Objective: To use data from the longitudinal Strong Heart Study (SHS) to determine the level of awareness about risk factors for heart disease among 13 populations of American Indians in Arizona, Oklahoma, and South/ North Dakota. The aim of this study is to assess awareness of nine major risk factors for heart disease among participants in SHS.

Methods: During July 1993 to December 1995 (phase II of SHS), 3638 participants ages 46 to 80 years (mean age 60) were asked if nine known risk factors for cardiovascular disease affect a person’s chances of getting heart disease; 3226 (89%) participants completed the study and met the method reliability criteria for inclusion.

Results: Among each of the nine risk factors, the percentage of correct answers provided by study participants ranged from 70% (family history of heart disease) to 90% (being overweight). Participants with hypertension (90% vs 86%, $P<.05$) and diabetes mellitus (81% vs 71%, $P<.05$) were more likely than those without these disorders to know they were heart disease risk factors. For all nine risk factors, the percentage of correct answers was lower ($P<.05$) among smokers than among nonsmokers. In multivariate logistic regression analyses, female sex, advanced education, and being from Oklahoma were significantly associated with heart disease awareness.

Conclusion: Although overall risk factor awareness for heart disease was high, subgroups were identified who could benefit from culturally appropriate health education and other interventions to motivate health prevention actions, especially for smoking. (Ethn Dis. 2006;16:647–652)

Key Words: Awareness, Behavior, Chronic Disease, North American Indians, Tobacco

INTRODUCTION

Cardiovascular disease (CVD) is the leading cause of death among American Indians. The proportion of premature deaths attributed to heart disease is higher among American Indians/Alaska Natives than in any other racial group. Furthermore, American Indians are experiencing an epidemic of CVD, and without aggressive prevention programs, CVD mortality and morbidity will continue to increase. Several risk factors for CVD are modifiable, eg, smoking, physical activity, and diet. Individual behavior can be targeted to reduce and/or eliminate modifiable risk factors for CVD; therefore, determining what people know about risk factors is a worthwhile endeavor. Heart disease risk factor knowledge is the first step in risk factor reduction. In some populations, smokers and people who are overweight are more likely to identify these respective risk factors for heart disease. However, knowledge does not always lead to behavior change that reduces risk.

We are aware of only one other study that describes heart disease risk factor knowledge in American Indian communities. Among American Indians, variations in risk factors for CVD exist both culturally and regionally. American Indians/Alaska Natives have the highest prevalence of cigarette smoking among both youths (28%) and adults (40%) in the United States. Although smoking prevalence varies in American Indian tribal groups (eg, northern Plains tribes have higher rates than southwest tribal groups), the average number of cigarettes smoked per day by American Indians is less than the US average. Zephier et al found dietary patterns for American Indians to be associated with high risk for CVD, due in part to the lack of, or expensive cost of, fresh fruits and vegetables in rural American Indian communities.

The aim of the current study is to assess awareness of nine major risk factors for heart disease among participants in the Strong Heart Study (SHS). Multivariate logistic regression was used to examine the association between heart disease risk factor awareness and regional centers, education, sex, age, American Indian heritage, native language, and use of traditional (American Indian) medicine.

METHODS

Study Population and Data Sources

Strong Heart Study (SHS) phase I, conducted during 1989–1991, was the first large multicenter study to examine CVD morbidity/mortality and risk factors in 13 American Indian tribal groups: Ak-Chin Papago/Pima, Apache, Caddo, Cheyenne River Sioux, Comanche, Delaware, Fort Sill Apache, Gila River Pima/Maricopa, Kiowa, Oglala Sioux, Salt River Pima/Maricopa, Spirit Lake, and Wichita. These groups reside in one of three regional centers: Arizona, southwestern Oklahoma, and South Dakota/North Dakota. SHS phase II study population includes 3638 phase I participants who...