RELATIONSHIP OF DEMOGRAPHIC CHARACTERISTICS OF INTERVIEWERS TO BLOOD PRESSURE MEASUREMENTS

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ABSTRACT: This report describes findings from the Hypertension Detection and Follow-Up Program (HDFP) on the relationship between traits of interviewers and outcome of blood pressure measurements taken during home interviews. Mean diastolic blood pressure readings and prevalence data for 137,417 respondents taken by 617 interviewers are analyzed. Findings from regression analysis show that the magnitude of the absolute or relative difference in outcome of blood pressure measurements is associated much more positively with the characteristics of race and sex of the respondent than these characteristics in the interviewer.

KEY WORDS: Demographic factors, hypertension, interviewing techniques, survey methods.

Although the evidence is mixed, some literature on surveys suggests that an important source of bias in information obtained during household surveys may relate to differences in sociodemographic characteristics between interviewer and respondent. Dohrenwend and her associates suggest that the greater the “social distance” between interviewer and respondent, the greater the distortion in some outcome measures. Measures of social distance include age, sex, race, social status, and education. The potential bias in responses coincident with these characteristics is such that some investigators and most survey organizations try to minimize the “social distance” between interviewer and respondent whenever possible.

Reiser and his associates, Van der Valk, and more recently Williams and his colleagues have provided experimental data to show that rises in blood pressure in hypertensives and normotensives were more related
to the nature of the interpersonal interaction between the interviewer and respondent than to the content of the questions that preceded the blood pressure measurements. In view of the large-scale hypertension screening programs currently underway in the U.S. and elsewhere, it is useful to know whether traits of interviewers interact with reported blood pressure measurements taken during interviews. The Hypertension Detection and Follow-Up Program (HDFP) has collected data on a very large number of blood pressure measurements by over 600 interviewers. The HDFP experience with respect to blood pressure measurements and interviewer-respondent characteristics adds to the study of this question.

Methods

The HDFP is a community-based, randomized controlled trial initiated by the National Heart, Lung, and Blood Institute of the U.S. National Institutes of Health in 1973. Its primary objective was to compare the effects on five-year mortality of a systematic antihypertensive treatment program versus referral to usual community medical therapy. While the study design is described in detail elsewhere, certain methodologic features of the HDFP pertinent to this report are given here.

Population Screened. Blood pressure measurements were obtained on defined populations, aged 30 to 69 years, in 14 U.S. communities. In all but one of these communities, the original screening took place in the respondent's home. Of 178,009 age-eligible persons, blood pressure measurements were obtained from 158,906 adults after they had completed an interview that obtained medical history and socioeconomic information.

Blood Pressure Measurement. Blood pressure was measured by interviewers who were trained according to a standardized protocol on measurement technique and who were required to meet a specified level of performance using definitive criteria. Prior to certification, the interviewers were tested for hearing and visual acuity to eliminate possible bias in blood pressure measurements. Blood pressure measurements were taken on the participant's right arm using a mercury manometer. Both systolic and fifth-phase diastolic pressures were recorded to the nearest 2 mm Hg. Measurements were taken after the respondent had been seated for at least five minutes. Three readings were recorded. The mean of the last two diastolic blood pressure readings was used to define blood pressure level. Persons with an average diastolic blood pressure of 95 mm Hg or greater were defined as having elevated blood pressure at the initial screening of the HDFP. These screening pressures form the material of this report.

The Interviewers. It was the responsibility of each clinical center to recruit and train local interviewers. Interviewers varied considerably with