

Food Habits with Special Reference to Antioxidants Consumption Patterns among Adolescent Girls

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ABSTRACT

Establishing sensible food habits from young is essential in shaping food preference later in life. For any person to remain healthy and avert acquiring any disease. It is extremely important for the person to develop a proper habit. It is only when a person control his diet and watches the food and drink which go into the body that would be able to protect him from any of the disease. Now days the youngster are very selective about the food they eat. The age of old curries and Idlis and dosa are out of their preference, even though they have been brainwashed right through about their good health effects. The varieties of meat products, pizza, and cheese alike are attracting their taste buds. Buying pre cooked item is a trend that is slowly on the increase with busy schedule, meal times too have become irregularly and when panqs of hunger strike, it is easier to pick up ready to eat snacks rather than prepare a hot meal. The market is constantly flooded with new food product, which are promote attractively and this has greatly influenced the food habits of the youngsters. Fruits, potatoes, spinach, garlic, carrot, whole wheat brown rice, butter, diary product, orange, lemon etc is source of Antioxidant. Free radical reactions have been implicated as cause or consequence in the following condition. Example - Immunity and ageing, cancer, PEM, Neurological condition, cardiovascular disease and excessive. Guiding girls about the way to prevent the loss of nutrients while cutting, chopping and peeling off the vegetable so as to prevent form the loss of essential nutrients which can save them from the lack of antioxidant and many other nutrients. Food habits greatly depend upon the factor that whether we consume food in isolation or in group and after carrying out above study it was found that majority of girls preferred having food is groups and only some girls preferred in isolation. Maximum (55%) girls, don't have knowledge of antioxidant while 45% girls have knowledge of antioxidants. 30% girls told orange lemon is source of antioxidant 26% girls told green vegetable and 10% girls told leafy vegetable but 34% respondents told other source of antioxidant. 55% girls included food rich in antioxidant in diet while 45%girls not included food rich in antioxidant.55% girls told antioxidant helpful in prevention of disease while 45% girls told antioxidant is no helpful in prevention of disease. Most girls consume nutrient intake was below the RDA, only fat intake was above the RDA which could lead to future disease.

Keywords : Antioxidant, RDA, Adolescents, Food Habits

I. INTRODUCTION

The normal functioning of cell is depending on a proper balance of pro-oxidants and antioxidants. The farmer promote the release of oxygen to provide energy needed for cell functioning. In this process, different biochemical reactions take place, which continuously produces various free radicals. If these free radicals are not quenched by antioxidants, they cause damage to the cell, protein DNA and RNA. Cumulative tissue injury thus cause by free radicals in now known to underlie the pathogenesis of such diverse condition as cancer, atherosclerosis, radiation damage and accelerated ageing.

Thus the USDA definition of an antioxidant can be extended in a nutritional context to include "compounds that project biological system against the potentially harmful effects of processes or reactions that can cause excessive oxidants".

Free radicals are chemical special with one or more unpaired electrons. Paired electrons spin in opposite directions and their energy is neutralized, while a molecule or radical with an unpaired electron has unbalanced energy and become unstable and highly relative. It can either lose an electron and get "oxidized" or except an electron and get reduced.

In biological systems, removal or addition of electron is the most frequent mechanism known as Redox (Reduction oxidation) reaction. The reduction is the addition of an electron to an acceptor molecule, which stores energy, while oxidation is removal of an electron from a molecule to release energy. During the process of release of energy to perform normal activities of life electron are transferred between the molecules resulting in many Reactive oxygen species and the non oxygen free radicals in the body. Factors that increase free radicals formation body factor (Energy metabolism, diabetes, exercise ,acute illness, injury, immune response, obesity, xenobiotics, other metabolic reaction and other diseases) Environmental factor (Air pollution, stress, high level of Vitamin c, tobacco, smoke, Trace mineral, UV rays, high level of oxygen etc)

Fruits, potatoes, spinach, garlic, carrot, whole wheat brown rice, butter, dairy product, orange, lemon etc is source of Antioxidant. Free radical reactions have been implicated as cause or consequence in the following condition, example- immunity and ageing, cancer, PEM, neurological condition, cardiovascular disease.

Generally is seen that many people have not got the idea of current nutrition. Sometimes it is seen that they don't know the correct nutritional factor of many things lack of information about the antioxidant is very much common in girls and now a day in this fast generation it is very important to take foods rich in antioxidant. Today in this fast generation girls generally don't take the balance diet which they actually need. They just remain on fast food just they take one or two things in the diet and they undergo the deficiency of certain nutrients, so as to care then from those diseases it is very essential to guide them for the right intake of food.

Guiding girls about the way to prevent the loss of nutrients while cutting, chopping and peeling off the vegetable so as to prevent from the loss of essential nutrients which can save them from the lack of antioxidant and many other nutrients.

Garek M. (2010) analyzed certain lifestyle parameters and conditions indices among people with traditional and vegetarian model of eating. The research conducted show that vegetarian present in high level of caring about their health which is expressed on a scale of pre-health behaviours, than people with traditional model of

eating. A higher percentage of them take up physical activity in their free time (80% vs. 70%) additionally, the more seldom drink alcohol and smoke cigarettes, Alcohol abstinence is declared by 75% of vegans. 25% of lacto-ova vegetarian and 8% of people with traditional model of eating. Tobacco non-smoking is declared by 94% of vegans, 74% of lacto-ova-vegetarians and 67% of traditional eating people. It has also been shown that some psychomatic health indices, especially concerning digestive duct system, remain varied in regard to the model of eating followed. The research has proven that vegetarian model of eating influences other- non eating pro-health behaviour and in this way it shapes healthy lifestyle of research subjects.

Iwanicka B & Borzecki A. (2004) examine the good eating habits is an essential part of a healthy lifestyle. It helps prevent civilization disease. The BMI, and eating plan analysis are useful in individual, nutritional assessment. The aim of the study was to assess nutritional status and eating habits in young adults. An average BMI was 23.63 kg/m² in the interviewed men and 20Kg/m² in women caloric value of the daily eating plans was average in men 2943 Kcal, in women 2272 Kcal of people were on diet, but none of BMI over 25 Kg/m². The majority of the students ate at lunchtime at the university cafeteria or prepared meals themselves. The eating plan varied very much. The majority was based on the eating guide pyramid and consisted of three balanced meals during the daytime; there were also single cases where students stuck to eating high calorie meals at night-time mostly.

leach (2002) carried out, the study of food habits and stated that food habits are the socially influenced food related behaviour of humans as members of group, either influences includes culinary traditions, individual preferences, cultural, religions, economic, environmental and even political factor. Magazines, newspapers and television reflect an amalgam of culturing traditions depending on the contributing sources. The aim of the study was to identify the anthropometric measurement and nutritional requirement and food habit with special reference to antioxidant consumption pattern among adolescence girl.

Objectives of the study

1. To assess the anthropometric measurement and nutritional requirement.

2. To assess the food habits with special reference to antioxidant consumption pattern among hostel girls.

II. MATERIALS AND METHODS

Samples - Study group consists of 100 adolescence girls. Girls were selected from the area by purposive sampling methods. A survey was conducted through questionnaires and personal interviews.

Techniques of the study- Pretesting of the schedule was done for the validity and reliability, after pretesting, the relevant question was excluded and some new questions were included.

(A) Anthropometric measurement

(a) Height: - Subject was made stand erect and base foot on the flat surface, near the side of wall with feet pan-ell to head, buttock and shoulders and back to head touching the wall and arm hanging naturally at the side, after the height was taken with the help of measuring tape.

(b) Weight: - The weight was measured in Kilogram by following procedures described by Jelliffe (1966).

The weighing scale was placed on an even floor and patients were requested to stand on the centre of the balance in minimum clothing, without footwear and head erect i.e. 90 of the floor zero correction of the libra scale was done.

(B) Dietary Assessment

The dietary assessment of each subject was asked to recall the diet which she has taken during last 24 recalls. The nutrients provided by National Institute of Nutrition (1997) in his book the Nutritive value of Indian foods-

(C) Dietary Pattern

Each sample was interviewed personally regarding consumption pattern of certain food, timing or meal etc. During interview, respondents each information was recorded simultaneously. After the collection of information from all respondents the collected, was arranged into simple tabular form by coding of question and transferring to the master chart. Transferring of data into tabular form makes comparison easy.

The data was analyzed with the help of a scientific calculator, percentage were calculated for category.

III. RESULT & DISCUSSION

Table 1. Distribution of subject according to Body Mass Index BMI

BMI	Frequency	Percentage
18.5	60	60%
18.5-24.9	38	38%
25-29.9	2	2%
30s above	-	-
Total	100	100%

The above table shows that 60% of respondents were underweight 38% of the respondents had normal BMI and 2% respondents were overweight. Obesity was not found among the respondents.

Table 2. Distribution according to food habits

Food Habits	Frequency	Percentage
Vegetarian	50	50 %
Non-Vegetarian	30	30 %
Eggitarian	20	20 %
Total	100	100

It was found that 50% of the athletes were vegetarian, that is they did not consume chicken, eggs, meat etc. but ate onion and garlic 30% of the student belong the non-vegetarian groups, 20% of them belong to eggitarian groups that is they consumed only egg and non vegetarian item.

Table 3. Distribution according to food usually preferred

Food Preference	Frequency	Percentage
Healthy food	66	66 %

Greasy food	2	2 %
Fast food	32	32 %
Total	100	100

Food habits and consumption pattern greatly involves the fact that whether the food is preferred or not the above data shows that majority of athlete, 66% of girls preferred healthy food, 32% of athlete preferred fast while only 2% of athlete liked greasy food.

Table 4- Distribution according to preference to have food on the basis of taste and their appetite

Preference to have food on	Frequency	Percentage
Taste	48	48 %
Appetite	42	42 %
Both	10	10 %
Total	100	100
Mean – 33.33	Std. – 20.42	

The above data show that 48% of the respondents food preference depend upon the taste of the food while 42% of the respondents preferred food on their appetite whereas 10% of respondents were also of the opinion that their food preferences depend upon both taste and appetite.

Table 5- Distribution according to intake of fruit

Take a fruit	Frequency	Percentage
Yes	65	65 %
No	35	35 %
Total	100	100
Mean – 50	Std. – 21.21	

The above data show that 65% of the respondents take a fruit after lunch but 35% respondents do not take a fruit after lunch.

Table 6- Distribution according to which type of fruit taken

Type of fruit	Frequency	Percentage
Seasonal fruits	55	55 %
Sour fruits	20	20 %
Fibrous fruits	15	15 %
Other	10	10 %
Total	100	100
Mean – 25	Std. – 20.42	

The above data show that 55% of the respondents take a seasonal fruits 20% respondents take a sour fruit, respondents take a fibrous fruits and 10% of the respondents take a other fruits.

Table 7- Distribution according to type of food included in your diet

Diet	Frequency	Percentage
Rice, Dal and Veg.	15	15 %
Chapati and Veg.	25	25 %
Rice and Veg.	35	35 %
Chapati, Veg, Rice , Dal ,Curd and Salad	25	25 %
Total	100	100
Mean – 25	Std. – 17.79	

The above data shows that 10% of the respondents rice, dal, and vegetable, 25% of the respondents chapatti, veg. and dal, 15% of the respondents rice and veg. while 50% of the respondents chapatti, veg. rice, dal, curd and salad included an your diet.

Table 8- Distribution According to Knowledge about antioxidant

Knowledge	Frequency	Percentage
Yes	45	45%
No	55	55%
Total	100	100
Mean – 50	Std. – 7.67	

The above data show that 45% of the respondents have knowledge about antioxidant while 55% have no knowledge about antioxidant.

Table 9- Distribution according to uses of antioxidants

Source of antioxidant	Frequency	Percentage
Safety from cancerous	20	20%
For beauty uses	25	25%
Both for beauty and health	45	45%
Other	10	10%
Total	100	100
Mean – 25	Std. – 14.71	

The above data shows that 20% of the respondents think antioxidant provide safety from cancerous, 25% of the respondents think antioxidant provide For beauty uses, 45% of the respondent think about antioxidant both for beauty and health and while 10% of the respondents think antioxidant provide other purpose.

Table 10- Distribution according to include foods rich in antioxidants in diet

Include antioxidant in diet	Frequency	Percentage
Yes	55	55%
No	45	45%
Total	100	100
Mean – 50	Std. – 7.07	

The above data shows that 55% of the respondents include antioxidant in diet while 45% of the respondents do not include antioxidant in diet.

Table 11- Mean daily intake of nutrients by the respondents

Nutrients	Mean	RDA
Energy (Kcal)	1800	1875
Carbohydrate	300 gm	330 gm
Fat	30 gm	20 gm
Protein	35 gm	50 gm
Calcium	300 mg	400 mg
Iron	20 mg	30 mg

The above data show that most of the nutrient intake was below RDA, only fat intake was above the RDA which could lead to future disease.

IV. CONCLUSION

The analysis showed that here is less knowledge about Antioxidant, Health and nutrition, so majority of girls suffer from under nutrition. Girls of Non Home Science background don't have proper knowledge of antioxidant, health and nutrition. To conclude it can be said that proper knowledge of antioxidant, health and nutrition helps in promotion good nutritional status.

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