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"A study on assessing the effectiveness of nutritional education on antioxidants among adolescence in selected schools of Bangalore.

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ABSTRACT: In today's world, it is well documented that the adolescence are considered to be most vulnerable group for the various health hazards. They are more attracted towards the fast food that might lead them to wide range of diseases like cancer, cardiovascular disease, Alzheimer's disease etc. But antioxidants are a diverse group of chemicals that can be naturally found in vegetables, fruits and plants in general and even synthesized in our body. The diet containing these food items provides healthy body, increased memory, higher immune status and protect from many non- communicable diseases. Here the study focused to assess the knowledge level of antioxidants among adolescence in selected schools of Bangalore.

KEY WORDS: Nutritional Education, Antioxidants, Adolescence, Effectiveness

INTRODUCTION:

Adolescent is Often defined as a transient stage between childhood and adulthood The rapid growth is generally between 11 to 15 years for girls and 13 to 18 years for boys. This rapid change leads to an increase need for dietary content and micronutrients. The growth depends on adequate nutrition. The Children from this age group take so many different types of fast food which are not healthy so there is a need for the children to be taught for balanced food.

A diet full of antioxidants and balanced diet gives A healthy growth and protection from cancer and other disease conditions. The dietary antioxidant are vitamin A, vitamin C, Selenium, Carotenoids, Flavonoids Melatonin lycopene etc. It is also synthesised in our body example superoxide, glutathione, peroxidase etc . Anti-oxidants have effect on ageing immune system, fatigue, stress, diseases such as cancer etc it can prevent damage.

Antioxidant defence system limit free radical formation and prevent the oxidative damages caused by substances called free radical. These free radicals can lead to cell damages, DNA changes, cells structure and cell protein changes, it can bring mutation over the DNA structure leading to cancerous changes and other health conditions

NEED FOR THE STUDY:

The year of 12 to 18 are the time of study growth of children. Good nutrition has high priority. Children must know that what they eat affect their growth and health. Changes in our society have intensified the need of nutritional education for the children to have a good health and survival.

Now when we look at the present generation they consume more amount of fast food ,candy, free high fat chips, cola food high in fat and sugar about 25 to 40% of teenage are overweight mostly from junk food a high risk factor for different types of diseases, cancerous changes ect. in the future life of adolescent.

A result study related to anti oxidants as protection of ovaries from oxidative damages and reduce the risk of ovarian cancer was carried out at Los Angeles a structured questionnaire was administered to 558 histologically confirmed epithelial ovarian cancer case and 607 population Preventive measures How we can define n controls from the multi ethnic population based case control study conducted Between 1993 and 1999 in Los Angeles .Overall vitamin A and keratin intake where modestly associated with are reduced risk of ovarian cancer .Our findings suggest that dietary vitamin A and keratin where modestly protect against ovarian cancer.

OPERATIONAL DEFINITION :

1. EFFECTIVENESS: Refers to significant measures or ability of nutritional education to produce a specific desired effect in terms of significant improvement in knowledge as measured by post test.

2. NUTRITIONAL EDUCATION: The structured teaching programme Which is prepared to educate a group of adolescence.

3. ANTIOXIDANTS: A diverse group of chemical that can be naturally found in vegetable ,fruits and plants in general .They are also synthesised in our body.

4. DIETARY INTAKE: It encompasses all the healthy nutrients ,calories and other substances obtained through eating and drinking.

5. PREVENTIVE MEASURES : Preventive measures are actions or strategies taken to prevent the occurrence of an undesirable event or outcome. They are proactive steps aimed at reducing risk.

6. TYPES OF DISEASE : Diseases can be broadly classified into infectious disease. cardiovascular diseases , cancerous disease and cognitive impairment etc.

7. ADOLESCENCE : It refers two boys and girls who are between the age group of 13 to 18 years.

OBJECTIVES OF THE STUDY

1. To assess the knowledge of adolescence on antioxidants before nutritional education.
2. To assess the knowledge of adolescence on antioxidants after nutritional education.
3. To evaluate the effectiveness of nutritional education on antioxidants among adolescence.
4. To find out an association between knowledge on antioxidants and selected variables.

RESEARCH HYPOTHESIS:

H_1: There is an increased knowledge among adolescence after nutritional education on antioxidants than before nutritional education.

H_2: There is a significant association between the knowledge score and the selected demographic variables.

CONCEPTUAL FRAMEWORK:

Nursing has made tremendous progress in all areas of patient care and education where all forms of knowledge is being used by students. Conceptual framework is a theoretical approach of study scientifically based framework has health as goal for nursing on the selected arrangement and classification of concept.

The present study aims at evaluating the effectiveness of nutritional education on antioxidants and dietary intake as a preventive measure of different types of disease among adolescence in selected schools at Ambikapur. The conceptual framework of the present study is based on King's goal attainment theory (1981)

In the selected study the concept by king organises the phenomena within three dynamic interaction system can be explained as follows.

1. Personal system ; Adolescent individual themselves make a personal system it presents the concept of self growth and development.
2. Interpersonal system: Interpersonal systems are formed with human being interaction here the researcher and adolescent both together make the interpersonal system The concept it includes interaction perception communication and transaction.
3. Social system : It has organised boundary system of social roles behaviour and practises developed to maintain values and the mechanism to regulate the practise and rule it includes education system and work system etc.

   Resources includes both adolescents and nutritional education needed to carry out specific decision making when correct choices are made in research allocation to support healthy lifestyle for obtaining systems goal. 0.762

METHOD:

One group pretest posttest design with quasi experimental approach was used to assess the effectiveness of nutritional education on antioxidant among adolescence in selected schools, Bangalore. In view of the problem and to accomplish the objectives of the study, the self-structured questionnaire was prepared .Reliability of the tool was tested and validity was ensured in consultation with guides and experts in the field of medicine and nursing.

The study was carried out in Ramanashree Udaya School, 18th main, Vijay Nagar, Bangalore. For this study, 60 adolescents were selected by simple random sampling technique. Structure questionnaire was used for data collection. The data obtained from adolescence were analyzed and interpreted in terms of objectives and hypothesis of the study. Descriptive and inferential statistics were used for data analysis; the level of significance was set at 0.05 level.

Population

Population is any group of individuals that have one or more characteristics in common that are interested to the researcher. The target population for pilot study consists of adolescent children of the schools, Bangalore.

Sample

It consists of subject of the population selected to participate in a research study. In the present study sample consist of 13-18 years adolescence of schools, Bangalore.

Sample size

Sample is a subject of the population selected to participate in a research study. Sample selected for present study was 60 .They had age group of 13-18 years from high school

Sampling technique

Sampling refers to the process of selecting the portion of population to represent the entire population. In this study simple random sampling technique was used.

Criteria for sample selection

The sampling frame structured by the researcher included the following criteria.

Inclusion Criteria:

- Adolescence who are available at the time of study.
- Adolescence who are willing to participate in the study.
- Adolescence who can speak and write English.

Exclusion criteria

- Adolescence those are having completes knowledge of antioxidants.
- Adolescence whose parents are dietician.

Development and description of the tool

Data collection is the gathering of information needed to address a research problem. Tools are the procedures or instruments used by the researcher to collect the data. In this present study self administered questionnaire was used for collecting the data after an extensive review of literature and discussion with experts; questionnaire was developed to assess the knowledge of adolescence regarding antioxidants. Data was collected by self-administered questionnaire.

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RESULTS:

The results indicates that out of 60 respondents majority 32(53.3%) were in the age group of 15-16 years,43 (71.7%) were high school, 36(60%) were having 1-2 siblings,29(48.3%) were getting Rs, 51-100 pocket money, 30(50%) were hindu ,26(43.3%) father's education was graduate ,40 (66.7%) mother's education was higher secondary ,27(45%) adolescence family income was Rs. 10,001- 15,000, 38(63.3%) were having good relationship with the siblings, 55(91.7%) were non vegetarian, 31(51.7%) were 145-150 cm heighted, 54(90%) were not having any health problems and 21(35%)received information from books.

The pre test knowledge on antioxidants among 60 adolescent students 40(66.7%) had inadequate knowledge, and 20(33.3%) had moderately adequate knowledge.

In post test knowledge on antioxidants 39(65%) had adequate knowledge and 21(35%) had moderately adequate knowledge. The STP was found to be effective method of providing information regarding antioxidants and its influence on health.

The result illustrates that the mean post test knowledge score (78.6) is higher than mean pre test knowledge score (37.5) .The computed ' t' value 27.44 showed that there is significant difference between pre test and post test knowledge score (41.1). Hence the hypothesis is accepted .

No	Knowledge Aspects	Respondents Knowledge (%)						Paired 't' Test
		Pre test		Post test		Enhancement		
		Mean	SD	Mean	SD	Mean	SD	
I	Antioxidants	32.6	15.8	86.2	14.9	53.6	19.3	21.51*
II	Sources of Antioxidants	42.6	13.8	79.1	9.4	36.5	15.3	18.48*
III	Functions of antioxidants	31.7	15.7	72.7	13.4	41.0	15.6	20.36*
IV	Need of antioxidants	43.0	24.4	78.7	16.8	35.7	23.3	11.87*
	Combined	37.5	11.9	78.6	7.1	41.1	11.6	27.44*

* Significant at 5% level, t (0.05,59 df) = 1.96

INTERPRETATION :

Further the effectiveness of the nutritional education was tested by inferential statistics using the paired 'T' test. A highly significant difference found between the pretest and posttest knowledge is 41.1. The respondents indicate significant increase in knowledge on nutritional education. It was effective in improving the knowledge of antioxidants among adolescence. Collected data was analyzed by using descriptive and inferential statistics.

This study also showed a significant association between pretest knowledge of adolescence and selected demographical variables like age group ,educational level, number of sibling and family income/month but there is no association between pocket money / month, religion, education of father ,education of mother, relationship with sibling ,food habits, body mass index ,History of health problems and sources of health information.

CONCLUSION:

The knowledge of adolescence regarding antioxidant was inadequate when assessed in pre-test. Whereas the knowledge level is improved during the post test. Nutrition education was effective in improving the knowledge of adolescence on antioxidants.

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