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Obesity among doctors: A pilot study in Port Harcourt, Nigeria

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Abstract

Background: Doctors are ambassadors for change through counselling of their clients, patients and the general populace on lifestyle modification, maintenance of ideal weight and avoidance of obesity. Due to the sedentary lifestyle of doctors and other healthcare personnel, they are found to be susceptible to obesity. Consumption of snacks, family history of obesity and lack of physical activity /exercise are predictors of obesity among doctors.
Objective: The general public is usually advised by doctors on a healthy lifestyle which includes maintaining ideal body weight but it has been observed that many healthcare providers do not necessarily keep to this advice. This study hopes to observe if the doctors are also keeping within the ideal body weight.
Methodology: This was a descriptive observational study conducted among medical doctors in Rivers State, Nigeria. The study was conducted in Port Harcourt which is the capital of Rivers State. A semi-structured self-administered 37-item questionnaire divided into five sections was used. Section 1: Demographics, Section 2: Short Form of the International Physical Activity questionnaire, Section 3: lifestyle and dietary habits, Section 4: medical history and Section 5: measurements. Random sampling was used.
The weight, height, waist circumference and hip circumference were measured. The weight was measured to the nearest 0.1kg and the height to the nearest 0.1cm using standardized measures and equipment while the waist circumference was measured using a tape measure to the nearest 0.1cm. The Body Mass Index was calculated and compared with the World Health Organization classification of obesity.
Results: The number of research participants was102 doctors were recruited, Frequency (%) for each weight category - 2.9% underweight, 6.9% normal weight, 62.7% overweight, 21.6% Class 1 obesity, 2.0% Class 2 obesity and 3.9% Class 3 obesity.
Conclusion: Despite the advice given to patients to avoid obesity and maintain an ideal weight, some doctors are obese. This predisposes them to non-communicable disease. They also consume sugared drinks. Doctors need to practice the counselling given to patients/clients.

Key Words: Obesity, Body Mass Index, non-communicable diseases, Overweight

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Introduction

Obesity is an epidemic worldwide as it is a health problem and even a hazard globally in the 21st century[1-3]. This is because there are a lot of non-communicable diseases whose risk factors are linked to obesity and overweight. The more people that become overweight and obese, the more people will become ill thus leading to more burden on the health systems, with a resultant increase in morbidity and mortality. More people die from obesity than overweight[4,5]. Obesity can be defined as the accumulation of excessive fat in the body and this occurs when the amount of calories consumed exceeds the amount of energy that is expended[1,3,4,6,7]. There are social, behavioural, cultural, psychological, environmental, metabolic and genetic factors linked to obesity[4,6,8].

Some of the causes of obesity are affluent lifestyle which results in decreased physical activity due to the advancement of technology in transportation, use of electrical appliances which are effortless, sedentary lifestyle, doing office jobs, spending long periods watching television and use of computers and surfing the internet, consumption of large amounts of fat and sugar[4,6]. Some scholars have tagged obesity as an illness and it is a risk factor for several diseases such as diabetes mellitus, diseases of the cardiovascular system, some cancers, metabolic problems, hypercholesterolemia, insulin resistance, obstructive sleep apnoea, and osteoarthritis[6,9,10]. Obesity is also associated with psychological problems, poor self-esteem, early retirement, increased morbidity and mortality[2,6,8,10]. Obesity is a preventable cause of death hence it can be prevented by weight control[3,6]. Several risk factors have been associated with obesity[7].

Generally, due to the work done at the medical workplace, health care workers including doctors have a sedentary lifestyle which predisposes them to obesity[4,11]. In as much that physicians who are health professionals are expected to practice the health education they give to the populace on weight control and nutrition, there is a paucity of data on obesity among doctors[4,11]. Discussions on obesity among physicians are usually neglected even though physicians are not immune to obesity if they do not practice healthy lifestyles and how physicians counsel their patients on obesity if affected by the physician's body mass index[12].

Some of the snacks consumed in Nigeria are meat pie, cakes, biscuits, puff puff, sausage roll, egg roll, fish roll, which all contain large amounts of fat, sugar and salt. Coupled with the sedentary lifestyle of doctors, sitting long hours in the consulting room attending to patients hence the doctors are consuming more calories than the energy that is ben used by the body. Therefore for a healthy population with doctors inclusive, medical practitioners should also practice what they teach and be of the ideal body weight[3].

Iwuala et al studied obesity among health service providers in Nigeria, danger to long-term health worker retention showed that Nigerian healthcare workers including doctors are not exempted from obesity as some of them are obese[2]. Some of the risk factors of obesity found in doctors in Pakistan are consumption of snacks, family history of obesity and sedentary lifestyle[11].

Mahmood et al in a study on predictors of obesity among postgraduate trainee doctors working in a tertiary care hospital of the public sector in Karachi, Pakistan showed that having lunch outside the home, male gender, drinking tea always, snacking in between meals, family history of obesity and physical inactivity were associated with obesity[11]. Eating meals outside the home was a predisposing factor as most meals cooked in commercial eateries have a high fat and sugar compared to homemade food. Tea in this study was found to be associated with obesity as sugar is added to make tea sweet.

Basu et al in a study on pattern and determinants of overweight and obesity among future physicians in Nepal revealed that doctors tend to be predisposed to obesity and overweight due to their sedentary lifestyle. This made them susceptible to illnesses associated with obesity as its risk factor[4]. Obese respondents in this study spent longer times on the computer and watching television, drank large quantities of soft drinks, junk foods, consumed small quantities of fruits and vegetables, were physically inactive, addicted to alcohol, were males and some of them had a family history of obesity.

Jayara et al in a study on the prevalence of overweight and obesity among students of a medical college in south India: a pilot study showed a relationship between the consumption of junk food and obesity/overweight[6].

At the time of conducting this study, there was no study on obesity particularly amongst physicians in Nigeria. Hence this pilot study investigates obesity among physicians in Port Harcourt which is located in southern Nigeria. Few studies conducted among healthcare professionals and doctors have shown that some doctors are obese. Health personnel are expected to show exemplary lifestyle and be role models to the public regarding weight control and management. Doctors are ambassadors for change through counselling of their clients, patients and the general public on lifestyle modification, maintenance of ideal body weight and avoidance of obesity because of its consequences therefore this pilot study investigates obesity and its risk factors among doctors in Rivers State, southern Nigeria.

Subjects, Materials and Methods

This is an observational prospective study conducted among doctors in Rivers State, Nigeria. Participation in the study was voluntary. The study was conducted in Port Harcourt which is the capital of Rivers State, with several public and private hospitals. Respondents for the study were recruited via random sampling.

The Questionnaire

A semi-structured 31-item questionnaire divided into five sections was administered. Section A had questions related to demographics, section B the short version of the international physical activity questionnaire, section C lifestyle and dietary habits, section D medical history- family history of obesity, respondent on any weight increasing drugs example steroids, omeprazole, thyroxin, oral hypoglycaemic agents, history of any disease with obesity as a risk factor such as autoimmune disease, diabetes mellitus, hypertension, myocardial infarction, respiratory challenges, thyroid disease and venous thromboembolism. Section E comprised of measurements. Section A comprised seven questions, section B seven questions, section C thirteen questions and section D four questions.

Measurements

In this study, the body mass index (BMI) was used to measure the body fat of respondents. It is easy to measure the body mass index which is a measure of the weight in kilograms divided by the square of the height[13,14], the height was measured to the nearest 0.1cm. A Hana bathroom scale was used in measuring the weight which was measured to the nearest 0.1Kg.

Subjects were allowed to rest for at least fifteen minutes before the blood pressure was measured. The blood pressure was measured using an Accoson table mercury sphygmomanometer. The fifteen minutes rest was used to relieve the respondent of any stress

After the calculation of the body mass index, obesity was then classified using the international classification of obesity and overweight by the World Health Organization[15] as Underweight <18.5kg/m^2, Normal 18.5-24.9kg/m^2, Overweight 25-29.9kg/m^2, Class I obesity 30-34.9kg/m^2, Class II obesity 35-39.9kg/m^2 and Class III (severe or morbid) obesity > 40kg/cm^2.

Results

One hundred and two (102) doctors participated in the study. Most of the respondents were between the ages of 31-40 years 49(48%). Table I shows the socio-demographic characteristics of the respondents. Most of the respondents worked in a government hospital 77(80.2%). Table 2 shows the time spent watching television and Table 3 the eating pattern of respondents.

The mean number of soft drinks consumed by the respondents is 2.86+ 2.28. The heaviest meal was lunch in 58(58.6%) of the respondents, 52(52%) of the respondents usually skip breakfast, 69(68.3%) of the respondents ate snacks and 73(71.6%) of the respondents drink soft drinks while at work. 23(22.5%) of the respondents consume alcohol. The result showed that 18(17.6%) of the respondents had a family history of obesity. 2(2.0%) of the respondents use weight increasing drugs. Table 4 shows the respondents' body mass index categories. Table 5 shows the relationship between social demographics and obesity while Table 6 shows the relationship between eating pattern and obesity.

Table 1: Socio-demographic characteristics of the respondents

Variable	Frequency(N)	Percentage (%)
Age (N=102)		
21-30 Years	26	25.5
31-40 Years	49	48
41-50 Years	18	17.6
51-60 Years	4	3.9
61-70 Years	4	3.9
71-80 Years	1	1
Sex (N=102)		
Males	34	33.3
Females	68	66.7
Marital status (N=102)		
Separated	2	2
Single	3005	33.3
Married	66	64.7

Place of work of the respondents

Variable	Frequency(n)	Percentage (%)
Hospital Ownership(N=96)		
Military Hospital	1	1
Company hospital	3	3.1
Non-Governmental Organization	3	3.1
Private	12	12.5
Government	77	80.2

Table 2: Time spent on watching television (N=102)

Variable	Frequency(N)	Percentage (%)
Time spent watching TV(Hours)		
<= 3.0	73	71.6
3.1 - 6.0	18	17.6
6.1 - 9.0	7	6.9
9.1+	4	3.9

Table 3: Eating Pattern of the respondents

Variable	Frequency(N)	Percentage (%)
Heaviest meal(N=99)		
Breakfast	16	16.2
Lunch	58	58.6
Dinner	25	25.3
Skip Breakfast(N=102)		
Yes	52	52.0
No	50	49.0
Eat snacks(102)		
Yes	69	68.3
No	33	32.4
Drink soft drinks(N=102)		
Yes	73	71.6
No	29	28.4

Table 4: Body Mass Index Category of the respondents

Variable	Frequency(N)	Percentage (%)
Underweight	3	2.9
Normal weight	7	6.9
Overweight	64	62.7
Class I Obesity	22	21.6
Class 2 Obesity	2	2.0
Class 3 Obesity	4	3.9

Most of the respondents were overweight, 64(62.7%)

Table 5: Relationship between Social demographics and obesity

Variable	Normal weight	Overweight/Obese	Fisher's Exact(P-value)
	Sex(N=99)		
Males	2(28.6)	32(34.8)	0.111(1.000)
Females	5(71.4)	60(65.2)	
Marital Status(N=99)			
Separated	0(0)	1(1.1)	7.179(0.142)
Single	2(28.6)	31(33.7)	
Married	5(71.4)	60(65.2)	
Age(N=99)			
= 40 Years	6(85.7)	67(72.8)	0.558(0.672)
>40 Years	1(14.3)	25(27.2)	

Table 6: Relationship between eating pattern and obesity

Variable	Normal weight	Overweight/Obese	Fisher's Exact(P-value)
Heaviest Meal(N=99)			
Breakfast	0(0)	16(18)	3.983(0.110)
Lunch	3(42.9)	54(60.7)	
Dinner	4(57.1)	19(21.3)	
Skip Breakfast(N=97)			
Yes	3(42.9)	47(52.2)	0.228(0.709)
No	4(57.1)	43(47.8)	χ
Place of breakfast(N=97)			
Home	5(71.4)	48(52.7)	2.841(0.242)
Outside home	0(0)	26(28.6)	
Don't eat breakfast	2(28.6)	17(18.7)	
Place of Lunch(N=98)			
Home	2(28.6)	26(28.6)	1.945(0.378)
Outside home	3(42.9)	54(59.3)	
Don't eat Lunch	2(28.6)	11(12.1)	χ
Place of Dinner (N=98)			
Home	7(100)	78(85.7)	0.216(1.000)
Outside home	0(0)	7(7.7)	
Don't eat dinner	0(0)	6(6.6)	
Eat Snacks (N=98)			
Yes	3(42.9)	63(69.2)	2.056(0.211)
No	4(57.1)	28(30.8)	
Drink Soft Drinks (N=99)			
Yes	5(71.4)	65(70.7)	0.002(1.000)
No	2(28.6)	27(29.3)	

Discussion

In the management of some diseases, lifestyle modifications may be part of the treatment given to patients and clients. Medical work involves counselling patients on different aspects of lifestyle including maintaining ideal body weight. In this study, most of the respondents were overweight 64(62.7%), 22(21.6%) had to class I obesity, 2(2.0%) class II obesity and 4(3.9%) were morbidly obese. When compared with the study conducted among postgraduate trainee doctors in Pakistan where 31.6% were overweight and 28.2% obese[11], it is slightly higher in this study. This shows that some doctors are not maintaining ideal body weight no matter the knowledge they have on nutrition. In this study, more females doctors 60(65.2%) were obese compared to their male counterparts. This was the opposite in the study by Basu et al where more male future physicians 28.5% were obese. Medical doctors also ate snacks and drank soft drinks which are high in calories. Though the study did not investigate the type of snacks consumed, respondents who ate their breakfast and lunch outside the home were obese compared to those taking meals at home. Those who drank soft drinks 65(0.7%) were obese. Other studies conducted have shown that overweight and obesity have been linked to the consumption of large quantities of soft drinks, and snacking[4,10] as seen in this study. This is similar to a study in Pakistan where 64% took lunch outside the home and 59% took snacks in between meals[11].

Conclusion

Obesity is a global problem affecting both developed and developing countries. The developing countries including Nigeria are getting westernized affecting lifestyle and diet. Medical doctors who counsel patients on the risk factors of various non-communicable diseases should also avoid such risk factors including obesity. If doctors get obese, they may not have the morale to advise their patients on achieving and maintaining ideal body weight. Therefore the following recommendations are proposed: hospitals should have a canteen where good and healthy food is cooked for health care workers to eat while at work, doctors should be encouraged to eat homemade food always, and hospital management should monitor the types of snacks and drinks sold within the hospital. Sugared drinks and snacks should not be sold within the hospital premises only proper meals.

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