Assessment of Nutritional status of School going girls, Development & Impact of Nutritional Games on Enhancement of Knowledge Pertaining Nutrition with Reference to Bijnor (U.P.)

Author: Ms. Roopal Mittal
Dept. Of Food and Nutrition
Govt. Girls College, Raisen, MP. India

ABSTRACT
Malnutrition has an effect on children’s well being and their ability to learn & play normally; therefore healthy food choices may prove a child’s well being & ability to learn and play normally. The dietary habits in childhood impact directly on growth, development and prevalence of disease throughout the life cycle. Healthy eating habits should, thus, established during childhood.

The quality of children’s diet usually declines as they move from childhood to adolescence. Healthy eating is usually not a priority for adolescents, and poor eating patterns may thus add a risk for current and future health problems.

The school going girls is in a state of process of growing up from puberty to maturity. Adolescent account for 1/5 of the world’s population and in India they account for 22.8% of total population. They are tomorrow’s adult.

Their growth and development is closely linked to the diet they receive during childhood. They may represent a window of opportunity to prepare nutritionally for a healthy adult life. They have to encounter a series of serious nutritional challenges not only affecting their growth and development but also their livelihood as adults. Thus it is not surprising that girl population who are “mother to be” is considers as the most important section on which the future of nation depends.

A large number of school based nutrition programmers have been implemented globally on obesity, the importance of activity and of vegetables & fruits in the diet. It is much more important to improve nutrition knowledge through nutrition education in order to have a positive influence on healthy food choices.

Number of children in India particularly girls live under suboptimal conditions marked by poor nutritional status and high level of morbidity and mortality.

In developing countries, factors associated with under nutrition of girls are poor household economic condition, periodic food shortage, burden of diseases, poor knowledge about long term consequences of under nutrition, quantity & quality of food and access to health and nutrition services.

Girls have mere easy access to health and nutritional information through schools, recreational activities and mass media than they have later in their lives. Particularly, health and nutrition education and healthy habits of female adolescents will have critical roles to play in maintaining future family health and nutrition.

The focus of this project is to determine the nutrition knowledge and nutritional status of school going girls attending purposively selected public school in district Bijnor (U.P.).

KEYWORDS: Malnutrition, Children, Healthy adult life, disease with food group, dietary patterns

Objective:
1) To assess the nutritional status of primary, middle, high & higher secondary school going girls.
2) To compare the nutritional status of different age and levels of education.
3) To study the dietary patterns, habits & foods used by the school going girls.
4) To study the misconcepts and food fads.
5) To study the causes of nutritional deficiency disease.
6) To relate the nutritional disease with food group & specific nutritional deficiencies.
7) To study the availability of type of food in the study area.
8) To develop the nutritional games for enhancing nutritional knowledge according to educational level.
9) To study the impact of nutritional games on enhancement of nutritional knowledge.

Brief review of literature
Research is an original contribution to the existing stock of knowledge making for its advancement. It’s the pursuit of truth with the help of study, observation, comparison and experiment.

The primary objective of review of literature is to imbibe understanding of previous work that has been done in subject with focus explored aspect of the problem. The important steps in the planning of any research journals, books, dissertation, thesis & other sources of information on the problem to be investigated. (Kothari, 1999)

Assessment of nutritional status of community is one of the first steps in the formulation of any public health strategy to combat malnutrition. The principal aim of such an assessment is to determine the type, magnitude and distribution of malnutrition in different geographic areas, to identify the at risk groups and to determine the contributory factors. (Bamji, 2004)

Anaemia is a major global problem affecting between 20-70% of the population in various countries. The disease is of particular significance in preschool & school children because of high prevalence (50-70%) & the adverse functional consequences. In school children, anemia impairs scholastic performance & in young women, the reproductive performance. (Bamji, 2004)

Obesity during childhood is a significant risk factor for chronic disease during adulthood. Adolescent often have irregular pattern of working, studying, sleeping and eating. Healthy regular meals are often replaced with fast foods consumed outside the home. The more meals that are eaten outside the home, the higher risk of obesity. (Mann &Truswell,2007)

Adolescence is a time of rapid growth and transition from childhood to adulthood. Adolescent girls are often at nutritional risk. They need extra care to avoid nutritional deficiency, especially of iron & iodine because of menstruation and this time of rapid growth, respectively. WHO estimates that more than 1.9 billion individuals have inadequate iodine nutrition & almost 300 million of these are school aged children. (Mann & Truswell, 2007)

Obesity amongst adolescents is responsible for carrying weight-related risks like cardiovascular diseases into adulthood. An Indian study has shown that obese adolescents are more likely to develop hypertension later in life as compared to their leaner counterparts. Over-consumption of calories, especially fast food, snacks and soft drinks were contributing factors resulting in obesity and female adolescents were more prone to this as compared to males.

Adolescents, particularly girls, are especially vulnerable to iron deficiency due to low intake and absorption of iron, and increased iron requirements for fast growth and replacement of menstrual blood losses (Brabin and Brabin,1992). Children and adolescents of urban families are more overweight than in the past, possibly because of decreased physical activities,
sedentary life style, altered eating patterns and increased fat content of the diet. Increase in sedentary activities, such as television viewing and computer games, is suspected to be responsible for the decline in physical activity levels. (Wang et al, 2002)

Noteworthy contributions in the field of the proposed work:-
A food consumption survey among adolescents found that energy intake was between 1104—1238 Kcal, far below the recommended allowance. Low energy intake was associated with food habits of not having breakfast among adolescent and school age children due to factors such as workload of parents and availability of street food near school. The studies recommended the importance of nutrition education to school children and street food vendors on hygienic food preparation and nutrition. (Sunarmo and Untoro, 2002)

Another study in Assam reveals a high prevalence of malnutrition among the school age children of tea garden workers of Assam and nature of malnutrition indicates that causes of malnutrition are not only recent but also long term deprivation. Urgent steps should be taken to improve nutritional status of children. Poor nutrition of children not only adversely affects the cognitive development of children, but also likely to reduce the work capacity in future. (Medhi JK etal,2006)

Adequate nutritious and balanced diets along with maintenance of health are the chief requirements in a society. There was significant improvement in the nutritional knowledge of the subjects after nutrition education. Hence, it can conclude from the present investigation that nutrition education is an important measure to improve dietary habits and food choices of the adolescent girls, as poor dietary habits and ignorance are the main reason for poor nutritional status of the adolescent girls. It would not only improve the health of adolescent girls, but future generation will also influenced, as adolescent girls are would be mothers. (Gupta N & Kochar G.K,2009)

According to another study by Shrihari ji et al (2007) Nutritional problems in school going girls like anaemia prevalence (hemoglobin concentration <120 g/L) ranged from 19 to 88% across five different cities in India. Other micronutrient deficiencies including, folate, riboflavin, niacin, vitamin C, vitamin A, and vitamin B12 were also present based on biochemical parameters in one study and clinical signs of deficiency in three other studies. Overweight and obesity were prevalent among 8.5-29.0% and 1.5-7.4% respectively among school children, as indicated by 11 studies. Predominant components in children’s diet were cereals and pulses, followed by milk and milk products; the other components like fruits and vegetables component was comparatively lower.

A high prevalence of anaemia among the urban girls of Ahmedabad slums was alarming looking to the grave consequences of anaemia. The association of anaemia with various risk factors is also established by now. The present study highlights the need to develop pragmatic intervention programmes incorporating various strategies to improve dietary intake and bioavailability of iron; nutritional supplementation of iron and folic acid tablets and fortification of edible dietary items with iron. (Verma .A etal)

Methodology:-
1. Sampling and design of the study:- This study will be conducted em representative group of school going girls of primary school, middle, high school, higher secondary school. The samples will be selected by random sampling technique in the schools of Bijnor district.
2. Tool for the study:-
   A KABP (knowledge, attitude, belief, and practices) questionnaire will be created considering the important aspect of nutrition.
   (a)Questionnaire:-
   A reliable dietary questionnaire on food habits, eating behavior, and nutrition knowledge will be constructed.

   (b) Twenty four hours recall sheet:-
   The twenty four hours food is analyzed for 3 days using a transfer sheet of each subject to detect whether each subject is achieving the RDA for each food group.

3. Anthropometric measurements:-
   • Height & weight will be measured with approximately accuracy.
   • BMI (body mass index) will be calculated by dividing the weight in kg by the square of height in meters.
   • Triceps skin fold will be measured with nearest accuracy.

Nutritional games:- Nutritional education will be imparted through nutritional games. The nutritional education will be imparted by special regular session for a period of months to the girls. The topics chosen for the study will be balanced diet, anemia, sanitation & hygiene, dietary habits, obesity, & about various methods of cooking appropriate for retaining maximum nutrients etc.

5. Monitoring the effect of nutrition education
Before imparting nutrition education, the level of nutritional knowledge possessed by respondents will be pre & post tested by filling the questionnaire.

6. Statistical analysis of data:-
   Statistical calculation will be applied on data by standard procedure.

7. Area of the study:-
   The area of the study, where we intend to study the nutritional status & imparting nutrition education are of district Bijnor (U.P). This area can give us a peep into problems faced by school going girls and we can also assess our objectives through these area.

Expected outcome of the proposed work:
Assessment of nutritional status of community is one of the first steps in the formulation of any public health strategy to combat malnutrition.

- The nutritional status of school going girls will determine the type, magnitude & distribution of malnutrition in target group
- It will determine the contributory factors of malnutrition in the study area.
- Food intake data obtained through diet survey will provide a base for nutrient adequacy & susceptibility to disease.
- The clinical examination will provide the information about the nutrients responsible for the appearance of specific deficiency signs.
- Nutritional games will promote a positive attitude towards health, good food practices, good nutrition habits and hygienic factors which will play a major role for proper growth, development & work capacity in later life.
- The availability of food provide the knowledge of food distribution system, that can be used at official levels
- The study of misconcepts and food fads will made a necessary data to make further nutritional programmes and policies.

These expected outcomes emphasize the need for nutritional intervention, and suggest that, in addition to using nutritional assessment, it is necessary to impart nutrition education, so that a larger number of girls with malnutrition and/or at an increased risk for developing malnutrition may be identified and correctly managed.

References

http://www.ijre.org


10. Verma A etal, Factors Influencing Anaemia Among Girls Of School Going Age (6-18Years) From The Slums Of Ahmedabad City), Deptt. of Community Medicine, B.J. Medical College, Ahmedabad