PREVALENCE OF AND RISK FACTORS FOR HYPERTENSION IN A RURAL AREA OF THE PHILIPPINES

Cielito C. Reyes-Gibby, DrPH; Lu Ann Aday, PhD

ABSTRACT: This study reports on a community health survey conducted among ≥ 20 year old rural residents of San Antonio, Nueva Ecija, Philippines, to serve as a basis for tailoring health programs for hypertension in the community. The focus of the analyses is the assessment of the prevalence of and risk factors for hypertension. A cluster survey was conducted among 336 residents in May 1998. Sixty clusters were drawn from areas comprising the town using probability proportionate to size sampling technique. Seven households were visited per cluster and one respondent was randomly chosen for interview and measurement of blood pressure, height and weight in each household. Eighty-four percent of eligible respondents participated. Hypertension prevalence was 23%. Only 42% had been diagnosed with hypertension (i.e., had been told and prescribed anti-hypertensive medication by their physician). Forty-seven percent reported taking anti-hypertensive medication (33 were prescribed by a physician while 4 were by self-medication) but only 17% of those identified as being hypertensive had it under control. Logistic regression showed that age ≥ 50 (p = 0.000), family history of hypertension (p = 0.004), and body mass index ≥ 25 (p = 0.003) were significantly associated with hypertension. This study documents the prevalence and predictors of hypertension in a previously understudied population. In the absence of fully implemented programs to prevent and control hypertension, the current prevalence is only expected to increase, leading to substantial increases in morbidity and mortality and health care cost.

KEY WORDS: hypertension; rural; Philippines; health survey.

Cielito C. Reyes-Gibby is Adjunct Assistant Professor, Behavioral Sciences, and Lu Ann Aday, is Professor, Behavioral Sciences, both at the University of Texas School of Public Health, Houston Health Science Center, Houston, TX.

Requests for reprints should be addressed to: Lu Ann Aday, PhD, University of Texas School of Public Health, Houston Health Science Center, P.O. Box 20186, Houston, TX 77225, e-mail: laday@sph.uth.tmc.edu.

The authors gratefully acknowledge the assistance of Wenyaw Chan, PhD, and Lori Leonard, ScD, University of Texas School of Public Health, and the residents of San Antonio, Nueva Ecija, Philippines, especially ex-Mayor Antonino Lustre and his Barangay Captains for their cooperation, and the interviewers, Myra, Gay, Tess, Cielit, and Edralyn, for their dedication and hard work.

389
INTRODUCTION

Hypertension (HTN), the major risk factor for cardiovascular disease (CVD), is emerging as a major public health problem in the Philippines. Age-standardized mortality rates from hypertensive diseases increased from 21.0 to 45.6 and 15.6 to 25.5/100,000/year among men and women respectively, between the years 1963 to 1976. Further evidence to support this trend was provided by the Southeast Asian Medical Information Center (SEAMIC) which reported CVD as the leading cause of mortality in the Philippines from 1990–1993. Despite the alarming trend, research on HTN is limited especially in rural areas of the Philippines.

This study reports the results of a household survey requested by the town mayor and community health officials, to serve as a basis in developing a program to prevent and control HTN in the rural town of San Antonio, Nueva Ecija, Philippines. HTN was identified as the most important and worrisome health problem during focus group discussions in the community. The purpose of the survey was to assess the prevalence of and risk factors for HTN among the town residents and to shed light on the likely magnitude of the problem in a previously understudied rural area of the Philippines.

METHODS

The target population of this study were the ≥ 30 year old residents (i.e., has resided for more than 6 months at the time of survey) of San Antonio, Nueva Ecija, Philippines during May–June 1998. San Antonio is in the Northern island of Luzon, approximately 100 miles north of Manila, the capital, and has a total population estimated at 56,130 as of 1995. The town is comprised of 15 geo-political areas called barangays.

A cluster sampling technique was used in selecting the sample. Based on a modification of the “30 × 7” cluster sampling technique of the World Health Organization Expanded Program on Immunization (WHO-EPI), 60 clusters were drawn from areas comprising the town using probability proportionate to size sampling technique (PPS). Seven households were visited per cluster and one respondent was randomly chosen for interview and measurement of blood pressure, height and weight in each household.

Prior to the survey, community leaders were asked to inform the residents of the survey. Each household was visited up to three times to complete the survey. Eighty-four percent of the eligible respondents participated.