 1983; 83:551-556.
4. Oldewage-Theron WH, Egal AA. Nutrition Knowledge and nutritional status of primary school children in QwaQwa. SAJCN; 2010; 23(3):149-154.

5. Kostanjevec S, Jerman J, Koch V. The effects of nutrition education on 6th graders knowledge of nutrition in nine year primary school in Slovenia. *Eurasia J Math Sci Tech Educ.* 2011; 7(4):243-252.
6. Choi Eun-Suil, Shin Na Ri, Jung Eum Im, Park Hae-Ryun, Lee Hong-Mie, Song Kyung-Hee. A study on nutritional knowledge and dietary behavior of elementary school children in Seoul.
7. Kumari Sweta. Impact of Nutritional Education on Nutrient Adequacy of High School Children studying in Kendriya Vidyalaya Gannipur. Ph.D thesis, B.R.A. Bihar University Muzaffarpur, Bihar, India.
8. Lee NS, Im YS, Kim BR. The study on the food habits and preferences of elementary school children. *Korean Journal of Community Nutrition.* 1997; 2:187-196.
9. Kim KN, Kim AJ, Park ES, Woo MK, Lee BK, Hyun TS. Content analysis of the questionnaires used in dietary surveys. *Korean Journal of Community Nutrition.* 2000; 5:697-708.
10. Jung SM A study on the nutrition knowledge, the eating attitude, and the eating behaviour of elementary school students in Busan. Dong-A University of Korea, Master's Thesis. 2002.
11. Lee SW, Sung CJ, Kim AJ, Kim MH. A study on nutritional attitude, food behaviour and nutritional status according to nutrition knowledge of Korean middle school students. *Korean Journal of Community Nutrition.* 2000; 5:419-431.
12. Manios Y, Kafatos A. Health and nutrition education in elementary Schools: Changes in health knowledge, nutrient intakes and physical activity over a six year period. *Pub. Health Nutr.* 2002; 2(3):445-448.
13. McAleese JD, Rankin LL. Garden-based nutrition education affects fruit and vegetable consumption in sixth-grade adolescents. *J Am Dietetic Assoc.* 2007; 107:662-665.
14. Powers A, Struempfer B, Guarino A, Parmer S. Effect of a nutrition education program on the dietary behavior and nutrition knowledge of secondgrade and third-grade students. *J Sch Health.* 2005; 75(4):129-133.
15. Wagner N Meusel D, Kirch W. Nutrition education for children - results and perspectives. *J Pub Health.* 13:102-110.
16. Thanuja B, Ramya V. Assessment of Nutritional Knowledge among adolescent girls and impact of Nutrition Education. *Convey Research Journal.* 2007; 1(1).
17. Lytle L, Stone E, Nichaman M, Perry C, Montgomery D, Nicklas T. Changes in nutrition intakes of elementary school children following a schoolbased intervention: results from the CATCH study. *Prev. Med.* 1996; 25:465-477.
18. Reynolds K, Winton A, Shewchuk R, Hickey C. Social cognitive model of fruit and vegetable consumption in elementary school children. *J Nutr Edu Behav.* 1999; 31(1):23-30.
19. Worsley A. Nutrition knowledge and food consumption: can nutrition knowledge change food behavior? *Asia Pacific J Clin Nutr.* 2002; 11:579-585.
20. Harnack L, Block G, Lane S. Influence of selected environmental and personal factors on dietary behaviour and chronic disease prevention. *J Nutr Edu.* 1997; 29:306-312.
21. Kelder S, Perry C, Lytle L, Klepp K. Community-wide youth nutrition education: Long-term outcomes of the Minnesota Heart Health Program. *Health Educ. Res.* 1995; 10(2):119-131.
22. Torkar G, Pintarič M, Koch V. Fruit and vegetable playing cards: utility of the game for nutrition education. *Nutr. Food Sci.* 2010; 40(1):74-80.
23. Perez-Rodrigo C, Aranceta J. Nutrition education in schools: experiences and challenges. *Eur. J Clin Nutr.* 2003; 57(1):82-85.