

PERCEPTION OF RISK OF OBESITY AMONG ADOLESCENTS IN YAKURR LOCAL GOVERNMENT, CROSS RIVER, NIGERIA

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ABSTRACT

The increasing rate of obesity among adolescents is becoming alarming and of public health concern. Adolescence is a crucial period for establishing healthy behaviors, many of the habits formed during this developmental stage will last well into adulthood. Studies have shown that rapid changes in physical growth and psychological development have placed adolescents as nutritionally vulnerable group with unhealthy eating behaviors and involvement in other risky health behaviours such as high consumption rate of alcohol. The aim of the study is to assess the perception of risk of obesity among adolescents in Yakurr Local Government of Cross River State, Nigeria. This research is a cross-sectional descriptive study. Prevalence of obesity among adolescents in Yakurr was found to be 13%. The distribution of obesity among respondent shows that the females were more obese than the males 34 (65.4%). out of 52(13%) respondents that were obese 15(29%) were within the age group of 10-12years, 22(42%) were within the age group of 13-15 years, 15(29%) were within the age group of 16-19years. Respondents with normal and overweight had low risk perception of obesity. A holistic approach to address the problem is needed; if not the implication of this problem on the future generation will be disastrous.

KEYWORDS: Obesity, Diabetics, Perception of Risk of Obesity among Adolescents.

INTRODUCTION

The prevalence of obesity has continued to rise at an alarming rate worldwide to such an extent that it has been described as a global epidemic (WHO, 2000). It has even overtaken underweight in prevalence in many developing countries as the most common public health concern for children and adolescents (Reilly, 2002). This increased prevalence, which was initially more marked in developed countries, has become a global concern (Popkin, 2002). In the developed world obesity is now the most common disease of childhood and adolescence (Reilly, 2002).

Obesity is defined as an abnormal growth of the adipose tissue (Parks, 2009). A Body mass index of 30 or more is considered as obesity while a range of 25 to 29.9 is considered as overweight (Whitney, Pinna, and Rolfe 2006). A Body Mass Index (BMI) can be calculated from measurements of height and weight, the formula is weight in kilogram divided by height in meter square (weight (kg) / height (m²). In research and epidemiology this definition is clinically meaningful as they identify children and adolescents at high risk of obesity. Recent data support the use of BMI (Body Mass Index) as an

appropriate measure of adiposity, especially in adolescence, since it accounts for linear growth (Dietz, 1998).

Obesity is now extremely prevalent in children and adolescents across the globe. Adolescence is the transitional period between childhood and adulthood and a unique phase of life during which a child goes through tremendous physical, emotional and social change (Gupta, 2010).

Adolescence is a crucial period for establishing healthy behaviors, many of the habits formed during this developmental stage will last well into adulthood. It has been found that the rapid changes in physical growth and psychological development have placed adolescents as nutritionally vulnerable group with unhealthy eating behaviors (WHO, 2000). An increase appetite is normal during adolescence and food sometimes becomes a passion for them, this leads to over weight in most cases. Overweight is defined as any weight in excess of the normal range. Obesity develops when a person eats more calories than the body burns off (Lucas and Gilles, 2007).

In Nigeria, data on the prevalence of obesity are few and scattered. Recent reports from studies in Nigeria show a rising prevalence of obesity on Nigerian adolescents in an urban community (Akinpelu, Oyewole and Oretogun 2008). According to Ansa, Odigwe and Anah (2001) obesity in children and adolescents in Nigeria is an evolving problem and is associated with morbidities such as increase in cardiovascular diseases leading to increase mortality. Pediatric obesity is not a cosmetic issue; it is associated with a significant burden of ill health both for obese children and for adults who were obese as children.

Obesity in children and adolescents is generally caused by lack of physical activity, unhealthy eating pattern with genetic and lifestyle both playing important roles in determining a child's weight. Obese adolescents have 70 percent chance of becoming obese adults. Although certain medical disorders can cause obesity, less than one percent of all obesity is caused by medical problems. Though the etiology of obesity is rather complex, increased intake of fast foods, replacements of the traditional high fiber diet with Western diets, high sugar and fat intake and the tendency for a more sedentary lifestyle with the advent of cars are believed to contribute to this epidemic of childhood obesity (Friedman, 2000).

Obesity is a disease process associated with the development of serious medical complications and increased mortality in adulthood and adolescents. It is a risk factor associated with cardiovascular diseases, atherosclerosis, hypertension and diabetes mellitus (Friedman, 2000). Adolescent obesity is also associated with some psychological problems like low self-esteem, feeling of inadequacy, anxiety, social dysfunction, depression and moodiness; all of which affect the personality of the adolescent (Whitaker and Dietz, 1997). Since treatment of obesity is largely difficult there is need for intervention during childhood and adolescent and this includes early detection and prevention (Ansa et al, 2001). Successful treatment requires multidimensional approach. The first step in managing adolescent obesity is to motivate the adolescent for weight loss. Decreasing calorie intake and increasing physical energy expenditure and activity are the basis for management (Gupta, 2010). Mortality rate of obesity has increased in the past few years and will continue to increase if precautions are not taken. Obesity is more difficult to treat than to be prevented because of its multifactorial nature and its prevention will require a multidimensional approach (WHO, 2000).

In Calabar studies showed that the prevalence of obesity in children and adolescents was said to be 2.3 to 4.0 % (Ansa, Odigwe, Anah, 2001) while 18% of adolescents were obese generally (Owa and Adejuyigbe, 1997). The prevalence rates of obesity and being overweight in a study carried out in Cross River, Nigeria were 1.7% and 6.8%, respectively (Victor and Maxwell 2008). Obesity most commonly begins between the ages of 5 and 6 or

during adolescent. Studies have shown that a child who is obese between the ages of 10 and 13 has an 80% chance of becoming an obese adult. Recent reports from various studies in different parts of Nigeria show high prevalence as in developed countries.

METHODOLOGY

STUDY SETTING

This present study took place in Yakurr Local Government Area of Cross River State, Nigeria with headquarters at Ugep with a population estimated at 196,271 according to the 2006 National census (NPC 2006). Yakurr lies between latitudes 50 401 and 60 101 north of the equator and longitudes 80 21 and 60 101 east of the Greenwich Meridian and 120 km (75 mi) northwest of Calabar, the capital of Cross River State. Yakurr Local Government constitutes the largest ethnic group in the state with 14 primary health care centres (PHC) and 1 generally hospital located at the LGA headquarters (Ugep). They share their northern and eastern boundaries with Obubra Local Government Area, the southern boundary with the Biase Local Government Area and their western boundary with the Abi Local Government Area. The language spoken by the Yakurr is Lokaa, an Upper Cross River language.

ANTHROPOMETRIC MEASUREMENTS

Anthropometric variables included body weight, height and waist circumference measurements were performed in the morning by trained researchers using standardized procedures. Body weight was measured with minimal clothing and without shoes, using a calibrated portable scale. Height was measured to the nearest meters with the subject in the full standing position without shoes using calibrated portable measuring rod. Body mass index (BMI) was calculated as body weight in kg divided by height squared in meters.

A structured questionnaire was also used to get socio-demographic information and variables related to lifestyles from adolescent. A bathroom scale calibrated from zero to 120kg was used to measure the weight of the adolescents. The scale was checked and corrected for zero error before every measurement. Each subject is allowed to wear only the school uniform for measurement, all shoes and heavy clothes were removed. The weight was read to the nearest 0.5kg. Respondents were asked to remove shoes and stand upright by the wall and reading was taken to the nearest 0.5m. The measurement of the weight and the height was used to calculate the Body Mass Index, which is used to assess for normal weight, overweight and obesity.

FINDINGS

Socio-demographic characteristics of respondents

Socio-demographic distribution of respondents shows that out of 400 respondents, 207(51.75%) were females, 193(48.25%) were males, out of this 90(22.5%) were within the age group of 10-12years, 169 (42.25%) were within the age group of 13-15 years, 141 (35.25 %) were

within the age group of 16-19. Overall mean age of respondents was 15 years. A greater proportion of the

respondents were Christians, 395(98.8%), 5 (1.25%) were Muslims.

TABLE 1.0

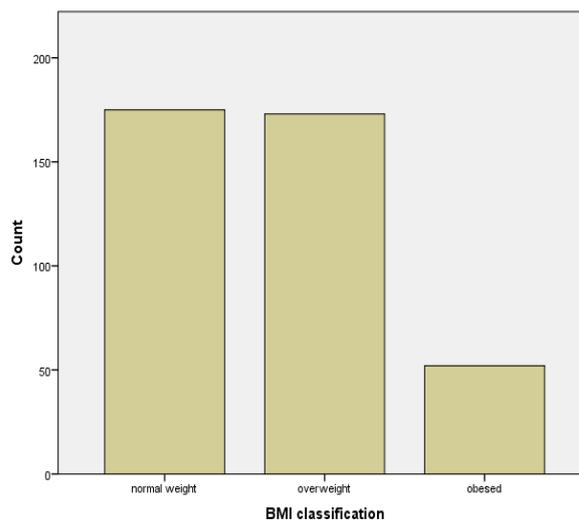
RELIGION, AGE , AND SEX DISTRIBUTION OF RESPONDENTS							
SEX			AGE			Total	
			10-12	13-15	16-19		
MALE	RELIGION	CHRISTIAN	Count	48	80	62	190
			% within religion	25.3%	42.1%	32.6%	100.0%
			% within age	100.0%	98.8%	96.9%	98.4%
		% Total	24.9%	41.5%	32.1%	98.4%	
		MOSLEM	Count	0	1	2	3
			% within religion	0.0%	33.3%	66.7%	100.0%
	% within age		0.0%	1.2%	3.1%	1.6%	
	Total	Count	48	81	64	193	
		% within religion	24.9%	42.0%	33.2%	100.0%	
		% within age	100.0%	100.0%	100.0%	100.0%	
		% of Total	24.9%	42.0%	33.2%	100.0%	
	FEMALE	RELIGION	CHRISTIAN	Count	41	87	77
% within religion				20.0%	42.4%	37.6%	100.0%
% within age				97.6%	98.9%	100.0%	99.0%
% of Total			19.8%	42.0%	37.2%	99.0%	
MOSLEM			Count	1	1	0	2
			% within religion	50.0%	50.0%	0.0%	100.0%
		% within age	2.4%	1.1%	0.0%	1.0%	
Total		Count	42	88	77	207	
		% within religion	20.3%	42.5%	37.2%	100.0%	
		% within age	100.0%	100.0%	100.0%	100.0%	
		% of Total	20.3%	42.5%	37.2%	100.0%	

Prevalence of obesity among adolescent students

The result of the prevalence of obesity among adolescents in Yakurr shows that Out of the total 400 respondents 52(13%) were obese. The distribution of obesity among respondent shows that the females were more obese than the males 34 (65.4%). out of 52 respondents that were obese 15(29%) were within the age group of 10-12years, 22(42%) were within the age group of 13-15 years, 15(29%) were within the age group of 16-19years

PREVALENCE OF OBESITY ACCORDING TO SEX AND AGE

BMI classification			Age			Total
			10-12	13-15	16-19	
normal weight	sex	Male	18	37	24	79
		female	14	42	40	96
	Total		32	79	64	175
Overweight	sex	Male	25	37	34	96
		female	18	31	28	77
	Total		43	68	62	173
Obese	sex	Male	5	7	6	18
		female	10	15	9	34
	Total		15	22	15	52
Total	sex	Male	48	81	64	193
		female	42	88	77	207
	Total		90	169	141	400



SOCIO-ECONOMIC STATUS OF OBESE ADOLESCENTS IN YAKURR LOCAL GOVERNMENT

78% of obese adolescents have parents that owns a car, of which 77% of obese adolescents have fat parent, 48% of them have house help. 73% spend much of their time watching Television while 27% involves themselves in one physical activities or the other. 81% of them eat meals three times and above. As shown in table 2.0.

Table 2.0 Risk factors for obesity in the respondents

VARIABLES	NORMAL WEIGHT	OVERWEIGHT	OBESSE
Parent owns a car	45	83	41(78%)
Yes			
No	130	90	11(22%)
One of the parents is fat	2	80	40
Yes			
No	173	93	12
Have house help	0	10	25
Yes			
No	173	163	27
Physical activities			
House chores	88	30	7
Watching TV	23	80	38
Games	11	20	7
Meal rate/ day	66	30	5
Once	60	43	5
Twice	37	70	30
Thrice			
> Thrice	10	32	12
Perceived risk of obesity	10 (5.8%)	15(8.6%)	

PERCEPTION OF RISK OF OBESITY

Among adolescents that have normal weight, only 5.8% believe that they are at risk of obesity, this is classified as low risk perception. While only 8.6% of those that are overweight believe that they are at risk of obesity, this can also be classified as low risk perception.

DISCUSSION

The rise in prevalence of obesity among adolescents in developing countries including Nigeria is likely to create a tremendous public health burden (Monteiro, Conde, Popkin, 2004) because obesity in children and adolescents is strongly associated with many diseases (Reilly, Methven, McDowell, Hacking, Alexander, Stewart, Kelner, 2003). Metabolic complications associated with obesity in childhood greatly increase the risk for type 2 diabetes and early cardiovascular disease (Nathan and Moran 2008). Moreover, obesity in adolescence was shown to track to adulthood (Deshmukh-Taskar, Nicklas, O'Neil, Keast, Radcliffe, Cho, 2010). Aside from overall obesity, abdominal obesity has also been linked to increased cardiometabolic risk in children and adolescents (Maffeis, Banzato, Talamini, 2008).

In this study, prevalence of obesity among adolescents in Yakurr local government area was 13%, this prevalence, however, is very high compared to figures from other parts of the world. This finding shows an increase in prevalence when compared with a study in Kaduna (Owa and Adejuyigbe, 1997) where prevalence of obesity in adolescence was 18%. This finding supports the statement by Popkin, 2002 which states that obesity in developing countries is increasing at a faster rate. The high prevalence in this study could be due to western lifestyle which includes browsing on the internet, playing computer games instead of outdoor games, bad eating habit (regular eating of snacks and fast food), some

socioeconomic factors and family history of obesity. An increase in appetite is normal during adolescence and food sometimes becomes a passion for them, this leads to overweight in most cases. Overweight is defined as any weight in excess of the normal range. Obesity develops when a person eats more calories than the body burns off (Lucas and Gilles, 2007). Current evidence indicates that obesity is a multifactorial condition influenced by many variables, including genetic, demographic and lifestyle factors (Barlow 2007).

Using the BMI, the prevalence of being overweight was higher among the females than the males, this result is similar to findings in a study in Britain where girls had higher prevalence of obesity than the boys (Whitaker et al, 1997). It was concluded that the prevalence of obesity among the girls in later life is mainly due to growth spurts and the effects of hormonal surges that occur later in girls (Chhatwal, Verma and Kaur, 2004).

Adolescents who watch more TV tend to consume more calories or eat higher-fat diets and eat fewer fruits and vegetables (Krebs-Smith, Cook, Suber, Cleveland, Friday, Kahle, 1990). Some researchers have argued that the viewing of TV while eating suppresses cues of satiety, which leads to overeating.

Furthermore, adolescents who lived sedentary lifestyles were from families with high socio-economic status, this can be understood, considering the fact that most of the obese adolescents were from relatively richer homes where most house chores will be carried out by housemaids; they also have ready access to cars, which encourage a more sedentary lifestyle.

CONCLUSION

This study supports the fact that obesity in adolescents is on the increase because of the effect of westernize culture which encourages sedentary lifestyle and patronage of fast food joint. Family history of obesity and bad eating habit (eating out of homes and high intake of breakfast) were also associated with obesity. It is also recommended that enlightenment programmes on obesity targeted at adolescents should take their different socio-economic backgrounds into consideration to be effective. Therefore, a better understanding of the relationships between obesity and lifestyle factors is necessary for effective prevention and management of obesity among adolescents

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