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MODELING BODY MASS INDEX (BMI), BLOOD PRESSURE (BP), AGE AND SEX TO INVESTIGATE CARDIOVASCULAR PROBLEMS

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Cardiovascular disease (CVD) is a general term for conditions affecting the heart or blood vessels, usually associated with building up of fat deposits inside the arteries. Majority of individuals with CVD may go about their normal day-to-day schedule of duties without realizing the danger the disease portends. As the severity increases, affected persons become more prone to suffer death. In this study, some risk factors other than family history, diabetes, poor diet, and smoking have been investigated. We modelled the relationship between BMI, BP and Age for male and female separately so as to investigate the fluctuations in the proximity to cardiovascular diseases between male and female individuals. Many studies have shown a couple of significant associations between BP, BMI and Age, but in this study, we will like to predict the likelihood of having an abnormal BMI with age to bring to the notice when one is due for check-up to prevent cardiovascular problems using multiple linear regression. A receiver Operating Characteristics (ROC) was done to compare male and female individuals considering their ages and the results show that there seems to be a positive correlation.

Biography

Uchenna Ogoke is a lecturer in the Department of Mathematics and Statistics, University of Port Harcourt, Nigeria. She has her research interest in the area of Biostatistics. She has attended many Local and International workshops and conferences where she presented her works and won a number of awards. In one of her works, she developed a model which was adopted in the bipolar investigation, using "The Modified Logistic Ridge Regression Estimator". She has published widely in both Local and International journals of which "Cubic Spline Regression: An Application to Early Bipolar Disorder Dynamics" is one of the publications. Her publications have provided positive interactions and collaborations between her and some allied disciplines, thereby strengthening the profile of statistics in the Biosciences. She is a member of relevant professional bodies such as a Nigerian Statistical Association (NSA) and the International Biometric Society (IBS), Washington DC, USA.

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