

Frequency of obesity among type 2 diabetic patients attending a tertiary hospital in Lagos state, Nigeria

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and Falade MI

Obesity and type 2 diabetes mellitus constitute major public health issues in modern societies worldwide. They have been linked in several ways. Obesity is involved in the pathologic process that culminates in the development of type 2 diabetes.

The aim of this study was to assess the frequency of obesity in known type 2 diabetic patients and also to determine the presence of comorbidities associated with these two conditions.

The study was carried out at Lagos University Teaching hospital and was designed as a retrospective review of the medical records of type 2 diabetic patients undergoing treatment at the Hospital for the year 2011. Seventy six case notes were accessed. Out of the 76 case notes only 63 were used in analysis. Assessment included weight, height, age, sex, comorbidities present, genetic factors and duration of diabetes.

Forty six patients (73%) were either obese (34.9%) or overweight (38.1%) while 23.8% were of normal weight. The majority of diabetic patients were in the age groups 50-59 and 60-69. Average BMI for obese and overweight patients were 32.73+ 3.73 and 26.61+ 1.88 respectfully. Comorbidities such as hypertension, dyslipidaemia, retinopathy, neuropathy, renal impairment and ulcer were found present.

The study revealed high prevalence of obesity/overweight among the diabetic patients. Hypertension and retinopathy were common in these patients.

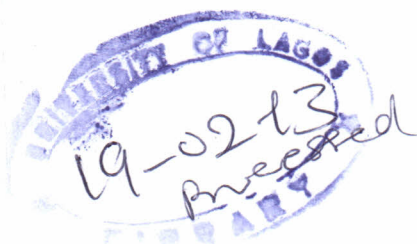
Health care professionals should encourage patients to adopt preventive measures or life style that will lead to weight loss as weight loss by 5% is enough to reduce the incidence of comorbidities which affect mortality and morbidity.

Biography

Aina BA completed her PhD in 2005 from University of Lagos. She is an Associate professor in the Department of Clinical Pharmacy and Biopharmacy of same University. She has published more than 30 papers in peer reviewed journals.

Ogbo PU is a PhD candidate and Assistant Lecturer in Department of Clinical Pharmacy and Biopharmacy, University of Lagos. Falade MI is about completing her Bachelor of Pharmacy from the University of Lagos

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Relationship between BMI, perception of weight and methods of weight reduction among pharmacy students of University of Lagos

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Obesity is associated with many diseases. It is a leading cause of death worldwide. There are two main causes of obesity—diet and lack of physical activity. Pharmacists should advice on weight control products, eating habits, physical activity and healthy lifestyles, especially for patients who want to maintain their weight loss.

This study was to determine the perception of pharmacy students (future pharmacists) on their weights and method of weight control.

A modified version of CDC Youth Risk Behavior Survey questionnaire 2011 was self administered to pharmacy students who consented to fill the questionnaire. About 450 students consented to fill the questionnaires out of which 445 questionnaires were eventually used for analysis.

Majority (70.2%) of the students described themselves as having the right weight while only about 1 % as very overweight and 13% as slightly overweight.

The mean BMI for those that described them as being very overweight was 34.67 ± 1.00 while the very underweight had a mean BMI of 18.24 ± 2.42 . These results tally with classification of BMI.

All those that described themselves as being very overweight were trying to lose weight while about 82% of the slightly overweight were trying to lose weight. Among the very overweight and slightly overweight, 40% and 30% went without food for 24 hours; 20% and 10% took diet pills; 0% and 9% vomited or took laxatives respectively. Only 22% of those trying to lose weight were involved in physical activity on all 7 days before the survey.

Obesity isn't much of a problem amongst the students. The few that are overweight should be encouraged to employ right methods of weight control.

Biography

Aina BA completed her Ph.D in 2005 from University of Lagos. She is an Associate professor in the Department of Clinical Pharmacy and Biopharmacy of same University. She has published more than 30 papers in peer reviewed journals.

Oyerinde OO is an Assistant Lecturer and a PhD candidate in the Department of Clinical Pharmacy and Biopharmacy, University of Lagos.

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RELATIONSHIP BETWEEN BMI, PERCEPTION OF WEIGHT AND METHODS OF WEIGHT REDUCTION AMONG PHARMACY STUDENTS OF UNIVERSITY OF LAGOS

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Introduction

- Obesity is associated with many diseases. It is a leading cause of death worldwide.
- There are two main causes of obesity – diet and lack of physical activity.
- The role of pharmacists in management of obesity include
 - i) raise awareness and provide information/ advice;
 - ii) refer patients to specialist services e.g. diet, drugs or surgery
 - iii) review and maintain progress.
- Pharmacists should advice on weight control products, eating habits, physical activity and healthy lifestyles, especially for patients who want to maintain their weight loss.



Objective

- This study was to determine the perception of pharmacy students (future pharmacists) on their weights and method of weight control.



Method

- A modified version of CDC Youth Risk Behaviour Surveillance (YRBSS) questionnaire 2011 was self administered to pharmacy students who consented to fill the questionnaire. About 450 students consented to fill the questionnaires out of which 445 questionnaires were eventually used for analysis.
- SPSS 15.0 was used for analysis



YRBSS

- The Youth Risk Behavior Surveillance System (YRBSS) monitors six categories of priority health-risk behaviors among youth and young adults:
 - 1) behaviors that contribute to unintentional injuries and violence; 2) tobacco use; 3) alcohol and other drug use; 4) sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) infection; 5) unhealthy dietary behaviors; and 6) physical inactivity.
- In addition, YRBSS monitors the prevalence of obesity and asthma.

Relevant questions

- How do you describe your weight?
- Which of the following are you trying to do about your weight?
 - During the past 30 days, did you go without eating for 24 hours or more (also called fasting) to lose weight or to keep from gaining weight?
 - During the past 30 days, did you take any diet pills, powders, or liquids without a doctor's advice to lose weight or to keep from gaining weight? (Do not include meal replacement products such as Slim Fast.)
 - During the past 30 days, did you vomit or take laxatives to lose weight or to keep from gaining weight?
 - During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day? (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.)

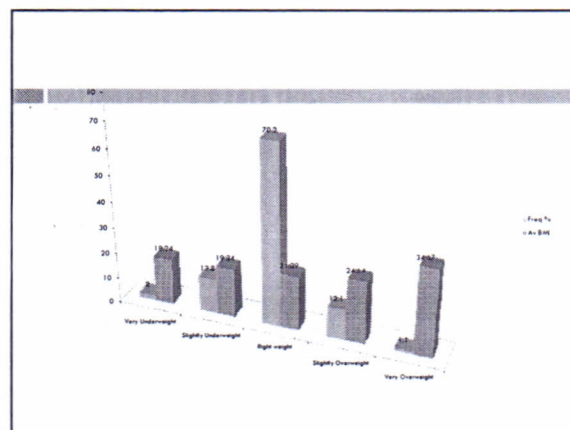
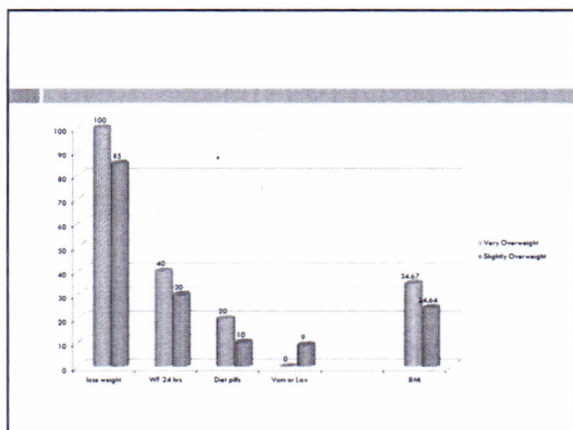
Results I

- Majority (70.2%) of the students described themselves as having the right weight while only about 1 % as very overweight and 13% as slightly overweight.
- The mean BMI for those that described themselves as being very overweight was 34.67 ± 1.00 while the very underweight had a mean BMI of 18.24 ± 2.42 . These results tally with classification of BMI.



Results II

- All those that described themselves as being very overweight were trying to lose weight while about 82% of the slightly overweight were trying to lose weight. Among the very overweight and slightly overweight, 40% and 30% went without food for 24 hours; 20% and 10% took diet pills; 0% and 9% vomited or took laxatives respectively. Only 22% of those trying to lose weight were involved in physical activity on all 7 days before the survey



Conclusion

- Obesity isn't much of a problem amongst the students. The few that are overweight should be encouraged to employ right methods of weight control



Limitations

- Responses are subjective
- BMI was not measured
- Non responses

Acknowledgements

- Ethical Committee of Faculty of Pharmacy, Unilag
- Pharmacy students that consented to participate in the study
- Staff of Dept of Clinical Pharmacy and Biopharmacy, Unilag
- CDC

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Body Mass Index (BMI) {Quetelet index}

BMI	CLASSIFICATION
< 18.5	underweight
18.5-24.9	Normal weight
25.0-29.9	overweight
30.0-34.9	Class I obesity
35.0-39.9	Class II obesity
≥ 40.0	Class III obesity

WHO designations include the following

- Grade 1 (commonly called overweight) - BMI of 25-29.9 kg/m²
- Grade 2 overweight (commonly called obesity) - BMI of 30-39.9 kg/m²
- Grade 3 overweight (commonly called severe or morbid obesity) - BMI greater than or equal to 40 kg/m².
- The categories for particularly severe obesity are as follows:
 - Severe obesity - BMI greater than 40 kg/m²
 - Morbid obesity - BMI of 40-50 kg/m²
 - Super obese - BMI greater than 50 kg/m²

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Introduction

- Obesity and type 2 diabetes mellitus constitute major public health issues in modern societies worldwide. They have been linked in several ways.
- Obesity is involved in the pathologic process that culminates in the development of type 2 diabetes.
- The BMI is used in the classification of obesity
- Obesity is defined as having a body mass index of 30 or more.
- Obesity decreases the quality and length of life, and increases individual, national, and global healthcare costs.



Objective

- The aim of this study was to assess the frequency of obesity in known type 2 diabetic patients and also to determine the presence of comorbidities associated with these two conditions.



Methods

- The study was carried out at Lagos University Teaching hospital
- Retrospective review of the medical records of type 2 diabetic patients undergoing treatment at the Hospital for the year 2011.
- Seventy six case notes were accessed. Out of the 76 case notes only 63 were used in analysis.
- Assessment included weight, height, age, sex, comorbidities present, genetic factors and duration of diabetes.
- SPSS 15.0 was used to analyse data



Results I

- Forty six patients (73%) were either obese (34.9%) or overweight (38.1%) while 23.8% were of normal weight.
- The majority of diabetic patients were in the age groups 50-59 and 60-69.
- Average BMI for obese and overweight patients were 32.73 ± 3.73 and 26.61 ± 1.88 respectively.
- Comorbidities such as hypertension, dyslipidaemia, retinopathy, neuropathy and renal impairment were found present.

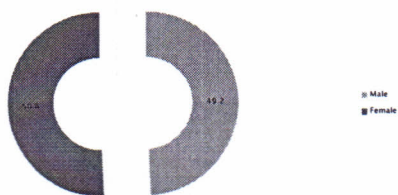


Results II

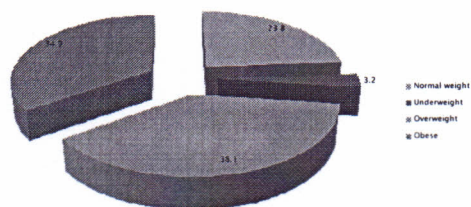
- 67.7% of males were either obese (16.1%) or overweight (51.6%) while 78.1% of females were either obese (53.1%) or overweight (25%)
- Statistical significance ($p = .02$)



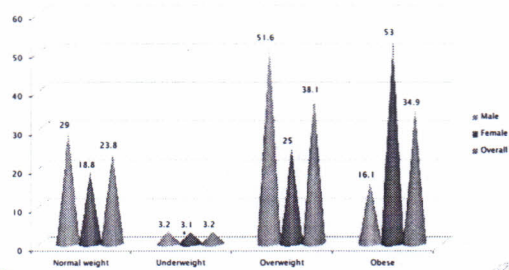
Frequency by sex



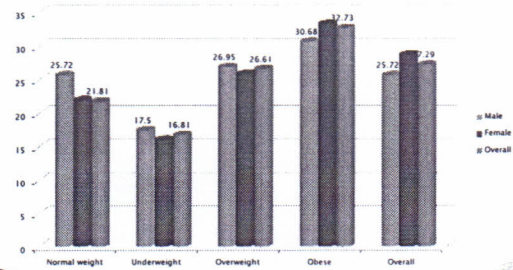
Frequency of obesity



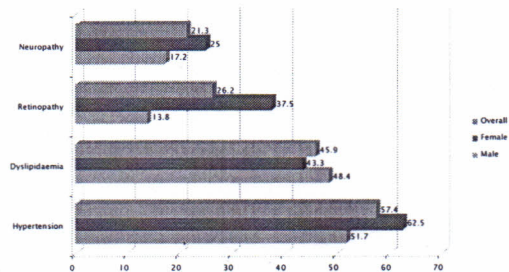
Frequency of obesity



Average BMI



Co morbidities



Conclusion

- The study revealed high prevalence of obesity/overweight among the diabetic patients.
- Hypertension, dyslipidaemia and retinopathy were common in these patients.

Recommendation

- Health care professionals should encourage patients to adopt preventive measures or life style that will lead to weight loss as weight loss by 5% is enough to reduce the incidence of comorbidities which affect mortality and morbidity



Limitations

- Small population size
- Illegibility of physician's handwriting
- Missing information
- Torn case notes

References

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- LUTH Medical Records Staff
- OMICS GROUP

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