Knowledge and Attitude Regarding Life Style Modification Related to Obesity among Adolescents at Selected Private Schools, Tirupathi

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Abstract

Background: Obesity is a serious health problem and its prevalence has increased dramatically over the past 20 years [1]. If current trends continue 2.7 billion adults will be overweight by 2025 from 2.0 billion in 2014. On current trends, 177 million adults worldwide will be severely obese and in need of treatment by 2025 [2]. Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults [3]. *Objectives:* To assess the knowledge regarding life style modification related to obesity among adolescents. To assess the attitude regarding life style modification related to obesity. To determine the relationship between knowledge and attitude of adolescents students regarding life style modification related to obesity. To find out the association between knowledge and attitude of Adolescents with selected socio-demographic variables. *Methodes:* A descriptive study involving 100 adolescents was self administered questionnaire. Data were collected by using systematic random sampling technique. It included data regarding socio-demographic characteristics and questions pertaining to knowledge and attitude regarding life style modification related to obesity. *Results:* Out of 100 adolescents, it was seen that 54 per cent adolelescents had moderate knowledge about lifestyle modification related to obesity , 41 per cent adolescents had moderate level attitude about life style modification related to obesity. *Conclusion:* The knowledge and attitude regarding the life style modification related to obesity is moderate. So, there is need to educate adolescents regarding life style modification about obesity as well as dietary pattern, exescises to reduce the obesity .

Keywords: Knowledge; Attitude; Obesity; Life Style Modification; Adolescent.

Obesity is a serious health problem and its prevalence has increased dramatically over the past 20 years [1]. If current trends continue 2.7 billion adults will be overweight by 2025 from 2.0 billion in 2014. On current trends, 177 million adults worldwide will be severely obese and in need of treatment by 2025 [2]. Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. It is defined as a person's weight in kilograms divided by the square of his height in meters (kg/m^2). Practicing certain very simple and convenient day to day lifestyle changes, we can lead a much better and healthier life [3].

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Table 1: "BMI classification"

BMI (kg/m^2)		Classification[4]
From	Up to	
	18.5	Underweight
18.5	25.0	Normal weight
25.0	30.0	Over weight
30.0	35.0	Class I obesity
35.0	40.0	Class II obesity
40.0		Class III obesity

Source: World Health Organization Retrieved 15 February 2014

Adolescence is the period of crucial growth. During this phase physical changes including growth, the onset of menarche for the girls, and increase in fat and muscle mass takes place. This contributes to obesity. Adolescent obesity is associated with increased morbidity and mortality in adulthood. In India among adolescent increased consumption of more energy-dense, nutrient-poor foods with high levels of sugar and saturated fats, combined with reduced physical activity (due to increased use of automated transport, technology in the home) and more passive. Leisure pursuits are suspected as major contributors to rising levels of obesity. Obesity may be caused by number of social, cultural, behavior, physiological metabolic and genetic factors that are beyond the person's control. Symptoms of obesity usually show up in the form of breathing trouble, excess accumulation of fat, insulin resistance increase in size or number of fat cells that rise in blood pressure, high cholesterol levels etc [1].

Obesity can cause a number of further problems, from difficulties with daily activities to serious health conditions. Some of the day-to-day problems that can be caused by obesity includes, breathlessness, increased sweating, snoring, difficulty doing physical activity, feeling very tired a lot of the time, joint and back pain, low confidence and self-esteem feeling isolate type 2 diabetes a condition that causes a person's blood sugar level to become too high blood pressure high cholesterol and atherosclerosis (where fatty deposits narrow your arteries), which can lead to coronary heart disease and stroke asthma metabolic syndrome [5].

World Health Organization and the National Institutes of Health have recommended that obese adults (ie, body mass index ≥ 30 kg/m²), as well as those who are overweight (body mass index of 25–29.9 kg/m²) and have comorbid conditions, lose 10% of their initial weight. comprehensive program of lifestyle modification is considered the first option for achieving this goal. Lifestyle modification, also referred to as behavioral weight control, includes 3 primary components diet, exercise, and behavior therapy. This narrative review examines weight losses achieved with this approach, as well as new developments with each of the 3 components [6].

Diet includes that low-carbohydrate, low-fat, Mediterranean, and low-glycemic load regimens. Low-fat diets, such as the Ornish diet, or as recommended by the American Heart Association, provide 10% to 20% of calories from fat and recommend plant-based foods including grains, fruits, and vegetables [6].

Physical activity plays a critical role in improving cardiovascular health in both average-weight and obese individuals.   physical activity, particularly of resistance training, include sparing the loss of fat-free mass, an occurrence that may attenuate the reduction in resting-metabolic rate that accompanies weight loss. Regardless of the mechanisms of action, the message is the same overweight and obese individuals should increase their physical activity by what ever means possible to keep off the lost weight [6].

Behaviour therapy refers to a set of principles and techniques for helping obese individuals modify eating, activity, and thinking habits that contribute to their excess weight. Records of their food intake, physical activity, and body weight, which they review with their interventionist to identify areas of success and areas in need of improvement. Record keeping is expanded over time to include information about times, places, thoughts, and feelings associated with eating and physical activity. Frequent self-monitoring is a consistent predictor of both short- and long-term weight loss [6].

Methodology

After obtaining the permission from the Dr. KKR Gowtham school Tirupathi. The adolescents were aproached individually with the permission of authorities. The tools used were baseline proforma, structured knowledge questionnaire with 20 questions and fivepoint "Likert scale" with 19 items to assess the attitude regarding life style modification related to obesity. The data was collected from adolescent with informed consent. The sample was selected by systematic random sampling technique. The total 100 adolescent were by the investigator using self administered questionnaire schedule.

Inclusion Criteria

Adolescent who are studying at Dr.KKR gowtham school, adolescents who are available at the time of data collection ,adolescents who are willing to participate .

Results

Table 2 The data presented in the above table reveals that among the sample of adolescents majority (52%) are in the age up to 13 years, were

as 28 respondents are in the age group 14 years and 20 sample respondents are in the age group of above 15 years. Based on the residence of the adolescents, 81 were living in urban areas, 14 were living in rural areas, and only 5 were living at slum area. The occupational status is one of the indicator of socio economic back ground of a person, with regards to father occupational status greater proportion (45) were private employes, 38 were govt employee, only 1 was un employee. With respect to adolescents pocket money per month, 58 per cent receiving 0- 100 rupees, 30 per cent receving 101-500, 12 per cent above 500 rupees. Based on the dietary habits, majority (74) of adolescents consumed mixed diet, 18 were vegetarians, 8 were non vegetarians.Based on weight of the adolescents, 53 adolescents were below 50 kgs, 23 adolescents were between 50-60 kgs, 24 were adolescent's body weight above 60 Kgs.Based on the height of the adolescents, 44 were below 150 cm, 31 were between 150-160cm, 25 were above160cm. Based on the dietary habits, majority (74) of adolescents consumed mixed diet, 18 were vegetarians, 8 were non vegetarians.Based on weight of the adolescents, 53 adolescents were below 50 kgs, 23 adolescents were between 50-60 kgs, 24 were adolescent's body weight above 60 Kgs.Based on the height of the adolescents, 44 were below 150 cm, 31 were between 150-160cm, 25 were above 160 cm.

Table 2: Frequency and percentage distribution of socio demographic variables among adolescents

Sl. No.	Socio demographic variables		Frequency (F)	Per cent (%)
1	Age			
	a)	up to 13 years	52	52%
	a)	14 years	28	28%
	b)	15 and above	20	20%
2	Standard of the study			
	a)	8 th class	55	55%
	b)	9 class	23	23%
	c)	10 th class	22	22%
3	Type of family			
	a)	Nucler family	90	90%
	b)	Joint	10	10%
4	Residence			
	a)	Urban	81	81%
	b)	Rural	14	14%
	c)	Slum	5	5%
5	Present staying with			
	a)	Parents	98	98%
	b)	Relatives	1	1%
	c)	Hostler	1	1%
6	Father education			
	a)	Illiterate	2	2%
	b)	Primary	3	3%
	c)	Secondary	6	6%
	d)	Intermediate	15	15%
	e)	Graduate	22	22%
	f)	P G and above	52	52%
7	Father occupation			
	a)	Unemployed	1	1%
	b)	Private employee	45	45%
	c)	Govt employee	38	38%
	d)	Retired/others	16	16%
8	Pocket money received per month			
	a)	0-100	58	58%
	b)	101-500	30	30%
	c)	500 Above	12	12%
9	Mother education			
	a)	Illiterate	8	8%
	b)	Primary	1	1%
	c)	Secondary	14	14%
	d)	Intermediate	16	16%
	e)	Graduate	39	39%
	f)	P G and above	22	22%

10	Mother occupation			
	a)	Home maker	74	74%
	b)	Cooli	1	1%
	c)	Private employee	14	14%
	d)	Govt employee	10	10%
	e)	Retired	1	1%
11	Family income per month			
	a)	Below 20000	51	51%
	b)	20000-40000	18	18%
	c)	above 40000	31	31%
12	Diatery habits			
	a)	Vegetarian	18	18%
	b)	Non Vegetarian	8	8%
	c)	Mixed diet	74	74%
13	Height			
	a)	below 150 cm	44	44%
	b)	150-160 cm	31	31%
	c)	above 160 cm	25	25%
14	Weight			

Table 2: Distribution of knowledge regarding regarding life style modification related to obesity among adolescents

S. No	Variable	Inadequate Knowledge		Moderate Knowledge		Adequate Knowledge	
		f	%	f	%	f	%
1	Knowledge	33	33%	54	54%	13	13%

It shows that out of 100 adolescents, 54 had moderate knowledge regarding life style modification related to obesity followed by 33 of the adolescentsof had inadequate knowledge and only 13 of the adolescents had adequate knowledge regarding life style modification related to obesity

Table 3: Distribution of attitude towards life style modificarion related obesity among adolescents

Sl. No	Level of attitude	Category	Frequency (f)	Percentage (%)
1.	Low level attitude	< 50%	19	19%
2.	Moderat level attitude	51-75%	41	41%
3.	High level attitude	Above 75%	40	40%

Table 3: Mean and standard deviation for knowledge and attitude towards obesity among adolescents

Sl. No	Category	$\overline{\chi}$ Mean	Standard Deviatation (SD)
1	Knowledge	25.4	7.89
2	Attitude	60.35	14.49
3	Total	85.75	22.28

Table 4: Correlation between the knowledge scores and attitude scores life style modification related to obesity

So. No	Variables	Mean	SD	Co - relation
1	Knowledge	25.04	7.89	r =0.334 p=0.001
2.	Attitude	60.05	14.49	highly positive correlation

Shows that 41 adolescents had high level of attitude, 40% had moderate level of attitude and 19 had low level of attitude regarding life style modification related to obesity

Mean and standard deviation scores of knowledge were 25.4 +- 7.89.with regard to attitude the mean and standard deviation scores were 60.35± 14.49. total mean and standard deviation scores were 85.75 ± 22.28.

It shows that calculated correlation coefficient (r) was 0.334 with P Value 0.001, which shows that there was statistically highly positive correlation between knowledge and attitude.

Association between the Socio Demographic Variables with Level of Knowledge

There is a significant association between level of knowledge regarding life style modification

rerlated to obesity with age, residence, father occupation ,pocket money, height were statistically significant at 0.01 level where as remaining demographic variables (standard of the study, type of family, mother occupation, family income, and dietary habits present living status, father and mother education) are not showing any significance.

Association Between Socio Demographic Variables With The Level Attitude

There is a statistically significant association between level of attitude regarding life style modification related to obesity with residence, diatery habits, father occupation were statistically significant at 0.01 level where as remaining demographic variables (age, father occupation, pocket money, height , standard of the study, type of family, mother occupation, family income, and dietary habits present living status, father and mother education)are not showing any significance.

Discussion

The discussion part according to the results ubtained from statistical analysis based on the data of the study, the reviewed literature, hypothesis which was selected for the study is to reveal the fact about assess the knowledge and attitude regarding life style modification related to obesity among adolescents .

The present study mainly concentrates on adolescent obesity the problem statement of the study was "A study to assess the knowledge and attitude regarding life style modification related to obesity among adolescents".

The first objective of the study to assess the knowledge of adolescents regarding life style modification related to obesity

Present study shows that among 100 adolescents 54 per cent were having moderate knowledge,33 per cent were having inadequate knowledge ,13 per cent were having adequate knowledge

The second objective of the study is to assess the attitude of adolescents regarding life style modification related to obesity

Present study shows that among 100 adolescents 41 per cent were having high level attitude, 40 per cent were having moderate level of attitude ,19 per cent were having low level of attitude

The third objectives of the study was to determine the relationship between knowledge and attitude of adolescents students regarding life style modification related to obesity.

Present study shows that the correlation between mean knowledge scores 25.4 and mean attitude scores 60.35 of adolescent of life style modification related obesity is highly positive correlation between knowledge scores and attitude score the compted 'r' vale between knowledge scores and attitude score obtained by adolescents was significant at 0.01level

The fourth objective of the study was find out the association among knowledge and attitude of Adolescents with selected demographic variables

There is significant associatation between the demographic variables like Age, residence, father occupation , pocket money, height leve of knowledge at p< 0.01 level and there is significant associatation between the demographic variables like residence, father occupation leve of attitude at p< 0.01 level only dietary habits at 0.05 level

Conclusion

The study findings revealed that out of 100 adolescents, (54%) had moderate knowledge regarding life style modification related to obesity followed by (33%) of the adolescents of had inadequate knowledge and only (13) of the adolescents had adequate knowledge regarding life style modification related to obesity and attitude level Shows that 41 adolescents had high level of attitude, 40% had moderate level of attitude and 19 had low level of attitude regarding life style modification related to obesity. A majority of the adolescents were having medium level of knowledge and attitude regarding life style modification related to obesity and demographic variables were statistically significant, and hence it can be concluded that, there should be improved awareness regarding life style modifications related to obesity by providing information regarding life style modifications included that dietary changes, exercises, sleepling patterns in order to improve the adolescent health.

Recommendations

A similar study needs to be conducted on a large sample size with the same problem.

A comparative study can be taken in urban and rural area to find out the effectiveness of Self

Instructional Module.

A comparative study can be done to assess knowledge and attitude and practices prevention of obesity among male and female adolescents.

A study can be counducted to assess the effectives of structured teaching on prevention of obesity among adolescents.

Aknowledgement

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