



## **Prevalence of Hypertension among Working Adults in Rwanda**

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### **Dear Editor in Chief**

Researchers have shown that hypertension, once rare in traditional African societies, is rapidly becoming a major public health problem (1). In Africa, the shift of many people from rural to urban areas has rendered hypertension an epidemic and with it comes “the burden of civilization” (2). The population of Sub-Saharan Africa is now characterized by increasing longevity and westernization and “hypertension has now changed from a relative rarity to a major problem”. Furthermore, the anticipated increase in the burden of hypertension is likely to be of momentous consequences because only a few people will have access to treatment and control is likely to be very poor (3). This epidemiological transition could partially be explained by the rapid urbanization with changes in lifestyles, especially dietary habits and physical activity patterns and the group that appears to be most at risk for hypertension are those individuals of medium to high socio-economic status in urban areas (4). The modifiable risk factors associated with hypertension in this group include obesity, smoking, lowered physical activity, high alcohol consumption and hyperglycemia and are attributed to increased life expectancy, urbanization and its associated lifestyle changes characteristic of economic progress in developing countries (5). The at-risk groups include company managers, university employees, senior government officials and businessmen or women, especially those living and working in urban environments (4). As much as the poor may

suffer from malnutrition and related illnesses, the groups in question are at risk of suffering from illnesses attributable to living a sedentary lifestyle.

A cross-sectional survey among 100 adults aged 27 to 67 years at an urban tertiary education institution in Rwanda showed that 36 participants were classified as being hypertensive, giving a crude prevalence of 36%. Of these only 3% were aware of their hypertensive status, 33% were not aware. For hypertensive participants the mean systolic blood pressure was 147.8 (SD=12.50) and diastolic blood pressure was 93.8 (SD=7.01); for normal-tensive participants the mean systolic blood pressure was 119.5 (SD=11.33) and diastolic blood pressure was 73.1 (SD=8.39). Both systolic blood pressure ( $r=0.627$ ;  $P<0.05$ ) and diastolic blood pressure ( $r=0.598$ ;  $P<0.05$ ) significantly correlates with age.

The main finding of this survey is not only the high prevalence (36%) of hypertension among employees in Rwanda but also the high prevalence of individuals not aware of their hypertension (33%). The low levels of awareness is a concern but some researchers are of the opinion that this could be a reflection of the combined effects of competing priorities in health care, scarce resources, and the low levels of public education on non-communicable diseases (6). Taking into consideration that this survey was done at the workplace these results indicate that special programs for those at-risk of hypertension or other non-communicable diseases are needed in this

type of setting. It is recognized that a big number of individuals can be reached at the workplace with health promoting interventions making it an ideal venue (7). It is also argued that if we reach employees early it is possible to slow down the morbidity onset, therefore cutting down on the cost associated with it.

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## References

1. Mafunda J, Mebrahtu G, Usman A, Nyarango P, Kosia A, Ghebrat Y, Ogbamarian A, Masjuan M, Gebremichael A (2006). The prevalence of hypertension and its relationship with obesity: results from a national blood survey in Eritre. *J of Hum Hypertens*, 20: 59-69.
2. Opier LH, Seedat YH (2005). Hypertension in Sub-Saharan African populations. *Circulation*, 112: 3562-3568.
3. Addo J, Smeeth L, Leon DA (2007). Global Health – Hypertension in sub-Saharan Africa. *Hypertension*, 50: 1012-1018.
4. Omondi DO, Othuon L, Mbagaya GM (2007). Physical activity patterns, dietary intake and health status among university of Nairobi lecturers in Kenya. *S Afr J Res Sport Phys Educ Recreation*, 29(2): 87-98.
5. Pradeepa R, Mohan V (2008) Hypertension & pre-hypertension in developing countries. *Indian J Med Res*, 128: 688-690.
6. Bovet P, Ross AG, Gervasoni J-P, Mkamba M, Mtasiwa DM, Lengeler C, Whiting D, Paccaud F (2002). Distribution of blood pressure, body mass index and smoking habits in the urban population of Dar es Salaam, Tanzania, and associations with socioeconomic status. *Int J Epidemiol*, 31: 240-247.
7. Hughes SL, Seymour RB, Campbell RT, Shaw JW, Fabiyi C, Sokas R (2011). Comparison of Two Health-Promotion Programs for Older Workers. *Am J Public Health*, 101:883–890.