Prevalence of Obesity among Teenagers of Rawalpindi/Islamabad

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ABSTRACT:

Background: Obesity is a key problem faced by the health care professionals across the world, and contributes in disease conditions. The literature supports that with the new advancements in technologies and lake of physical activity the obesity is become very common in human population in the world.

Objective: To determine the prevalence of obesity in teenagers by measuring their body mass index (BMI) and to elucidate the knowledge, attitudes and practices of Islamabad/Rawalpindi's teenagers regarding healthy eating, physical activity and life style.

Methodology: Cross sectional survey was done among 200 students of age between 13 to 19 years, in different schools, colleges and universities of Rawalpindi and Islamabad. Data was collected through structured questionnaire related to their physical activity and diet plan. Data was analyzed through SPSS 20.

Results: According to the data analyzed, results show that 35% were underweight, 51% were normal, 12% were overweight and 2% were obese. Results also **s**howed that 61.5% eat junk food most often, 28% eat fruits and vegetables, 9.5% eat dairy products and 1% eats other foods. Teenagers of age group 18-19 years had active lifestyle with normal BMI and participated in physical activities almost daily.

Conclusion: Based on the findings, the current study suggests that increase in intake of fast foods could have a greater influence on the prevalence of overweight or obesity among teenagers but more physical activity incorporated into daily life and active lifestyle of teenagers; majority of teenagers have 'normal' BMI. As participation in physical activities and active life style cause greater food consumption, therefore, leading to normal BMI.

Keywords: BMI, Obesity, Teenagers, Physical Activity, Lifestyle, Diet, (JRCRS 2013; 2(1): 23-26)

INTRODUCTION:

Teenager obesity is becoming a challenging problem throughout the world, including Pakistan. Teenagers lie between age 13 and 19 and can be considered the transitional stage from childhood to adulthood. Obesity is among the easiest medical conditions to recognize but most difficult to treat[3].There are different causes of obesity in teenagers. Low Participation in Physical activity. Physical activity refers to any body movement that burns calories, whether it's for work or play, daily chores or the daily commute. It is observed that due to the recent increase in caloric and fat intake, big portions of food, fast food meals, and excessive sugar intake by soft drinks. Secondary behaviours like watching television, using other electronic media and playing computer games. Unhealthy eating habits are major cause of obesity among teenagers. Teens are consuming very high fat foods like chips, fries, burgers and fizzy drinks.

Obese teenagers are at risk for a number of conditions, including: Obese teenagers may face constant stares, comments and whispering that can interfere with living normal teenage life. They may have depression and low self-esteem. Obese teenagers have difficulties in participating in physical activities. Due to obesity, teenagers may experience problems during breathing. 7 Increase risk of fractures, flat foot and ankle sprains 7. Those who were overweight were twice as likely as those with a healthy weight to have gallstones. 8

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Obesity can be managed in teenagers by Dietary Changes. Avoidance of junk food and drinking lots of water are the two factors which are recommended for any effective weight loss plans for teens. Go for green leafy vegetables rather than eating junk food. Fast foods and processed foods should be strictly avoided. Also, food which contains sugar and fats in it should not be consumed. One of the causes of obesity is excess intake of carbohydrates. One of the best weight loss diets for teens is the vegetable diet. Replace carbohydrates with naturally occurring proteins. In order to reduce weight, one must eat food which is rich in fiber such as fresh fruits, green leafy vegetables and whole grains. It acts as a natural appetite suppressant. Fish that are rich in omega 3 fatty acids such as tuna and salmon also helps in improving metabolism, thus resulting in weight loss. 9

One of the most effective ways to lose weight is doing exercise regularly. At least 30 minutes of cardio workout such as walking, swimming, skating, playing outdoor games or running on treadmill help teens to reduce weight easily. Cardio workouts significantly increase the metabolism, resulting in burning extra calories. Swimming and walking both are effective exercises to reduce weight. Teens should spend time playing outdoor games such as tennis, soccer, hockey and football. 9 All children tend to develop the habits which are followed by their parents. So parents have to play a better role in avoiding the obesity problem by guiding them to have healthy dietary habits and do regular exercise.

MATERIAL AND METHODS:

Cross sectional study was conducted (6 month duration). The Sample Size chosen was 200 students between ages 13-19yrs. data was collected from different schools of Rawalpindi / Islamabad. Convenient non-probability sampling technique was used. Data was collected through a developed structured questionnaire including 15 questions. Questions regarding diet, physical activity participation, weight & height were given. The variables of our study were Weight, Height, Diet, Participation in Physical activities, Gender and Age. Data was analyzed through SPSS 20.

RESULTS:

Out of 200 teenagers, 70 (35%) were underweight (BMI less than 18.5), 102 (51%) were normal weight (BMI 18.5-24.9), 24 (12%) were overweight (BMI more than 25) and 4 (2%) were obese (BMI more than 30). When questioned about foods snacked most often, as shown in table 3 and pie graph 2, 123 out of 200 teenagers eat junk food, 56 eat fruits and vegetables, 19 eat dairy products and 2 take other foods.

Table 1: Body Mass Index* Frequency Eat

		Frequently eat				Total
Body Mass Index	Less than 18.5	2 hrs	4 hrs	6 hrs	8 hrs	
	18.5-24.9	11	24	24	11	70
	More than 25	17	33	38	14	102
	More than 30	8	4	9	3	24
Total		1	2	0	1	4
		37	63	71	29	200

"Body mass index* Physical Activities Participation" Cross tabulation shown in table 2 showed that teenagers with BMI 18.5-24.9 participated in physical activities daily, whereas teenagers with BMI less than 18.5 participated in physical activities once a week or only on sports day.

Table 2: Body Mass Index* Physical Activities Participation Cross Tabulation

		Frequently eat				Total
Body Mass Index	Less than 18.5	Once a week	Daily	On sports day	Never	
	18.5-24.9	19	17	19	15	70
	More than 25	30	28	24	20	102
	More than 30	7	8	1	8	24
Total		0	3	0	1	4
		56	56	44	44	200

DISCUSSION:

The escalation of obese teenagers is due to the upsurge of technology, increase in snacks and portion size of meals and the decrease in the physical activity of children. It has been evidenced in a survey that daily macronutrient intake by Japanese children showed that the cholesterol concentration in 10-19 years old males and females increased year after year. The factors that contribute to the health problem s facing today's Japanese children include their sedentary lifestyle, irregular intake of meals (especially skipping breakfast) and the increasing daily ratio of fat to total energy intake[10]. If teenagers were more mobile and less sedentary, the rate of obesity would decrease. As according a study, the prevalence of obesity were lower in children for whom high physical activity was reported[11]. Therefore, teenagers have to put down the electronic devices and spend more time outside playing or exploring other options of physical activity. Researchers also show that teenagers living in the urban area with high SES were at risk for being overweight and obese than children living in the urban area with low SES and rural area children[12]. Some studies in teens suggest that computer, video game and internet use are associated with excess weight[13].

It has also been evidenced that some teenagers become addicted to junk food due to emotional eating habits and there are some who get trapped in erratic work schedules and fall prey to grabbing a pizza, burger, fries and noodles for their meals. 95% of the junk food addicts end up becoming obese and lead an unhealthy lifestyle[14].

All of the aforementioned studies show that problem of obesity in teenagers has grown considerably due to unhealthy food choices as teenagers have shifted away from healthy foods (such as fruits, vegetables and whole grains) to a much greater reliance on fast food, lack of physical activity and sedentary lifestyle due to more time spent using computers and other electronic games.

CONCLUSION:

Many studies reviewed for this thesis revealed the serious concern regarding overweight and obesity found among teenagers. With an intention of contributing to the body of knowledge regarding what factors contribute to the rising obesity in teenagers between the ages of 13-19 years, this thesis selected a list of variables and a cross sectional survey was conducted based on small set of questions. Based on the findings, the current study suggests that increase in intake of fast foods could have a greater influence on the prevalence of overweight or obesity among teenagers but due to more physical activity incorporated into daily life and active lifestyle of teenagers; the prevalence of overweight and obesity was lower in teenagers, resulting in teenagers having a 'normal' BMI. As participation in physical activities cause greater food consumption therefore, leading to normal BMI.

Therefore, teenagers should be encouraged more to participate in physical activities and dietary recommendations should also be carried out and more importance should be given on balanced diet and avoiding junk foods. Health education in schools should incorporate all the above mentioned points in an understandable and appealing way in order to maximize its impact in the community.

RECOMMENDATIONS:

Further work should be done on topics related to obesity to obtain results with minimal biasness and in addition the researches should be done on prevalence of obesity among adults and older people. It is also recommended that the sample size should be increased and work should also be done on co-morbidities related to obesity.

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