It is well known that pre-hypertension is associated with an increased risk of the development of hypertension and subsequent cardiovascular disease and higher mortality risk. Its early identification and implementation of preventive strategy is a priority.

The objective of this study was to determine the prevalence, associated cardiovascular risk factors and comorbidities and determinants of pre-hypertension among adult patients at the General Outpatient Clinic of Aminu Kano Teaching Hospital, Kano. This was with the hope of increasing physicians’ awareness about this cardiovascular risk factor in our environment and encouraging early detection and intervention.

In this cross-sectional study, participants were systematically selected for the study between June and August 2012. Data on participants’ blood pressure, anthropometric characteristics, and laboratory parameters were collected. Prehypertension was defined as systolic blood pressure (SBP) between 120-139 mm Hg and/or diastolic blood pressure (DBP) between 80-89 mm Hg. Variables were considered significant at a p-value less than 0.05. Statistical analysis was performed using SPSS version 16 software.

A total of 410 participants were recruited for the study, comprising 42.9% males and 57.1% females. The age of the participants ranged from 18 years to 80 years with a mean age of 36 years (SD ± 12.4). Majority of the participants were married and Hausa by tribe, with tertiary education.

The prevalence of prehypertension was 29.7%. The 20-29 year age range had the highest frequency, with a female preponderance. The prevalence of cardiovascular risk factors such as
overweight (BMI≥25 Kg/m²), elevated plasma glucose >6.0 mmol/dl, serum total cholesterol >5.2mmol/dl, serum LDL cholesterol >3.4mmol/dl, serum HDL cholesterol <1.0mmol/dl, serum triglyceride > 1.7mmol/dl in the study was 34.4%, 9.3%, 17.5%, 19.8%, 27.2%, and 15.2% respectively. On bivariate analysis, age, educational level, occupation, marital status, body mass index, fasting blood glucose and lipid parameters were associated with prehypertension. However on regression analysis, only increasing age (OR 1.032, CI 1.003- 1.063, p = 0.033), stress related occupation (OR 2.1185, CI 1.239-3.855, p=0.007) obesity (OR 1.057, CI 1.003-1.114, p=0.038) and elevated plasma glucose (OR 1.494, CI 1.091-2.045, p=0.012) were independently associated with prehypertension.

The high prevalence of prehypertension and clustering of cardiovascular risk factors indicates an urgent need for routine screening for this condition. These findings, along with the presence of co-morbidities amongst participants, support recommendations for physicians to actively target lifestyle modifications and multiple risk reduction in prehypertensive persons.