Diabetes Mellitus is one of the commonest non-communicable diseases (NCDS) and a major cause of morbidity and mortality all over the world. Obesity (High Body Mass Index, BMI) on the other hand, is an independent risk factor for the development of Type 2 Diabetes Mellitus (T2DM) buttressing their co-existence and possible relationship. This study aimed at determining the relationship between T2DM and the BMI in the study population.

This was a hospital-based cross-sectional study. A total of 216 diabetics and 216 age and sex matched non-diabetics (controls) were consecutively recruited based on selection criteria within the study period. More females 123 (56.9%) than males 93 (43.1%) participated with a male to female ratio of 1:1.3. Two hundred and five (94.9%) of the case respondents and 181 (83.8%) of the control group had ever been married. The most represented age group among the diabetics, 79 (36.6%), were more than 60 years of age while the least represented age group 3 (1.4%) was less than 30 years. The diabetic respondents and control group had a mean age of 54.70 ± 10.59 years and 54.67 ± 10.53 years respectively. The highest proportion of case respondents, 70 (32.4%) had post-secondary education while the least proportion, 33 (15.3%) had no formal education. Amongst the control group, the highest proportion, 72 (33.3%) had post-secondary education while the least 20 (9.3%) had no formal education. Seventy-four diabetics were self employed and represented the largest number of responders in their category. This was also applicable in the control group in which the largest number of responders, 86 (39.8%), were also from the self employed category.
A large proportion of the diabetics were observed to have a higher than normal BMI unlike what obtained in the control group. The largest number of case responders 94 (43.5%) were overweight closely followed by the obese group 70 (32.4%) while the rest 52 (24.1%) were of normal weight. There was a statistical significant relationship (p=0.000) between T2DM and the BMI of diabetic subjects when compared with their non-diabetic counterpart showing that diabetic subjects tend to have a higher than normal BMI.

Sixty-four (91.4%) of the obese diabetics had dyslipidaemia while 120 (82.2%) of the non-obese diabetics had dyslipidaemia. There was no statistical significant relationship between obesity and dyslipidaemia in this study group (p=0.074).

Forty-five (64.3%) of the obese diabetics were hypertensive while 66 (45.2%) of the non-obese were hypertensive. There was a statistical significant relationship between obesity and hypertension in both bivariate and multivariate analysis.

Only 12 (17.1%) obese diabetics had adequate physical activity while 58 (82.9%) had inadequate physical activity. Eighty-four (57.5%) of the non-obese diabetics had adequate physical activity while sixty-two (42.5%) had inadequate physical activity. There was a statistical significant relationship between obesity and physical inactivity in both bivariate and multivariate analysis.

This study demonstrated a relationship between type 2 DM and the Body Mass Index of adult diabetic subjects in an African community with a tendency of having a higher than normal BMI among the study group. Hypertension and physical inactivity were noted to be significant risk factors for obesity in the study group. Routine anthropometric measurements for all patients as well as educating them on lifestyle measures to reduce weight and avert further complications are recommended by the author.