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MUNI RAJ CHHETRI: PREVALENCE AND DETERMINANTS OF HYPERTENSION AND DIABETES AMONG ELDERLY POPULATION IN THE KATHMANDU VALLEY OF NEPAL. THESIS ADVISOR: ROBERT SEDGWICK CHAPMAN, M.D., M.P.H., 214 pp

**Background:** Elderly populations are susceptible to many non-communicable diseases particularly, hypertension and diabetes. Lack of awareness regarding disease status and risk factors increase the complications and mortality. The aims of this study were: (i) to determine the prevalence of hypertension and diabetes in elderly subjects, as diagnosed prior to and during the study, (ii) to identify the determinants of hypertension and diabetes as diagnosed prior to and during the study, (iii) to compare the determinants of hypertension and diabetes between previously diagnosed and newly diagnosed cases, and (iv) to compare determinants of hypertension with those of diabetes.

**Methods:** We conducted cross-sectional community-based study among 1633 randomly selected participants aged 60 years and above in urban and rural areas of the Kathmandu Valley, Nepal. Structured questionnaire was used to collect information regarding prevalence and potential determinants of hypertension and diabetes diagnosed in the survey and before the survey. Anthropometric metrics, blood pressure and fasting blood sugar tests were also measured. Analysis was done by binary logistic regression for any hypertension and any diabetes, and by multinomial logistic regression for these diseases diagnosed before and during the survey. Bivariate and multivariable analyses were conducted.

**Results:** We detected high prevalence of hypertension in the survey (32.5%) against diagnosed before the survey (22.4%) and diabetes only in the survey (17.3%) against diagnosed before the survey (8.6%). Our study observed that older age, exercise, health perception, family history of hypertension and increased waist circumference have a key influence on the increased risk of hypertension and diabetes. Age, urban residence, widowed/divorced status, low vegetable consumption, less health centre visit, higher body mass index were risk factors for hypertension diagnosed in the survey. However, personal history of diabetes was associated with reduced prevalence of hypertension in the survey. Age urban residence, exercise, health perception, disturbed sleep, family history of hypertension in blood and non blood relations, BMI and waist circumference were significant risk factors for hypertension diagnosed before the survey. Age, disturbed sleep and family history of hypertension were marginally associated with diabetes in the survey. However, education, exercise, health perception, family history of hypertension and increased waist circumference were significantly associated with diabetes diagnosed before the survey. Urban residence and lower social participation were associated only with hypertension. Education and infrequent health centre visits were associated with diabetes only.

**Conclusion:** The high prevalence of hypertension and diabetes in the elderly population studied, and the low level of prior diagnosis, identify an important public health problem. There is a need of regular screening of hypertension and diabetes and improved health care and education in the elderly.

Field of study: Public Health Student's signature.....  
Academic year: 2008 Advisor's signature.....