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Nutrition knowledge and eating attitude among female undergraduate students of university of Delhi

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Abstract

This study was conducted to evaluate the nutrition knowledge and eating attitude among female adolescent students (mean age 18.49 ± 1.3 years) of University of Delhi. The sample comprised of 50 university first year undergraduate adolescent girls from colleges of Delhi University drawn by purposive sampling technique. The tools in the study included Nutrition Knowledge questionnaire that was designed and pretested by the researcher consisting of questions related to general information, meal pattern and nutrition knowledge. Eating Attitude Test- EAT -26 was used to study eating attitude. Mean and Standard Deviation of the scores were calculated. Product moment coefficient of correlation (r) was computed in order to determine the dimensions of Nutrition knowledge influence on determining the eating attitude. The results were tested at 0.05 level of significance. The mean and standard deviation of Nutrition knowledge score was 21.5 ± 3.04 and Eating Attitude score of these subjects was 19.4 ± 1.08 . Relation between the nutrition knowledge and eating attitude revealed an inverse relationship and the non-significant correlation was observed ($r = -0.13$). The findings revealed that these students should not only improve upon nutrition knowledge but also should also be advocated on advantages of adopting right dietary Behaviours on overall health.

Keywords: Nutritional knowledge, eating attitude, adolescents, college going girls

Introduction

Adolescence is a period when biological, cognitive and social development is taking place. This period is one of the vulnerable periods of life when various health problems may arise if health and nutritional status is not taken care of as this phase is critical for the physical maturity. Further the future progeny also depends on the health conditions maintained during adolescence as their health may affect the wellbeing of newborns. It is well known that the age at which a girl achieves puberty is affected by her nutrition and living conditions (Rogol *et al* 2000) [2].

Adolescent years are also associated with concerns and anxiety with weight and body shape. In addition to having health risks of obesity and poor nutrition, teenagers are also exposed to the unrealistically thin role models often shown by the media. This may induce health damaging dietary Behaviours like unhealthy dieting behaviour, fad diets and skipping meals. There is ample evidence in literature of such dietary behaviour in young adolescents and among even those who are not overweight (Brugman *et al.* 1997; Vatnani, 1998) [3, 14]. Over the years it has been seen that the rate of skipping meals and on the other hand overindulgence with fast food has increased (Sadana *et al.* 1997, Adachi 1998; Adachi *et al.*, 2000) [1, 2, 15].

Nutrition knowledge is one of the factors that could influence adolescents eating behaviour. According to Chung *et al.* (2004) [5] college going girls have insufficient knowledge on their own health and nutrition and are not aware of the importance of health, and thus select foods on the basis of preference without proper judgment hence consume unbalanced diets. Such diets may result in the state of nutritional imbalance with over-nutrition and nutrition deficiency at the same time (Jung, 2002) [9].

An intense fear of gaining weight, and "a significant disturbance in the perception of the shape or size of his or her body is prominent in adolescent years and thus, lead to eating disorders (American Psychological Association, 1994). Eating attitude helps to assess the presence of eating disorders such as anorexia nervosa or bulimia nervosa. Some studies have

shown that despite nutrition knowledge it has not translated into dietary behaviour of students. Korinth *et al* (2008) [11] studied the eating behavior and eating disorders in students of nutrition sciences and found that nutrition students, more than other students, tend to restrict their food intake in order to control their weight, but they do not have more disturbed or disordered eating patterns than other students. Moreover, during the course of their studies, they adopt slightly more healthy food choices and decrease their tendency to be obsessive in their eating behaviour. It is therefore, imperative to study patterns of nutrition knowledge and eating attitude in college students particularly in girls so that timely intervention could be suggested to them in the form of an appropriate nutrition education programme.

Objective of the study

The objective of the present study was to assess Nutrition Knowledge and eating attitude among under-graduate female college students of University of Delhi and further, to determine the relationship between their Nutrition Knowledge and Eating Attitude.

Methodology

The present study was done to assess the knowledge of adolescent girls with respect to Nutrition and Eating Attitude and to evaluate if there is correlation between these two attributes of the college going girls of Delhi.

Sample selection

The sample was adolescents girls (18.49±1.3 years) studying in the first year of undergraduate courses in colleges of Delhi University. The sample population of 50 university first year graduate adolescent girls from two colleges of Delhi University was drawn by purposive sampling technique. The rationale of the study was clearly presented before the students and careful instructions regarding the tests were provided to them. The relevance and significance of the study was told to them and they were assured that the responses obtained on the test would be kept secret. All doubts and queries from students were cleared before the start of the test and only then the students were asked to respond to the test. The data was collected by the investigator in a group of 15-20 subjects at a time. The researcher gave Nutrition Knowledge questionnaire first followed by the Eating Attitude questionnaire. In the end the researcher thanked all the respondents for their cooperation.

Tools for data collection

In order to attain the objectives of the study, test of the Nutrition knowledge and Eating attitude were required. The tools in the study were selected on the basis of the relevance to the objective of the study, availability of the test, reliability and validity of the tool and applicability of the tool in Indian situation.

Nutrition Knowledge questionnaire was designed and pretested by the researcher and it comprised of three segments including general information, meal pattern and nutrition knowledge. General Information segment was designed to draw the general information from the subject and questions were pertaining to self, family background, members in the family etc. Meal pattern segment was designed to draw information regarding the timing of the meal, food preferences, skipping meals, opinion about fast food, consumption of fast food etc. and the last segment had questions related to the nutrition knowledge.

To study eating attitude, Eating Attitude Test- EAT -26 was used that has been particularly useful a screening tool to assess "Eating Disorder Risk" in high school, college and other special risk samples such as athletes (Garner, Rosen and Barry, 1998) [7]. Screening for eating disorders is based on the assumption that early identification of an eating disorder can lead to earlier treatment, thereby reducing serious physical and psychological complications or even death. EAT 26 is the most widely used screening measure that helps in determining if any eating disorder exists. In 1982 the test was updated and shortened to the 26 item version, known as EAT 26 (Garner *et al.* 1982) [6] and the same was used to evaluate the subject's attitude towards preoccupation with food, dieting, eating, physical appearance and personal control over eating. If the score is 20 or higher, this means that advice of a qualified mental health professional may be required. High scores on self-report measure do not necessarily mean the respondent has an eating disorder; however, it does denote concerns regarding body weight, body shape and eating.

Statistical techniques

Mean was used as a measure of central tendency of the distribution of scores and Standard Deviation was calculated to find out the extent of variability of the distribution of scores. Product moment coefficient of correlation (r) was computed in order to determine the dimensions of Nutrition knowledge influence on determining the eating attitude. The results were tested at 0.05 level of significance.

Results

In this study, nutrition knowledge and eating attitude of first year undergraduate adolescent girls (18.49±1.3 years) of different colleges of University of Delhi were assessed. Nutrition Knowledge was measured by a self-designed pretested and modified questionnaire. The mean and standard deviation of Nutrition knowledge score (maximum score-40) was calculated and is depicted in table 1. The mean Nutrition knowledge score was found to be 21.5±3.04.

Table 1: Nutrition knowledge among first year graduate adolescent girls

| Group | N | Mean score | S.D. |
|---|----|------------|------|
| Nutrition knowledge among first year undergraduate adolescent girls | 50 | 21.5 | 3.04 |

Eating Attitude of first year undergraduate adolescent girls was measured by Garner (1982) [6] EAT-26 questionnaire and the mean and standard deviation of eating attitude was calculated separately and is shown in table 2. Mean of Eating Attitude Score was 19.4±1.08.

Table 2: Eating attitude among first year undergraduate adolescent girls

| Group | N | Mean score | S.D. |
|--|----|------------|------|
| Eating attitude among B.Sc. (Gen) first year graduate adolescent girls | 50 | 19.4 | 1.08 |

Relation between the nutrition knowledge and eating attitude among the subjects where in nutrition knowledge measured by researcher self-made questionnaire and eating attitude measured by Garner's EAT 26, was used to draw relationship between the nutrition knowledge and eating attitude for the first year undergraduate adolescent girls, the

correlation of nutrition knowledge and eating attitude was calculated and is reported in table 3. The results revealed an inverse relationship between nutritional knowledge score and eating attitude but the non-significant correlation between the Eating attitude and Nutrition knowledge was observed ($r = -0.13$)

Table 3: Eating attitude among first year graduate adolescent girls

| S. No. | Groups | N | Mean score | S. D. | Correlation coefficient |
|--------|---|----|------------|-------|-------------------------|
| 1 | Eating attitude among first year undergraduate adolescent girls | 50 | 19.4 | 1.08 | -0.13 |
| 2 | Nutrition knowledge among first year undergraduate adolescent girls | 50 | 21.5 | 3.04 | |

Discussion

The study was conducted to evaluate the nutrition knowledge and eating attitude in college going girls. The mean score of nutrition knowledge was found to be 21.5 ± 3.04 (table 1) out of a total score of 40. Nutrition knowledge is considered as one of the stepping stones to good health, however, adolescence is a period when there have been reportedly many influences on eating habits. The growing independence of adolescents and increased participation in social life have great impact on food intake. Unhealthy dietary habits including low fruit consumption, frequent consumption snacks having high content of sugar and fat and skipping breakfast are common among adolescents (Munoz *et al.* 1997) [12]. These behaviors have been found to be associated with increased risk of overweight and obesity, therefore improving nutritional habits is important. On the other hand, trend to attain thin body sizes is also catching up. Nutrition knowledge help people in developing new attitudes to improve their nutritional habits. It enables sustainable and long term behavioral changes in the field of food consumption and other health habits. However, knowledge alone would not change behaviour and other influence sometime become stronger in consuming right kind of diet and food selection.

The mean eating attitude score is found to be 19.4 ± 1.08 (table 2) in the present study. The scores above 20 in Eat 26 questionnaire signal towards eating disorders and demand mental health counseling. Although the score of the present study was less than 20 still was closer to this value, hence, indicated towards improving the eating attitude of the girls by making them aware of benefits of maintaining normal body weight through judicious diet and increasing physical activity. Heilbrun and Putter, 1986 [8] recommended theory on the correlation between body image and eating disorders. They suggested that some women may feel pressure to fit into a female sex role, which often includes an ideal body weight and actual body weight, it often times causes stress. This stress could serve as motivation for dieting and may lead to disordered eating.

The results in the present study revealed an inverse relationship between nutritional knowledge score and eating attitude but non-significant correlation between the between these two attributes was observed indicating that nutrition knowledge did not completely influence the eating attitude of the adolescent girls. Higher scores on nutrition knowledge and lower score on eating attitude (Eat-26) are desirable, hence this clearly shows the subjects of the present study are in need of a nutrition counseling module.

Overemphasis on the importance of being thin is internalized by youth who associate thinness with beauty and success. Kanekoa (2007) [10] studied the correlation between the eating attitude and body shape perception and found that body image had proven to exert a great influence on eating attitudes and behaviour. Such behaviour may lead to associated health problems. Thus, the results of the present study, suggest the need for education strategies to improve competence in the area of nutrition. In this group not only the nutrition knowledge intervention is needed but also their education programs must include right ways of weight management by increasing physical activity and staying away from any magical pills and fad diets.

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