

ABSTRACT

Metabolic syndrome (MS) is rapidly increasing in prevalence worldwide and is a top risk factor for non-communicable diseases which are among the world's biggest killer diseases. In Africa, the prevalence of MS is estimated to be between 17% and 25%. Studies have compared the prevalence of MS but yielded varied rates among the youth and adults in various countries. These variations are suggestive of the fact that MS components could be population dependent. The prevalence of MS and association between age, gender and MS remains uncertain among the youth who are vulnerable of developing MS because they exhibit unregulated dietary habits. The purpose of this study was to establish the prevalence and components of MS by age and gender among university students in Kenya. Specifically the study; examined the prevalence and major components of MS, the association between age and MS components and between gender and MS components among Maseno university students. The study employed descriptive cross-sectional study design with a target population of 17,000 students. A sample size of 429 participants determined by Fisher *et al.* formula was recruited using stratified sampling technique by age and gender criterion. Socio-demographic data of participants were collected using a pre tested questionnaire. Anthropometric parameters including Body Mass Index, Waist Circumference and biochemical parameters of triglyceride and high-density lipoprotein cholesterol were measured by following the World Health Organization guidelines. Blood pressure was measured in mmHg using automated Omron M2 blood pressure device and fasting blood sugar by use of a Hemocue blood glucose analyzer. Descriptive statistics was used to present prevalence of MS while chi-square and correlation analysis determined the association between age, gender and MS components. The results indicated an overall MS prevalence of 12.4%. The most frequently observed components were low HDL-c at 98.1% (males 65% and females 33.1%), BMI $\geq 30\text{kg/m}^2$ (4.9%), High fasting blood sugar (24.5%). Central obesity, high blood pressure and raised TG were observed less frequently (9.3%, 1.9% and 1.2% respectively). The study concluded that MS prevalence was high among the youthful population of Kenya and varies with age and gender. This study therefore recommended that surveillance policies be developed to identify affected youths and those at risk of having MS to ensure risk factors are detected early enough for appropriate preventive measures to be undertaken, involving education on the importance of healthy diet and maintenance of body fitness to reduce the risk of youths developing cardiovascular diseases.