PERCEPTION OF CHILD OBESITY AMONG THE ELITES IN BODIJA, IBADAN, NIGERIA

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ABSTRACT

Child obesity is on the rise globally and evidence suggests that this upward trend has continued into the 21st century. Genetic, dietary and/or physical activity patterns are important factors explaining why increasing number of children and adolescents are becoming obese. Evidence also suggests that social class position may be important in understanding the upsurge in its occurrence. In Nigeria, information on parents' perception of the obese status of their children is still inadequate. There is also a dearth of information on perceived causes and effect of child obesity among Nigerian elites. This article discusses knowledge of the etiology of child obesity among the elites, awareness of therapeutic measures, efficacy of adopted measures and assumed solutions. Utilizing both descriptive and survey research design, 180 high status residents in Bodija, Ibadan, were recruited as respondents through systematic random sampling techniques. Using purposive sampling, additional information on child obesity was obtained from ten medical and health service providers in the area. Research instruments comprised of questionnaires and unstructured interview guides. Results revealed that although respondents were generally aware of obesity and child obesity, and were generally conversant with its etiology, they were not unduly worried about the consequences of obesity although they recognized its possible harmful health outcomes. The article recommends for more educational and preventive social policies to encourage positive nutritional and recreational habits.

Keywords: Obesity, Elites, Perception, lifestyle, Prevention

INTRODUCTION

Obesity, which is defined as a condition where a pathological excess of body fat is present in an individual is gradually becoming a social problem with damaging health implications (World Health Organization, 20013; Booth, Chey, Wake, *et al.,* 2003; Tremblay, Katzmarzyk and Willms, 2002; Rosenbaum, Leibel and Hirsch, 1997). It is one of the most complex and poorly understood clinical syndromes that affect children and adult throughout the world. As a physical and medical issue, obesity develops when there is a discrepancy between energy intake and energy output, also known as energy imbalance. The body needs a certain amount of energy (calories) from food to keep up basic life functions. Body weight tends to remain the same when the number of calories eaten equals the number of calories the body uses or "burns". Over time, when people eat and drink more calories than they burn, the energy balance tips toward weight gain, overweight, and obesity (National Institute of Health, 2012). As a result, the original steady-state is disturbed and after a period of positive energy balance, a new steady-state with an increase in body fat is achieved. Since the actual amount of body fat is difficult to determine, percentage over weight or body mass index (BMI) is used to define and to track obesity for practical use. For a given BMI, adiposity varies with age, sex and ethnicity, however, BMI correlates reasonably well with body fat mass and the risk of obesity related diseases (Marjolein, van der Wouden, Schellevis, *et al.,* 200;, Aycan, 2009, Reilly, Methven, McDowell, *et al.,* 2003).

Child obesity is on the rise globally (World Health Organization, 1998; Chinn and Rona, 2001; Strauss and Pollack, 2001) and evidence from the United States suggests that this upward trend has continued into the 21st century (Ogden, Carroll, Curtin, *et al.,* 2002). The results from numerous studies have broadened the knowledge of the increasing and global impact that obesity has on public health. Child and adolescent obesity is associated with major health risks, both in the short (Reilly, 2005) and the long term (Must, 2003; Maffeis and Tato, 2001; Power, Lake and Cole, 1997). There is no clear explanation of the primary

cause of overweight and obesity in adolescents, although dietary and/or physical activity patterns must be important factors (Janssen, Katzmarzyk, Boyce, *et al*. 2005; Kautiainen, Rimpela, Vikat and Virtanen, 2002; de Onis and Blossner, 2000). The establishment of consistent trends in the associations between being overweight with dietary and physical activity patterns across countries with different cultures would provide strong evidence of a common aetiology for these relationships.

In children, defining overweight and obesity is complicated by the fact that weight varies with height as children grow (Lobstein and Frelut, 2003). Characteristically, body adiposity rises sharply during infancy, peaking at about 9 months and decreasing thereafter until about 6 years, when it starts picking up again. This second rise is referred to as rebound and lasts until adulthood. Skin fold measurements have been widely used for assessing obesity and are considered good indicators since they directly measure a layer of fat but they are open to numerous sources of both random and systematic errors.

In America and Europe, screening of children between age 4 and 7 years were carried out using body mass index (BMI) where an increase in percentage overweight children from 8% to 21% was found. In Nigeria, the prevalence of obesity among 457 children in the age group of 6 to 9 years was 3.2% for males and 5.1% for females based on weight for age while 3.7% males and 3.3% females were classified obese when triceps skin fold thickness was used as the basis of obesity (Akinpelu, Oyewole and Oritogun, 2008; Ejike, Ugwu and Ezeanyika, 2010). Also 18% of children aged 5-15 years from a relatively privileged section of a community were found to be obese (Akinpelu, Akinola and Gbiri, 2008; Lissau, Overpeck, Ruan, *et al.,* 2004). In Brazil and China, as in many of the emerging middle and high income countries, the burden of nutritional problems is shifting from energy imbalance deficiency to excess among older children and adolescents. The annual rates of increase in the prevalence of obesity were 0.5% in Brazil and 0.2% in China. Rates for Nigeria are generally conjectural.

Childhood obesity seems to increase the risk of subsequent morbidity whether or not obesity persists in adulthood (Rivera, Barquera, Campirano, *et al.,* 2002). Age thus forms an important consideration, this is because a high BMI at a young age implies longer years of excess weight and a higher risk (Aycan, 2009). Obesity may lead to premature death because of the health complications such as increased risk for hypertension, hypercholesterolemia, cancers, and diabetes mellitus. Other co-morbidities are associated with childhood obesity; these include orthopedic problems like Blount's disease, skin fungal infections, and psychological and behavioral problems (Akinpelu, Akinola, and Gbiri, 2008). The results from these and numerous other recent studies have shown that the world may be seeing the first generation that would be less healthy and with a shorter life expectancy than their parents (Bray and Bellanger, 2006, Cole, 2006; Kimm and Obarzanek, 2002; Dietz, 1998).

The vicious tentacles of obesity are extending day by day. There are different factors responsible for this. The important two are genetics and environment. Although, genes do not destine people to a lifetime of obesity, environment does strongly influence obesity. Most obesity research scientists agree that the rising number of obese people is partially a result of major environmental changes that have occurred during the past few decades. These changes include lifestyle choices such as what a person's food consumption is like and his or her level of physical exertion. However, the link between environment and obesity goes well beyond family attitudes toward food and exercise. Other environmental factors that encourage overeating and obesity include (a) Easy access to large meals, (b) Food

advertising, (c) Increase in sedentary desk jobs, (d) Labor-saving devices (such as cars) that reduce physical activity, (e) Less healthy food choices, (f) Little time to prepare healthy food, (g) Sedentary activities such as television watching, (h) Urban environments that lack recreation facilities, and (i) Work schedules not allowing exercise (Chin and Rona, 2001; Cole, 2006).

At risk children may find it difficult to make healthy food choices and get enough physical activity when they are exposed to environments where the following predisposing factors persist:

- Consumption of sugar drinks and less healthy foods on school campuses.
- Advertising of less healthy foods on television and radio.
- Lack of promotion in daily, quality physical activity in all schools.
- Absence of a safe and appealing place in many communities to play or be active for children.
- Limited access to healthy affordable foods.
- Greater availability of high-energy-dense foods and sugar drinks.

Nonetheless, information on the parents' perception of the obese status of these children is still inadequate. Specifically, the perceived causes of child obesity and the perceived effect of child obesity on health among the elites in Nigeria remain largely unknown. Furthermore, the understanding of relationship between parents' social class and child obesity as well as the socio-cultural behavior that influences child obesity had been problematic with the dearth of research on socio-psychological aspects of this disease. It is against the backdrop of child obesity and its effect on health that this article is focusing on the perception of elites on child obesity.

Perception is the ability to organize, identify and interpret sensory information in order to represent and understand the environment. There are three components of perception, first, the Perceiver, the person who becomes aware of something, and may or may not come to a final understanding. The perceiver's experience, motivational and emotional states affect their perception. The second component is the Target, the person or object being perceived or judged; and the third is the situation and or the environment. In this article, the Perceiver consists mainly of residents of the study area; the targets are obese children residing in the study area. It assumed that the socio-economic circumstances of the respondents, as well as their distinctive environmental factors will provide adequate information on the research objectives. Consequently, this article primarily examines the perception of the elites in Ibadan on child obesity. It describes their awareness of the etiology of obesity and child obesity, knowledge of therapeutic measures, efficacy of adopted measures and assumed solutions.

The theoretical Assumptions

This article derives its theoretical strength from the Health Belief Model (HBM). The Health belief model attempts to explain and predict health behaviors. This is done by focusing on the attitudes and beliefs of individuals. It was developed as a response to the failure of a free tuberculosis health screening program. Since then, it has been adapted to explore a variety of short and long term diseases. The HBM holds that health or illness behavior is a function of the perception an individual has of vulnerability to an illness and the perceived effectiveness of treatment with respect to deciding whether or not to seek medical attention (Elder, Ayala and Harris, 1999).The health belief model is based on the understanding that a person will take a health related action if that person:

1) Feels that a negative health condition can be avoided,

2) Has a positive expectation that by taking a recommended action, he will avoid a negative health condition.
3) Believes that he can successfully take a recommended health action

The health belief model was spelled out in terms of four constructs, representing the perceived threat and nets benefits: these are the perceived susceptibility, perceived severity, perceived benefits and perceived barriers; cue to actions and self efficacy were recent addition to these constructs. The individual perception of child obesity, its causes and effects on health affects will determine the extent to which the individuals is willing or ready to prevent obesity. It will also influence knowledge of methods to successfully prevent obesity and that these methods are not tiresome or burdensome.

METHODS

Descriptive and survey designs were adopted for this study. The choice of descriptive study was aimed at obtaining information concerning the current status of obesity in the study area and to describe "what exists" with respect to variables or conditions that influence this. It was also used for understanding and documenting the relevance of parental perception of prevalence of obesity among the elites in the society. The survey design, which consisted of both quantitative and qualitative methods, was utilized to select a sample of respondents in the study area. The study was conducted in Bodija Estate which is located in Ibadan North Local government in Ibadan, Oyo State. The local government area covers an area of 27 km^2 and with a population of 308,119 in 2006. Bodija estate is widely reputed as an elitist area, largely populated by people whose socio-economic status is regarded as being significantly higher than most other residents in Ibadan, Oyo state.

Although the focus of this study was on the elites in Ibadan, there were two categories of respondents: (i) members of the elites residing in Bodija estate; and (ii) medical and nutritional health practitioners providing services to Bodija estate residents. The inclusion of the latter category, who served as Key Informants, was to obtain information from health professionals with adequate information on the medical and lifestyle behavior of the primary respondents.

The first consideration was to determine what constitutes membership of the elite. For the purpose of respondent selection, the following inclusion criteria were developed:

- respondents must reside within the Bodija estate localities;
- respondents must either be the owner of the residential property or a relation of the property owner;
- respondents that are not owners of the building they reside in should have at least a tertiary level of education;
- respondents should own at least a vehicle; and
- respondents must have at least a child.

In short, two primary socio-economic variables: education and material possessions, measured in house and vehicle ownership, were used as proxies for categorizing respondents as elites.

Bodija estate is generally identified and addressed as two entities, Old Bodija and New Bodija. For the quantitative aspect of the study, data collection exercise was done in line with this demarcation. From each of the axes of Bodija estate, 10 major streets were randomly selected. In each of the streets, 10 houses were sampled through systematic random method. Residents in the selected house were informed of the purpose of the study and any resident that met the inclusion criteria was invited to fill the questionnaire. A total of 200

copies of questionnaire were administered but only 180 copies of questionnaire were retrieved and analyzed.

In undertaking the qualitative aspect of the study, a combination of purposive and snowball sampling methods was adopted to select Medical and Nutritional health service providers. A preliminary exercise was undertaken to identify health care providers in Bodija estate from where some respondents were recruited. Additional respondents were recruited from the University College Hospital that is located very close to the Estate and which serves as a referral hospital for many ailments and diseases. Ten medical and nutritional health care service providers were interviewed as Key Informants. They included four medical doctors, three nurses, two nutritionists and a physiologist. The unstructured interviews were tape-recorded and later transcribed for analysis. Data were collected between February and April 2012.

Data were collected using a well designed structured and unstructured questionnaire and an unstructured interview guide. The questionnaire was used to elicit information from Bodija residents, while unstructured in-depth interviews guides were used to collect data from the ten medical and allied experts. Prior to the main study, a pre-test of the instruments was undertaken among 10 residents and two medical personnel. Data collected were subjected to descriptive statistics such as percentages and frequency distribution. The findings are presented as both discussions and tables. They were used to analyze social-demographic characteristics such as age, types of occupation, education attainment, religion, marital status, ethnicity, sex and views and perception of child obesity. Qualitative data collected through in-depth interviews were content analyzed. In the course of carrying out this research, the highest ethical standards were maintained and the principle of ensuring that no harm was done was meticulously observed.

Adoption of the foregoing methodology imposed a number of limitations on the study. First, it was difficult to make confident generalizations about the findings given data collection limitations and the absence of strict statistical sampling. Second, the study generally focused on perception and not on actual practice relating to lived experience of the obese. This makes it difficult to make categorical statements relating to the social and psychological trauma associated with obesity. Third and final, while the study population was not typical of the elites in Ibadan, they provided a picture of a significant socio-economic group in Ibadan. In essence, the most significant usefulness of this study lies in its provision of its descriptive information on the perception of Ibadan elites on child obesity. It is advisable that these limitations are kept in mind always.

FINDINGS

Socio-demographic Characteristics of the Respondents

The socio-demographic characteristics of the respondents, as shown in Table 1, revealed that a simple majority of the respondents (51.7%) were females while 48.3% were males. The age distribution revealed that 33.3% were between 25-30 years of age, 31.7% were between 31-40 years, 18.9% were between 41-50 years and the remaining 6.7% were 61 years and above.

Table 1: Socio-demographic Characteristics of the Respondents

Characteristics	Percent (%)
Age (Years)	
25-30	33.3%
31-40	31.7%
41-50	18.9%
61 & Above	6.7%
Marital Status	
Married	70.6%
Separated	18.9%
Divorced	5%
Widowed	5.5%
Religion	
Christians	81.7%
Muslims	16.1%
Traditional	2.2%
Ethnic Group	
Yoruba	80.5%
Igbo	11.7%
Hausa	2.8%
Others	5.0 %
Education Level	
Senior Secondary Certificate Holders	5.6%
Nigeria Certificate of Education (NCE)	2.9%
National Diploma Certificate	3.3%
Bachelor or Equivalent Degree	53.8%
Master Degree	22.2%
PhD	12.2%
Occupation	
Self-employed	33.9%
Civil Servants	14.4%
Pensioners	7.2%
Private Sector Employees	23.3%
Traders	7.8%
Clergy	2.2%
Full housewife	4.4%
Unemployed	6.7%

Source: Field Survey, 2012

70.6% of the respondents were married; 18.9% were separated, 5% and 5.6% were divorced or widowed respectively. This distribution is largely consistent with the age of respondents, who are generally within marriageable age categories. Based on the religion distribution of the respondents, more than half 81.7% were Christians, 16.1% were Muslims and the remaining 2.2% practiced traditional religion. The preponderance of Christians in the study population was probably due to sampling error but this was not considered as damaging as religion is not assumed to be an important factor that will influence findings. Ethnic composition of the respondents revealed that majority 80.6% were Yoruba. This was not unexpected as the study area is predominated by Yoruba ethnic group. 11.7% of the respondents were Igbo, 2.8 were Hausa, while 5% were of other ethnic groups. Occupational distribution revealed that 12.2% were self-employed (but were also employers of labor). 14.4% were civil servants, 7.2% were pensioners, 21.7% were self employed, 23.3% worked in private organizations, 7.8% were traders, 2.2% were members of the clergy, 4.4% were full house wives and the remaining 6.7% were unemployed. The educational qualification of the respondents revealed that nearly half of the respondents (53.8%) had a bachelor or equivalent degree, 12.2% had PhD degree, 22.2% were Master

degree holders, 3.3% had National Diploma certificate; 2.9% had Nigeria Certificate of Education (NCE) while 5.6% were Senior Secondary Certificate holders.

Additional socio-economic analysis showed that a majority of the respondents (57.2%) resided in their personal house while 76.1% owned at least a vehicle. Among the respondents that affirmed ownership of car(s), 80.6% of them have between 1 to 3 cars; while 19% have between 4 and 6 cars. These findings affirm that majority of respondents are relatively affluent in terms of socio -economic status and could therefore be categorized among the elites in Ibadan. The overall picture painted largely affirmed that the inclusion criteria adopted are valid and produced the desired categories of respondents.

Respondents' perceptions on obesity and child obesity

Respondents were asked to define or explain what they understood to be obesity. This was designed to test their general knowledge of obesity. They were also asked to define or explain child obesity. It was assumed that, being generally well educated; respondents will have a fairly accurate knowledge of what obesity is. The results as depicted in Table 2 confirmed this assumption to be fairly accurate.

Table 2: Respondents definition / description of obesity and child obesity

	Frequency	Percentage
Description / Definition of Obesity		
Having excess fat in the body	57	31.7
Being overweight	68	37.9
Being too fat	47	26.1
Having a higher than normal BMI	8	4.3
Total	180	100
Description / Definition of Child Obesity		
When a child is overweight	69	38.3
Excess fat in a child's body	51	28.3
A child that is too fat	40	22.2
A child with bigger belly than is normal	6	3.4
A child with higher than normal BMI	14	7.8
Total	180	100

Source: Field survey, 2012

Table 2 revealed respondents general knowledge of obesity and child obesity. 37.9% believed obesity is when someone is overweight; 26.1% believed it is a situation whereby someone is too fat; 31.7% defined it as excess of fat in the body; while 4.3% believed it is when the BMI is higher than normal. Table 2 also revealed the various views of respondents on what constituted child obesity. A total of 38.3% described it as when a child is overweight; 22.2% described it as when a child is too fat, 28.3% believed it is when there is excess fat in the body of a child. 3.4% believed it is a situation where the child's belly is bigger than the rest of the body and the remaining 7.8% described child obesity as a child whose BMI is more than the normal age range.

The study further probed if respondents have family members that were /are obese. Data revealed that 25.6% of the respondents had members who were obese in their family, 63.3% did not have obese family members while 11.1% were not sure. Respondents generally believed that obesity can be transferred from parents to children (53.9%) through hereditary processes; 16.1% believed it cannot be inherited and 30% were not sure. Similarly, 78.3% opined that child obesity can be prevented; 4.4% did not agree, while 17.2% were undecided.

Table 3 revealed the respondents understanding of causes of obesity. Respondents were asked to indicate their agreement or otherwise with a number of statements relating to the causes of obesity. Findings show that majority of the respondents, 99.4% agreed that lack of exercise and genetic factors can cause child obesity. A majority of the respondents, 98.9% acknowledged that sedentary lifestyles is one of the causes of child obesity while 99.4% agreed that overfeeding is one of the causes of child obesity. About 72% believed that parental ignorance influences child obesity while 15.6% were not sure. 42.2% believed that eating more than three times a day can cause obesity in children, 37.2 disagreed with this and 20.6% were not sure.

Table 3: Respondents' Understanding of the Causes of Child Obesity

Items	Yes	No	Not Sure	Total
Lack of exercise is one of the causes of child obesity	179 (99.4%)	1 (0.6%)	-	180 (100%)
Genetic factor is one of the causes of child obesity	179 (99.4%)	-	1 (0.6%)	180 (100%)
Sedentary lifestyle is one of the causes of child obesity	178 (98.9%)	2 (1.1%)	-	180 (100%)
Over feeding is one of the causes of child obesity	179 (99.4%)	-	1 (0.6%)	180 (100%)
Do you attach the cause of child obesity to parental ignorance?	129 (71.7%)	23 (12.8%)	28 (15.6%)	180 (100%)
Do you think eating more than three times a day can cause obesity in children?	76 (42.2%)	67 (37.2%)	37 (20.6%)	180 (100%)
Do you think watching TV or playing video games too often without much physical activities can cause child obesity?	119 (66.1%)	40 (22.2%)	21 (11.7%)	180 (100%)
Do you think taking your kids to eateries too often can make them obese?	130 (72.2%)	26 (14.4%)	24 (13.3%)	180 (100%)

Source: Field survey, 2012

Perceived effects of obesity on children

Table 4 showed the respondents' perceived effects of obesity in children. An overwhelming majority of the respondents (85.6%) agreed child obesity in childhood can lead to different ailments in adulthood while 14.4% disagreed with this. Also, while a majority (86.1%) agreed child obesity can shorten the life span of the child affected, 13.9% disagreed. Most of the respondents (91.1%) agreed that child obesity can lower self esteem of the obese. From the table, 95% believed that obese children are often teased and taunted by their peers.

Table 4: Respondents Perception on the Effects of Child Obesity

Items	Agree	Disagree	Total
Child obesity in childhood can lead to different diseases in adulthood	154 (85.6%)	26 (14.4%)	180 (100%)
Child obesity can shorten the life span of the child affected	155 (86.1%)	25 (13.9%)	180 (100%)
Child obesity can lower the self esteem of the affected	164 (91.1%)	16 (8.9%)	180 (100%)
Obese children are often teased and taunted by their peers	171 (95.0%)	9 (5.0%)	180 (100%)

Source: Field survey, 2012

Table 5 revealed respondents' perception of the relationship between social class and child obesity. A majority of the respondents (62.2%) affirmed that children physical appearance is related to parent's social status or class, 21.7% disagreed while 16.1% were not sure. About

half (50%) believed that class perception tend to result in children being spoilt with luxuries not needed, 41.1% rejected this notion while the remaining 8.9% were not sure.

Table 5: Perception on Relationship between Parents' Social Class and Child Obesity

Items	Yes	No	Not Sure	Total
Does your children physical appearance have anything to do with your social status or class?	112 (62.2%)	39 (21.7%)	29 (16.1%)	180 (100)
Do you think because you belong to a certain class, you tend to spoil your kids with luxuries not really needed?	90 (16.1%)	74 (41.1%)	16 (8.9%)	180 (100)

Source: Field survey, 2012

The Key Informants, who were Medical and Healthcare professionals provided insights into how children of the elite usually become obese. Their general perception was that the elites tended to contribute directly and indirectly to obesity among their children. In the words of one of them:

> Most of the parents are culpable. They believed that they are giving to their children what they lacked when they were growing up. It is even worse among parents who experienced a delay in having children, due to medical or professional reasons. Because Africans highly value children, such parents tend to spoil their children. (Female, Medical Doctor, New Bodija, Ibadan, April 2012).

Another respondent explained that:

> Many residents are professionals with little or no time to fraternize with their children. The available option is to ensure that though these children lack parental presence and monitoring, they should not lack any material possession their parents can afford. Many give their children a lot of money with which they usually purchase and consume unhealthy foods. (Male, Nutritionist, Old Bodija, Ibadan, April 2012).

The making and sustenance of obesity was also traced to affluence and ability to afford the comforts of life. According to a respondent:

> Status symbols like having air-conditioners in every room, exotic factory-fitted air-condition cars and retinue of house helps at the beck and call of the family members, most especially the children; have become a status symbol among the elite. All these discourage physical exertion of the body for excess fat to be burnt. These children also consume vast quantities of chemically processed foods and drinks, which are the facilitators of obesity (Female, Medical Doctor, New Bodija, Ibadan, April 2012).

Another reason offered was that the Nigerian society generally has a favorable attitude towards obesity. As explained by a Key Informant:

> The obese status is seen as signs of good living; hence it is described with more acceptable appellations such as being 'plump' 'chubby' as the children are growing up. Such conceptualization usually prevents timely solution until it gets out of hand. The expectation is that such children will shed the excess weight over time. (Male, Physiologist at University College Hospital/New Bodija, Ibadan, April 2012).

Social and Environmental changes also affect child rearing and parenting styles that result in child obesity. According to a respondent:

> Bodija neighborhood is no longer what it used to be. Till mid-1980s, nobody will ask an obese child to exercise before they start. There were peer groups who will encourage that. Every weekend, these children will either go to Premier Hotel (Ibadan) swimming pools or University of Ibadan Swimming pool to swim; and you know, swimming is a good form of physical exercise. But these

> days, everybody, including children, lives sedentary lives. (Male KII, Retired Medical Professor, Old Bodija, Ibadan, April 2012).

Perception on preventive and therapeutic measures on child obesity

Knowledge of existence of a problem is usually assumed to act as a catalyst towards preventive or therapeutic efforts to minimize or remove the problem. As individuals and groups with relatively higher living standards than many other residents in Ibadan, the respondents were expected to be capable of identifying the preventive and therapeutic measures available to combat child obesity. Responding to the question, the respondents offered some measures that they believe can prevent obesity among children.

The major preventive measures identified included physical exercise (31.1%); reduction of junk food intake (20.6%); dieting (17.8%), and eating of balanced diet and in moderation (11.7%). Other measures identified were: combination of appropriate diet and exercising (1.7%); parental care and monitoring (2.8%), creation of awareness among children (2.2%), while 11.7% had no idea on how to prevent child obesity. It is instructive that respondents' prescriptions were behavioral in nature, signifying a belief that child obesity was preventable.

The prevention and treatment of child obesity is predicated on early recognition of the problem and timely intervention to provide some solutions. Many people delay treatment because they believe that their family members are genetically disposed to obesity. This sometimes led to a delay in seeking for a remedy. According to a female Medical practitioner with the University College Hospital, Ibadan:

> Obesity is a genetic issues in some family, hence the belief that it is not strange. Parents in such a situation believe that obesity runs in their family. A position of this nature almost always creates a difficult situation where abnormal cases may be ignored before they seek for medical help. Conventional medical practice is timely intervention against untoward action against healthful living (Female, Nurse/Matron at University College Hospital/New Bodija, Ibadan, April 2012).

Although diet therapy is seen as being central towards enhancing and improving long terms weight loss, compliance is seen as a major obstacle.

> Compliance to the end is very difficult, that is the reason for the little or success for the preventive and treatment measures. Since the elites are used to eating one kind of delicacy or possess certain distinctive pattern of behavior; the will to modify their lifestyle becomes difficult to muster. This informed the little or no success being recorded in preventive and treatment measures against obesity (Male KII, Pediatrician / Old Bodija, Ibadan, April 2012).

The respondents were asked to report on the outcome of whichever method they know or had ever used to treat child obesity. The general assessment, as revealed in Table 6, was that although very little success had been recorded, efforts to treat child obesity has increased people's understanding of the its danger.

Table 6: Respondents Perception on Efficacy on Treatment of Child Obesity

Response	*Frequency*	*Percentage*	*Total*
Little success has been recorded	23	12.8	180 (100.0)
Some success has been recorded	6	3.3	
It has increased people's understanding on the dangers of child obesity	148	82.2	
Helped to educate the public to reduce excess intake of food and drinks	1	0.6	
It has helped to reduce the death among obese children	2	1.1	

Source: Field survey, 2012

Table 6 showed the perceived efficacy of treatment measures adopted for child obesity. According to the table, 12.8% revealed that little success was recorded in the course of treating obesity, 3.3% perceived some amount of success (though not quantified). A majority of the respondents (82.2%) said that the treatment measures have increased their understanding on the dangers of child obesity, while 1.1% believed it has helped to reduce death rate among obese children.

A major reason for the limited success observed reducing child obesity was in the area of compliance with treatment measures. As explained by a respondent:

> There are peculiar cases of poor results in the course of embarking on preventive and treatment measures against obesity; however, a major cause of poor results is absence of self-restraints, which lead to non compliance. Since corporal punishment is no longer in vogue, these children will continue in their sedentary life style and in the consumption of obesity-inducing foods and drinks. (Female, Retired Matron, Old Bodija, Ibadan, April 2012).

Discussion of Findings

Respondents were generally aware of obesity and child obesity. Lack of exercise, and over feeding were given as the main causes of child obesity. Respondents were also aware of various effect of child obesity on health. A majority of the respondents agreed that it could lead to different diseases / ailments in adulthood; others believed that it could shorten life span of the child affected and that obese children were often teased and taunted by their peers, that being obese as a child can lower self esteem, and that children physical appearance is related to parents' social status; all of which are consistent with what literature affirms.

These findings provide further evidence that the factors responsible for child obesity are well known and that there are consistent trends in the associations between being overweight with dietary and physical activity patterns across countries. The various definitions and descriptions of obesity given by respondents lend credence to this. They are also consistent with scholarly difficulties and variations in defining obesity (Falase and Akinkugbe, 2003; Lobstein and Frelut, 2003). As reported elsewhere, including in Nigeria, relative affluence is identified as a major factor influencing child obesity (Akinpelu, Akinola and Gbiri, 2008; Lissau, Overpeck, Ruan, *et al.,* 2004). It would appear that the more a society becomes affluent, the higher the probability that obesity will increase among the populace. It is safe to further posit that the elites in the society are likely to be more disproportionately represented among the obese population in the absence of deliberate efforts to combat obesity.

In the study area, the presence and availability of predisposing factors, such as easy access to large meals, food and beverage drinks advertising, labor-saving devices that reduce

physical activity, sedentary activities such as long periods of television watching, and environments that lack recreation facilities, tend to increase the susceptibility of young children to obesity. This further confirms earlier conclusions reached by scholars such as Akinpelu, Akinola and Gbiri, 2008; Chin and Rona, 2001; and Cole, 2006.

It was assumed that if the elites are aware of the effects of child obesity, they would show serious concern for the possible negative consequences. From the findings of this study, this assumption was found to be misplaced. The fact that this health condition runs in the family makes some parents not to attach serious importance to it. Affluent status and financial capability to afford treatment must have influenced the poor attitudes towards prevention of this health condition.

Another major finding from this study was that the elites recruited for this study did not elicit serious apprehension about the apparent inefficacy of the preventive measures they know or had adopted to combat child obesity. While admitting that the measures they know or had ever used worked only to the extent of increasing public awareness of the dangers of obesity, the general failure of adopted therapeutic methods was dismissed almost casually. This suggests that the elites were not unduly worried about the consequences of obesity although they recognize that a danger exists. The health belief model anticipated this type of action. As explained earlier, health or illness behavior is a function of the perception an individual has of vulnerability to an illness and the perceived effectiveness of treatment with respect to deciding whether or not to seek medical attention. It is likely that respondents believed or were optimistic that the problem will disappear as the child grows older. Earlier findings revealed that nearly 26% of our respondents claimed to have someone that can be considered obese in their family. It is also possible that the cultural preference for chubbiness and a plump appearance mitigate serious apprehensions where issues of being overweight are concerned.

Similarly, the health belief model posits that ‘cue to actions’ is important in motivating individuals to take steps in seeking for positive health outcomes when a situation has been perceived as possibly harmful. In the absence of motivation, an individual may be reluctant to engage in preventive or therapeutic measures. It is likely that many of our respondents were insufficiently motivated to address more effectively the issue of child obesity. Further research is required to discover reasons for this apparent lack of motivation.

Conclusion

What the above suggests is the need for greater public enlightenment campaigns to educate the populace about the dangers of child obesity. The general causative factors in obesity demand that some forms of public protection legislation might be required. Manufacturers of sugary and fizzy drinks should be compelled to warn consumers about the dangers associated with excessive consumption of their product. Agencies such as the National Agency for Food and Drug Administration and Control (NAFDAC) and Consumer Protection Council (CPC) need to become more proactive in warning people about the dangers of consuming obesity inducing diets.

Children of the elites are some of the major targets of consumer advertising, promotion of potentially dangerous foods and drinks should attract serious control by relevant consumer protection agencies. The worldwide high increase in childhood diabetes should galvanize public health practitioners to campaign against the promotion and glamorization of unhealthy lifestyle and food consumption. It is instructive that the study area contains the largest concentration of fast food eateries and restaurants in Oyo state. The presence of these eateries is likely to compound the existing nutritional challenges of obese children of the elites residing in the area.

In addition, there is need for more recreational facilities within and around high class residential areas in the country. Such facilities should encourage more outdoor and calories burning activities. The use of high-tech equipment such as computers, cell phones with access to the internet, which have contributed significantly to sedentary lifestyles among children of the elites should be monitored and controlled by parents. In addition, the lifestyle of elite parents that permits little or generally inadequate time to interact with their children requires urgent modifications. Finally, the authors call for provision of healthy outdoor environments where youngsters can interact safely. This is because a little more of outdoor activities and a lot less of sedentary lifestyle will contribute to a healthier life for children of the elites.

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