

KNOWLEDGE ON OVERWEIGHT AMONG OVERWEIGHT ADOLESCENT GIRLS

ABSTRACT

Adolescence is perceived as one of the healthy periods in the life. They are fascinated by new tastes and have faulty eating habits along with physical inactivity which may lead to overweight. The present investigation is undertaken to assess the knowledge on overweight among overweight adolescent girls. The study was conducted on 200 overweight adolescent girls aged 17-20 years using random sampling method. A schedule was developed to get information on causes, health hazards, and prevention and management of overweight. Results showed that the obtained scores of overweight adolescent girls on causes and hazards were 4.21 and prevention and management were 16.3. Each item was further analyzed to identify the items for which the majority of adolescent girls gave incorrect responses. This study showed the poor knowledge of adolescent girls on overweight. Hence adolescent girls need much more awareness regarding weight management for healthy living.

Key words: overweight, knowledge, adolescent girls, weight gain, obesity

1. INTRODUCTION

Adolescence is perceived as one of the healthy periods in the life. The transition through adolescence and into early adulthood is recognized as an influential age for excess weight gain, marked by poor dietary patterns and physical inactivity. They are fascinated by new tastes and have faulty eating habits along with physical inactivity which may lead to overweight. Adolescence is generally characterized as a period of growing independence, where individuals are increasingly beginning to make their own decisions about their day-to-day life (Laska, 2012). Household family income, related socio-economic factors and overweight in mothers were most significantly associated with obesity in children (Gulati, 2013). Knowledge of unhealthy foods was higher for richer women, although their diet and activity levels were less healthy than poorer woman who did not have the resources to purchase healthy diet (Griffiths, 2005).

During adolescence, teens spend less time with family and more time with friends. This reflects their independent nature at the juncture of childhood and adulthood. Eating habits of adolescents, in general, are in process of changing from more traditional to more westernized one. The consumption of traditional food items such as pulses, green leafy vegetables, fruits and milk was found to be low among adolescents (Mallick, 2014). Indians are experiencing nutritional and lifestyle transition due to globalization. Many of the adolescent girls modify their normal dietary pattern and follow disturbed eating behaviors (Mishra, 2010).

Physical activity is a key factor in maintaining healthy weight status because it is potentially more impact on body composition, metabolism and increasing energy expenditure. Participating in regular physical activity has many beneficial physiological outcomes like increased bone mineral density, cardio-respiratory capacity, muscular strength and endurance as well as flexibility (Nowicka, 2007).

Health-related quality of life may plausibly impact weight status, with a reduction in the physical quality of life domains likely to affect energy expenditure through physical activity levels and time spent sedentary. Physical activity has been proven to reduce fat in at-risk individuals and also used to prevent unhealthy weight gain.

2. METHODOLOGY

2.1. Sample

2.1.1. Experimental Group:

A total of 100 overweight adolescent girls were taken purposively from degree I, II and III years of randomly selected three degree colleges of Tirupati. In the first step all the degree colleges at Tirupati were listed and three degree colleges were selected randomly. In the second step, weight and height were checked and calculated body mass index to all the students studying in selected degree colleges. The body mass index range from 25.0 to 29.9 were selected purposively for the study.

2.1.2. Control Group:

A total of 100 normal adolescent girls were selected randomly from degree I, II and III years of selected three degree colleges at Tirupati.

2.2. Tool

Structured interview schedule was used to assess the knowledge on overweight which consists of 54 items under the headings of causes and hazards and prevention and management.

3. RESULTS AND DISCUSSION

The frequency and percentages were tabulated for the knowledge on overweight among overweight adolescent girls. For the questions for which more than fifty percent of respondents gave incorrect answers were discussed below.

3.1. Mean and standard deviation scores of experimental and control groups as per their knowledge on overweight

It is evident from table 1 the mean knowledge scores on causes and hazards and prevention and management of normal adolescent girls is higher than overweight adolescent girls. The difference between two groups was found to be statistically significant regarding knowledge on causes and hazards of overweight. The difference between two groups was not statistically significant regarding knowledge on prevention and management of overweight.

The results are inline with findings of Sindhu et al (2012). Their results showed the low level of knowledge among school children of Delhi aged 4-17 years.

Components	Overweight Adolescent Girls (N=100)		Normal Adolescent Girls (N=100)		't' Value	Level of Significance
	Mean	SD	Mean	SD		
Causes and Health Hazards	4.21	2.906	5.31	2.92	2.68	0.001
Prevention and Management	16.3	8.711	17.65	7.51	1.18	NS

Table 1. Means and SD's of Overweight Adolescent Girls and Normal Adolescent Girls as per their Knowledge on Overweight
NS – Not significant

3.2. Interview schedule on assessment of knowledge on overweight regarding causes and hazards among overweight adolescent girls

Sedentary lifestyle such as watching television, computer, consumption of tasty foods, low energy expenditure and tendency to overeat may cause overweight. The hazards of overweight include physical, psychological, emotional and social hazards (Diane Fitzpatrick, 2000).

For the question, “What is overweight”, 74 percent of girls gave wrong responses. Whereas only 26 percent of girls had awareness that overweight means excess body weight as shown in table 2.

Age is associated with considerable changes in body composition. Excess weight has reached epidemic proportions globally and is observed across all age groups. 51 percent of girls had responded wrongly. Among them thirty one percent of girls had responded overweight is mostly observed in adolescents.

N = 100

S.No.	Content	Right Response	Percentage	Wrong Response	Percentage
1.	What is overweight?	26	26	74	74
2.	In which age groups overweight is commonly observed?	49	49	51	51
3.	Is overweight a communicable disease?	37	37	63	63
4.	What are the predisposing factors of overweight?	17	17	83	83
5.	What is the impact of excess body fat on health?	36	36	64	64
6.	What is the major cause of overweight?	41	41	59	59
7.	Which is not a risk factor for overweight?	29	29	71	71
8.	Which foods increase the risk of overweight?	44	44	56	56
9.	Which among the following hormones imbalance contribute to overweight?	49	49	51	51

Table 2. Item Wise Analysis of Knowledge on Overweight Among Overweight Adolescent Girls Regarding Causes and Health Hazards.

Overweight and obesity can be seen as the first wave of a defined cluster of non-communicable diseases called “New World Syndrome” creating an enormous socioeconomic and public health burden in poorer countries. However 63 percent of subjects thought that overweight is a communicable disease.

Habits of fast eating, skipping meals frequently, irregular eating, desire towards consumption of junk foods, eating meat are prevalent among adolescents and predispose them to adverse changes in body weight. In the present study 83 percent of girls were unaware on predisposing factors of overweight.

People who are inactive are more likely to gain weight because they don't burn the calories that take in from food and drinks. An inactive lifestyle also raises the risk for coronary heart disease, high blood pressure. 64 percent of girls did not have knowledge on impact of excess body fat on health.

The increase participation in sedentary activities such as prolonged sitting near television, computer, played indoor games may have low energy expenditure, fifty nine percent of overweight adolescent girls had no knowledge on the major cause of overweight. Whereas forty one percent of the girls had awareness on the major cause of overweight as low energy expenditure.

Eating fiber rich diet is the most effective ways to lose extra weight. The fiber rich foods aids in yielding energy to body, helps in easy digestion and fullness of stomach. Seventy one percent of girls had no knowledge on risk factors of overweight. Whereas only twenty nine percent recognized that taking green leafy vegetables is not a risk factor for overweight.

The intake of diet containing high calories, fat or cholesterol, sugar beverages may increase the risk of overweight. 56 percent of overweight adolescent girls in the present study had misconception on the foods which increase the risk of overweight. Whereas only 44 percent perceived that sweets will increase the risk of overweight. Many sweets are calorie dense foods and provide a large amount of energy. Consuming sweets can easily lead to consume more calories per day than calories burn, ultimately cause weight gain.

Overweight is associated with the hormone functioning imbalances. The endocrine disorders such as hypothyroidism may have effect on weight gain. The thyroid hormone helps the individual to maintain weight and good health. Fifty one percent of girls were not familiar about the hormone imbalance that contribute to overweight.

Whereas 49 percent of girls had awareness that thyroid hormone imbalance may contribute to overweight.

3.3. Interview schedule on assessment of knowledge on overweight regarding prevention and management among overweight adolescent girls

People skip breakfast very often because they think it will help them to loss weight. However, eating breakfast can help people to control weight gain. It is an important meal not to miss and one that needs to be continually promoted from the youngest age (Ballam, 2012). In table 3, fifty six percent do not know that breakfast is an important meal of the day.

Green tea is an excellent source of powerful antioxidants. Green tea improves blood flow and lower cholesterol. It prevents a range of heart-related issues from high blood pressure to congestive heart failure. Fifty seven percent of girls had no knowledge on advantages of consuming green tea.

The foods were cooked in various ways. Among them, steaming is considered as healthy cooking technique and capable of cooking almost all kinds of food. Steaming also results in a more nutritious food than boiling because fewer nutrients are leached away into the water, which is usually discarded. In table 3, eighty five percent of girls had given wrong responses for the healthiest way to cook the food. Among them seventy seven percent of girls had responded boiling is the healthiest way to cook the food and remaining respondents had responded frying is a good method of cooking.

The consumption of protein foods aids in body building. The protein content foods available both in plant and animal origin. The protein availability in animal origin as meat and from the plant origin as pulses (Dal). Dal is one of the main protein sources for most vegetarians. Dal is the backbone of the Indian meal. Dal has several benefits such as nutritious, tasty and adds a perfect accompaniment to most meals. Fifty five percent of girls had knowledge on protein rich foods.

Green leafy vegetables are nutritional power house filled with vitamins, minerals and phytonutrients. They are rich in

fiber, an important nutrient for weight loss. Fiber can also lower cholesterol and blood pressure, and help to temper blood sugar swings by slowing the absorption of carbohydrates into blood stream after meals. Sixty three percent of girls responded wrongly. Among them 61 percent of girls had wrong conception that carbohydrates are rich in green leafy vegetables.

Starchy foods such as wheat, beans, whole grains, potatoes and some vegetables and fruits help to meet daily requirements for vitamins and minerals. Starchy foods should make up around one-third of the foods in our diet including at least one starch food with each main meal. Seventy one percent of girls gave wrong responses. Whereas only twenty nine percent had answered that one-third of diet should be made up of starchy foods.

S.No.	Content	Right Response	Percentage	Wrong Response	Percentage
1.	Green tea helps to	43	43	57	57
2.	Healthiest way to cook the food is by	15	15	85	85
3.	Among the following which is rich in protein	45	45	55	55
4.	What is the rich source in green leafy vegetables	37	37	63	63
5.	How much of the diet should be made up of starchy foods	29	29	71	71
6.	Which diet regime is best to follow	14	14	86	86
7.	Why eating fruit is better than taking fruit juice	37	37	63	63
8.	Which food control bad cholesterol	29	29	71	71
9.	Which does not contain dietary fiber	11	11	89	89
10.	Which activities are included in self monitoring	32	32	68	68
11.	What is the benefit of good sleep	38	38	62	62

Table 3. Item Wise Analysis of Knowledge on Overweight Among Overweight Adolescent Girls Regarding Prevention and Management. N=100

Eighty six percent of girls had responded incorrectly for “which diet regime is best to follow”. Among them 79 percent of girls had answered eating three big meals a day is the best diet regime. Whereas only fourteen percent of girls had awareness that eating four or five small meals in a day is the best diet regime to follow in daily life. Eating small meals throughout the day can lower cholesterol, promote weight loss and improve energy.

Striegel – Moore (2006) associated drink consumption and overweight. They found that all the drinks consumed such as diet and regular soda, fruit juice, fruit flavoured drinks, and coffee or tea were the greatest predictor of increased body mass index. Sixty three percent of girls gave wrong response, whereas only thirty seven percent were familiar that fiber content is more in fruit compared to fruit juice.

Seventy one percent of girls had no knowledge on the food that control bad cholesterol. Whereas twenty nine percent of girls had awareness that nuts can control bad cholesterol. Nuts are high in the healthy type of plant-based fat, mono-saturated fat, which helps lower blood cholesterol and prevent heart disease. Also nuts are an excellent source of soluble fiber, that helps lower blood glucose levels.

Hunger is affected by many things, including when a person eat, and the composition of meals – the amount of fats, carbohydrates, protein, fiber and water content. Eating healthy high fiber foods feel full, can resist eating more food than needed. The plant origin foods consist of high dietary fiber compared to other foods. Eighty nine percent of girls had responded wrongly whereas only eleven percent have idea that meat does not contain dietary fiber.

Self monitoring refers to observing and recording some aspect of a person’s behavior, such as calorie intake, serving of fruits and vegetables, amount of physical activity etc, or an outcome of these behaviors such as weight. Self monitoring of diet and physical activity helps to identify weaknesses and strengths in diet and workouts. However 68 percent of girls had no knowledge on the activities included in self monitoring.

Sleep helps to maintain a healthy balance of the hormones that make you feel hungry or full. When a person don’t get enough sleep, can cause changes in hormones that increase appetite. Sixty two percent of girls gave wrong responses whereas only 38 percent of girls were familiar about the benefit of good sleep.

4. CONCLUSION

The knowledge on overweight among adolescent girls has associated with limited nutritional knowledge, unhealthy eating habits and lifestyle modification. The results of present study revealed the poor knowledge of adolescent girls on overweight. Changing lifestyle by performing regular exercises and developing healthy eating habits aid in weight control. Adolescent girls who does not follow good dietary habits and regular exercises may become obese. Those adolescents may develop complications related to obesity. Hence adolescent girls need much more awareness regarding weight management for healthy living.

5. REFERENCES

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