International Journal of Food Science and Nutrition
ISSN: 2455-4898
Impact Factor: RJIF 5.14
www.foodsciencejournal.com
Volume 2; Issue 5; September 2017; Page No. 152-154

Prevalance of over nutrition and impact of nutrition awareness among school going children of Cuttack district

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Abstract
Health and nutrition in early stages of human life determine, to a great extent, the physical and mental well-being of a person. In a developing country like India, poverty undoubtedly constitutes a major factor for malnutrition in children, but lack of awareness of what constitutes a balanced diet is also a factor, which needs to be considered. Childhood is a crucial period of physical and cognitive development. The consequences of ignoring the changing nutrition needs and burden of disease are grim. Nutrition refers to the appropriate intake of nutritionally adequate food in relation to the body's dietary needs. Over Nutrition is a state of nutrition in which one or more of the components of a healthy diet are consumed to excess such that adverse medical effects of that excessive intake are apparent and measurable. In India most of the school going children prefer indoor games and sedentary lifestyle. The present study was designed with main objectives, to develop nutrition education material for creating awareness, to assess the impact of ICT on the nutritional awareness of Over nutrition among school going children. Two hundred children (13-17years) were selected through the random sampling method from one children's home in Cuttack, Odisha. Children's nutritional awareness was assessed by imparting nutritional awareness. Pretested schedule was used in order to collect data from the respondents. The collected data were statistically analyzed. The study showed the children had lack of nutritional knowledge before intervention but it was improved after nutritional awareness intervention programme.

Keywords: nutrition, health, nutrition awareness, intervention, Cuttack

Introduction
Nutrition is the intake of food, considered in relation to the body's dietary needs. Good nutrition is an adequate, well balanced diet combined with regular physical activity which is a cornerstone of good health. Poor nutrition can lead to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and reduced productivity. (WHO, 2012) Another school based study in 2011 reported the prevalence of overweight and obesity in 8- and 18-year-old children, respectively, was 14.4% and 2.8% by International Obesity Task Force (IOTF) cut-offs, 14.5% and 4.8% by Center for Disease Control (CDC) cut-offs, and 18.5% and 5.3% by World Health Organization (WHO) cut-offs.(Misra, 2011) Nutrition Education is any combination of educational strategies, accompanied by environmental supports, designed to facilitate voluntary adoption of food choices and other food and nutrition related behaviours conducive to health and well-being. Nutrition education is delivered through multiple venues and involves activities at the individual, community, and policy levels. (Jones, 2010) [4] The school age period has been called the latent time of growth. The rate of growth slows and body changes occur gradually. Girls usually distance boys by the latter part of this period. Nutritional requirements of boys and girls are more or less the same till the first 9 years. After that there is a variation in some nutrients (srilakshmi, 2007) [1]. In spite of extensive research over the past decades, the mechanisms by which people attain excessive body weight and adiposity are still only partially understood. Overweight and obesity are caused by numerous social and environmental factors that influence people's energy intake and physical activity. (WHO, 2012) Need of nutrition education is very essential to solve the nutritional and health problems. It has been well recognized that one of the weakest link in intervention programs to control malnutrition is absence of proper nutrition education and scarcity of appropriate specific education materials. Therefore, preparation of location specific nutrition education materials is the need of the hour (Joshi and Singh, 2008) [3].

Methods and Materials
A cross sectional design was used in this study among School going children. The participants of the study were 200 school going children aged between 13-17 years selected through the random sampling method. The school going children was selected based on their willingness to participate in the study. Pretested schedule was used in order to collect data from the respondents. Data regarding general profile of respondent was collected using the first part of the schedule. Knowledge test Performa was prepared to assess the knowledge level of the school going children. A film strip was developed for

imparting nutritional awareness to respondents. After the exposure of communication material a post test was taken and comparison between score obtained in pre and post-test was taken and comparison between score obtained in pre and post-test by the respondents was decide the impact of nutritional awareness created through communication material among the target group.

The collected data was summarized, tabulated, processed and analyzed with the help of chi square applied on data.

Results and Discussion

1. Socio-Demographic Information of the Selected Respondents

Table 1: Distribution of Sports person By Socio-demographic profile

S. No.	Particulars	N=200	Percentage (%)
1.	Gender		
	Male	200	100
	Female	00	00
2.	Age (years):		
	18-20	85	42.5
	21-23	115	57.5
	24-26		
3.	Education (appearing)	00	00
	Graduation	00	00
	Post-Graduation	200	100
	PhD.		
4.	Hostler/ Days Scholar	198	99.0
	Hostler Scholar	2	1.0
	Days Scholar		
5.	Nature of family	200	100
	Joint family	00	00
	Nuclear family		
6.	Occupation of family	85	42.5
	Government service	102	52.5
	Business	13	6.5
	Any other		
7.	Family income group		
	High income (above 50000 rupees/month)	30	15
	Middle income (20000 – 50000 rupees per month	156	78
	Lower income (below 2000 rupees per month)	14	7

It is seen from Table 1 that among 200 respondents 100 percent respondents were male sex. As in the Children's home only male respondents were available. The age group of the respondents was divided into two groups 13-15 years and 16-17 years. On analysing the data it was found that 85 children (42.5 percent) were between the age of 13-15 years, 115 children (57.5 percent) were between the ages of 16-17 years. Age and sex are the basic characteristics of any population, which affect the social, political and economic structure. Among the 200 respondents 100 percent children were studying in intermediate class group. Maximum respondents belonged to joint family with 99.0 percent and only 1.0 percent belonged to nuclear family. All the respondents were hostler as the study was conducted in a children's home. Most of the respondent's family occupation was business with a percentage of 52.50 percent. In case of government service it was 42.50 percent and 6.5 percent family occupation was other services. Respondents who belonged to high income group were 15 percent, middle income group were 78 percent, and low income group were 7 percent. Middle income group was considered to be the maximum income group were the respondents belonged.

2. Weight for Age

Table 2

S. No	Particulars	N=200	Percentage (%)
1.	Normal >90%	78	39.0
2.	Grade I 75-90%,	85	42.5
3.	Grade II60-75%,	37	18.5
4.	Grade III <60%	00	00

For the assessment of weight for age Gomez Classification was being adopted. Most of the respondents belonged to Grade I (75-90) % obese group with 42.5 percent. The second highest group where the respondents belonged was normal group with 39.0 percent. 18.5 percent belonged to the group of Grade II.

3. Nutritional awareness status of the respondents

Table 3: Impact of nutritional awareness on the nutrition knowledge of sports person

Knowledge Category	Pre Exposure		Post Exposure	
	N	%	N	%
1-10 Very Poor	48	24	1	0.5
11-20 Poor	70	35	11	5.5
21-30 Fair	54	27	25	12.5
31-40 Good	23	11.5	49	24.5
>40 Very Good	5	2.5	114	57
Total	200	100	200	100

The chi-square statistic is 207.9317. The *p*-value is < 0.00001. The result is significant at $p < .05$

The Knowledge Test Performa contained 10 questions related to over nutrition. Each question carried 5 marks, and scores were given for the nutritional knowledge of the respondents based on their answers to the questions in the given questionnaire. The maximum score was fifty. The scores obtained were classified into five groups and they are: 1-10 (very poor), 11-20 (poor), 21-30 (fair), 31-40 (good) and above 40 (very good). The Pre- knowledge test Performa was divided into five parts as mentioned. Table 3 shows the impact of nutritional awareness on the nutrition knowledge of respondents, it was found that the percentage of the respondents having very poor knowledge was reduced from 24 percent to just 0.5 percent after the nutrition awareness intervention. It was also found that there was reduced poor knowledge from 35 percent to 11 percent and fair knowledge category was also reduced from 27 percent to 17.5 percent, 24.5 percent increase in the good knowledge category and 57 percent increase in the very good knowledge category. So from the above data it is concluded that the intervention program helped the respondents immensely in enhancing their knowledge about over nutrition. It is observed that the knowledge on over nutrition among the school children was

increased after the nutritional intervention. Henceforth the association between nutritional intervention and gain in knowledge is statistically significant and it is approved.

Conclusion

It is concluded that School going children had lack of nutrition knowledge before imparting nutrition awareness. A nutritional awareness intervention was planned with the help of flim strip. Nutrition awareness intervention has definitely created awareness among the selected sports person which would in long run help to improve their nutritional status as well as their efficiency during sports activity.

Acknowledgement

We authors are greatly thankful to other professors and members, Department of Food Nutrition and Public Health for their guidance and support during the research Trail and also Jehovah Jireh Children's home, Cuttack, odisha for their active participation in the study.

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