

CLASSIC

CONTEMPORARY

CROSS-CULTURAL

47 Out of Harmony: Health Problems and Young Native American Men

JENNIE R. JOE

Despite numerous medical advances, Native American men continue to experience more health problems and shorter life spans than their white counterparts. In this selection, Jennie R. Joe discusses the major health difficulties that confront young Native American men. She maintains that life expectancy rates of Native American men continue to lag behind those of their non-native counterparts because of demographic and historical differences between these groups. According to Joe, colleges can be especially effective in providing intervention strategies that restore the “harmony” in the lives of many Native American men.

The cultural perception and definition of health in most Native American (the term applies to both American Indians and Alaska Natives) communities are based on the concept of balance or harmony: a healthy state in which one is free of pain or discomfort, is at peace with oneself as well as with others, and is in harmony with all other elements of one’s environment. Although these are ideal goals, disease, accidents, and misfortunes are also acknowledged as part of the reality of life. Until recently, very few Native Americans traditionally survived to old age. Such an event is considered a special achievement and the individual is honored and respected.

Reaching old age yesterday or today, however, is not easy. Before the mid-1940s, the average

life expectancy for Native Americans was less than fifty years. Today, the life expectancy for Native American men continues to lag behind that of white men (*Regional differences*, 1997). Despite a multitude of medical advances, many Native American men at birth face a risk of premature mortality. This premature death and other indicators of poor health dominate the literature on the health of Native American men. Thus, any discussion of their health often emphasizes poor health and early mortality.

Poverty, poor education, high unemployment, unhealthy lifestyles, and voluntary and forced culture change are among the reasons for the premature mortality of Native American men. Although decades have passed since initial European contact, the consequences of colonization that followed this contact have forever altered tribal lifestyles and, in particular, the traditional role once held by young men.

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METHOD

My review of the health of young Native American men is based on a survey of existing literature as well as my knowledge of health care problems and issues that confront contemporary Native Americans.

RESULTS

Demographics

A majority of the Native American population lives in the American West, albeit Indians are present in all fifty states. Recently, the Native American population has been increasing. For example, the most recent 1995 population projection by the Indian Health Service (IHS) is approximately 2.7 million (*Projected American Indian*, 1994). In the 1990 census, Native American women outnumbered the men, 51 percent to 49 percent (1990 Census, 1993; Joe, 1996), and this proportion is not expected to change.

In general, the population profile of Native Americans parallels that of developing countries, namely high birth rates and a young median age. The 1990 census reported that 39 percent of Native Americans were then under the age of twenty years, compared with 29 percent for all races in the United States. The median age reported for the U.S. White population was 33 years, compared with about 27 years for the Native American population (*Projected American Indian*, 1994).

Census data also indicate that in 1990 more than half (56 percent) of Native Americans lived in off-reservation communities. The increased rural-to-urban migration also reflects a change in the pattern of family units (Paisano et al., 1994; Snipp, 1997). For example, Sandefur and Liebler (1997) compared 1990 census data with 1980 data and found an increase in the number of Native American children living with one parent. In 1980, 54.4 percent of these children lived with one parent; in 1990, the percentage increased to 62.9. This 8.5 percent increase for Native Americans was greater than the 6.5 percent increase for

the general U.S. population during the same period (Snipp, 1997). Although a majority of the single-parent households among Native Americans are headed by women, it is interesting to note that 9 percent of the single heads of households were fathers (1990 Census, 1993).

Most employed Native American men hold low-paying jobs. This low income is further reflected in the \$20,025 median family income reported in the 1990 Census, compared with \$31,572 for White families. More Native American families also reported incomes below the national poverty level: 27 percent compared with 7 percent of White households (Gregory, Abello, & Johnson, 1997). Single women were heads of household in most of these low-income families, although poverty is also prevalent in two-parent families.

The lack of employment opportunities and poor wages contribute to high rates of unemployment. Even when employed, Native American men are more likely than Native American women to experience financial setbacks in employment. For example, when Gregory and colleagues compared Native American men's and women's earning levels over a ten-year period, they found that the economic deterioration was more devastating for men, whose earnings fell 12 percent between 1979 and 1989. In addition, these researchers noted that the average hourly earning ratio for Native American men, compared with that for Native American women, decreased 9 percent, yet the annual hours worked decreased by 3 percent (Gregory, Abello, & Johnson, 1997).

Economic downturns are especially damaging to those who have not completed high school. According to Gregory and associates (1997), the real income for these men dropped 22 percent, whereas Native American men with a college education experienced income increases.

Thus, the economic picture for Native American men and their families is greatly influenced by their educational attainments. In comparison with Whites, fewer Native Americans complete high school or obtain a college degree. Paisano and colleagues note that only 9 percent of Native

Americans (both men and women) hold a bachelor's degree or higher, compared with 22 percent for Whites. The 1990 Census data (Paisano et al., 1994) revealed that 14 percent of Native Americans between the ages of eighteen and twenty-four years were enrolled in college in 1989. Although this is a significant number, many of these students do not complete college. Family crises or financial difficulties are frequently cited reasons for leaving school.

Research about Native American Men

Although much of what is reported in ongoing studies of men's health generally may have relevance for Native American men, I know of no current efforts to explore where and how some of these findings can be applied to this population. As I have pointed out, there is almost no research on healthy young Native American men of college age, a population that is of special interest for readers of *The Journal of American College Health*.

The focus of most studies on Native American men has been on various deviant behaviors and health problems in this population: alcoholism, delinquency, suicide, homicide, and criminal behavior (Jensen, Strauss, & Harris, 1977; Bachman, 1992). Whereas much is known about the incidence or prevalence of these problems, few researchers have addressed the reasons why the problems exist or why they persist.

Resources

To present a balanced picture of the overall health picture of young Native American men, one must piece together information from many sources. Unfortunately, the data may exist but are often collected in a way that discourages in-depth analyses. For example, health data collected and reported by IHS consist mainly of information from men who use IHS health facilities. Those data contain morbidity and mortality information by age and gender, but they cannot be examined

in terms of other important variables such as years of schooling, socioeconomic status, and degree of acculturation.

That the IHS provides service to only a portion of the Indian population contributes to aspects of the data limitation. Despite these drawbacks, the IHS health data are perhaps the only health data collected routinely and reported annually on a significant percentage of Native Americans and are therefore an important resource when one examines the health of this group.

The IHS, funded by the U.S. Congress, offers health care annually to approximately 1.4 million of the estimated 2 million Native Americans who are members of federally recognized tribes (*Regional differences*, 1997) in 35 small hospitals, 2 large hospitals, and 59 health centers. In addition, 12 hospitals and 155 health centers are managed by various tribal entities. Provision of services is based on a set of special federal-tribal treaty relationships. The system includes a variety of medical resources that are often the only health care in isolated rural communities.

The Health Situation

At different times, researchers such as Broudy and May (1983) and Young (1997) have discussed the changing health pattern of Native Americans, using the three-stage epidemiological model proposed by Omran (1983). The first stage in this model proposes an era of health problems caused by pestilence and famine, followed by an era of receding pandemics. In the third era, most health problems are attributed to the emergence of degenerative and manmade diseases. Olshansky and Ault (1986) have proposed a fourth state, the era of delayed degenerative disease.

Whether and for how long ancestors of most contemporary tribal groups experienced periods of pestilence or famine is not clear because most existing archaeological evidence is inconclusive. The era of pandemics, however, is well known. Following European contact, Native Americans experienced waves of contagious diseases such as

smallpox that rapidly depopulated most of the Americas (Stearn & Stearn, 1945). The biological consequences of subsequent tuberculosis epidemics continued for Native Americans well into the first half of the 20th century (the incidence of tuberculosis is today once again on the increase among Native Americans) (*Projected American Indian*, 1994; *Regional differences*, 1997). Not until the latter half of the [19th] century did the morbidity and mortality picture for Native Americans shift from infectious diseases to domination by chronic diseases and other health behaviors associated with unhealthy lifestyles (Joe & Young, 1994). The consequences of unhealthy living are perhaps best reflected in the rising mortality and morbidity rates associated with unintentional injuries, especially among young Native American men. Most unintentional injuries, usually the result of automobile accidents, tend to be associated with drinking alcohol. Other accidents may result from high-risk occupations or participation in sports such as rodeos (*Injuries among American Indians*, 1990; *Regional differences*, 1997).

The Health of Young Native American Men

The life expectancy at birth (calculated for the period 1992–1994) for American Indian and Alaska Native men is 67.2 years compared with 72.2 for white men, 75.1 for Native American women, and 78.8 for women of all races (*Regional differences*, 1997). Many Native American men die before reaching the age of 30. For example, between 1992 and 1994, the age-specific death rate for young Native American men aged 15 to 24 years was 202.9 per 100,000, compared with the 1993 rate of 2.1 per 100,000 for U.S. men of all races (*Trends in Indian health*, 1994).

Accidents. Accidents, a majority of which involve motor vehicles and alcohol use (James et al., 1993; Kettl & Bixler, 1993; Sugarman & Grossman, 1996), are a major cause of the shortened life expectancy for many of these young Native American men and a leading cause of

death for Native American men between the ages of 15 to 44 years. Although accident-related deaths are high for native men, the rates fluctuate from year to year; they have nevertheless remained higher than the rates in the general U.S. population. Between 1990 and 1994, the adjusted accident-related mortality rate for Native American men of all ages was 94.5 per 100,000, compared with 30.3 per 100,000 for nonnative American men in 1993 (*Regional differences*, 1997). Alcohol is a major contributor to the high accident rate, and there are indications that, for some men, drinking starts early in life. Mail (1995) notes that alcohol consumption for some of these men started during grade school.

Deaths attributable to accidents are most frequent among younger men in the general population, rather than among men over the age of fifty years. The significance of this problem, however, appears to be greater for young Indian men than for others. For example, between 1992 and 1994, the accident death rate for Native American men aged 15 to 24 years was 150 per 100,000, compared with 57.6 for the same age group of men of all races in the United States. Moreover, the ratio of accident death rates for Native American men and women aged 25 and over is 2.8 to 3. The accident death rates for Native American women, however, are two to three times higher than that for other women in the United States (*Regional differences*, 1997).

Frequently, cultural tolerance for using alcohol, driving on poor roads, driving in unsafe vehicles, and acceptance of laws that prohibit the sale or possession of alcohol on reservations contribute to the high rates of alcohol-related motor vehicle accidents. The prohibition on reservation lands forces those who wish to drink to drive great distances to purchase alcohol, consume it on site, and then attempt the long drive home. Drinking behaviors and drinking styles of Native American men are similar to those of young men in other cultures: They are not afraid to take risks, are willing to test or ignore traffic and drinking laws, and believe that they are immortal.

Suicide. Although suicide rates in the U.S. population tend to be highest among persons over the age of 65 years, suicide is the fifth leading cause of death for Native American men over the age of 10 years. When age is included in the analysis, suicide becomes the second leading cause of death for Native American men between the ages of 10 and 24 years (*Projected American Indian*, 1994; *Regional differences*, 1997). Some suicides occur among boys and adolescents; the overall median age of Native Americans who committed suicide between 1979 and 1992 was 26 years (*Homicide and suicide*, 1996).

In their examination of homicide and suicide rates for Native Americans, researchers at the Centers for Disease Control and Prevention (CDC) found that 64 percent of all suicides between 1979 and 1992 were males, aged 15 to 34. The suicide rates for these men was 62 per 100,000 compared with 10 per 100,000 for Native American women in the same age group (*Homicide and suicide*, 1996). Firearms were used in more than half (57 percent) of the suicides, with poisoning and strangulation as other frequent means of committing suicide.

Although firearms are the weapons of choice for suicides committed by both Native American men and women, hanging is the second choice for men, whereas poisoning ranks second for Native American women (*Homicide and suicide*, 1996). Reasons for these Native Americans choosing to end their lives are not always known, as is true in the general population. Poverty, family difficulties, poor self-esteem, grief, and an overwhelming sense of hopelessness are among the reasons frequently suggested by the victim's families or friends (Joe, 1996).

Homicide. Between 1990 and 1992, homicide was the third leading cause of loss of life for Native Americans less than 65 years of age; 28 was the median age of homicide victims (*Homicide and suicide*, 1996). Seven percent of these cases of lost potential years among Native Americans resulted

from homicide, a rate that was exceeded only by two other leading causes of death—unintentional injury and heart disease (*Injuries among American Indians*, 1990; Sugarman & Grossman, 1996).

Data on homicide deaths for Native Americans between 1979 and 1992 indicate that men between the ages of 15 and 44 accounted for 60 percent of all Native American homicides. At highest risk were men aged 25 to 34 years. Rates for this age group between 1979 and 1992 were reported as 47 per 100,000. Forty-eight percent of the Native American homicide deaths involve firearms, primarily handguns, but cutting and stabbing also account for significant numbers of homicides (*Homicide and suicide*, 1996).

Approximately 66 percent of the Native American homicide victims between 1988 and 1991 were killed by persons they knew, and 63 percent of male homicide victims were killed by family members or acquaintances, in contrast to 50 percent for the general U.S. population. Between 1988 and 1991, 51 percent of the Native American victims were killed by other Native Americans, and 39 percent were killed by white persons. A majority of these homicides involved men killing men (*Homicide and suicide*, 1996).

Cancer. Cancer incidence and mortality is increasing among American Indians and Alaskan Natives (Greenwald et al., 1996), as is the case among other minority ethnic groups. The American Cancer Society recently reported that cancer incidence rates between 1988 and 1994 for African American men were 560 per 100,000, compared with 469 per 100,000 for white men (*Cancer facts*, 1997). Although rates of cancer in general are lower for Native Americans than for some other racial groups, rates for specific cancers (nasopharyngeal, gall bladder, and stomach) are higher among Indians and Alaska Natives (Haynes & Smedley, 1999). These lower cancer rates may be attributed, in part, to higher mortality from other causes because Native Americans' lifespans are generally shorter than are those of other ethnic groups.

Many factors—late diagnosis, lack of access to treatment, fear of cancer, a belief that cancer is not a problem for Native Americans—contribute to the high cancer mortality of American Indians and Alaska Natives: Although most cancer prevention programs have been initiated for tribal women, some prevention efforts, especially those emphasizing smoking cessation, have begun to target Native American men. A 1994 national health survey revealed that 54 percent of Native American men and 33 percent of women smoked (*Tobacco use*, 1998). Young men are frequently among the very heavy smokers (Cobb & Paisano, 1997).

Cancer incidence rates for Native Americans are generally lower than those for the U.S. population in general; however, cancer is among the leading causes of death for Indian men. The five major sites of cancers that contributed to high mortality among Native men during the years 1992 and 1994 were the lungs (trachea and bronchi), prostate, colon, stomach, and liver. The most recent IHS report indicates that the overall cancer mortality rate for Native American men aged 14 to 25 years was 3.7 compared with 3.3 per 100,000 for the same age group of U.S. men, all races (Cobb & Paisano, 1997).

The report indicates that the cancer mortality rates for Native American men are approximately 57 percent greater than the rates for Native American women. Although cancer death rates increase with age among Native American women, cancer mortality occurs among younger men (Cobb & Paisano, 1997).

Diseases of the Heart. Heart disease is the leading cause of death for Native Americans as well as for Asian Americans, Pacific Islanders, and Hispanic Americans (Yu, 1991). One notable exception to these high rates of heart disease death is found among tribal groups in the Southwest, who have low rates of heart disease in spite of a high prevalence of risk factors, including obesity, diabetes mellitus, and hypertension (*Regional differences*, 1997).

According to the IHS, heart disease death rates for U.S. residents of all races have decreased approximately 20 percent since 1984. Although the leading cause of death among Native Americans is heart disease, the IHS reported that their age-adjusted heart disease death rates have been relatively stable since 1984 (*Regional differences*, 1997). Deaths from heart disease, therefore, have not decreased for these Americans as they have for the U.S. population in general.

When Native Americans' heart disease death rates are examined for the years 1990 to 1992, the age-adjusted rate is 157.6 per 100,000, a rate that is 8 percent higher than the rate for all races in the United States. It should also be noted that during this same period, the age-adjusted death rate for heart disease for Native American men in all age groups was higher than it was for Native American women (*Regional differences*, 1997).

Alcohol and Alcohol Abuse. Alcohol is a frequent confounding factor in many unintended deaths for young Native Americans. During the 1995 fiscal year, alcohol-related hospitalization discharges were 31 per 100,000 of the IHS user population over the age of 15 years, a rate that is 1.6 times greater than the rate for the U.S. population in general (*Regional differences*, 1997).

For many Native American young adults, attitude and perception of alcohol use are established during adolescence, an age when peers are the most powerful determinant of one's behavior (Oetting & Beauvais, 1986; Swaim et al., 1993; Oetting & Donnermeyer, 1998). According to Oetting and Beauvais (1986), the decision of whether to use or not to use alcohol is embedded in adolescents' interactions with close peers. These peer clusters become the setting where "norming" takes place and attitudes and behaviors regarding alcohol use are determined. Beauvais (1998) notes that peer clusters are enmeshed in the larger peer culture and that this larger culture is where certain sociocultural values are learned and parameters are set on how one should behave to fit in with others.

In one earlier study, Swaim and colleagues (1993) found that the dynamic relationship between the influence of peers and parents differs for Native American and other American youth. Peers are important influences for both groups; for Native American youth, the influence of peers is equal to that of their parents.

The problem of alcohol use among the Native American population continues to be studied by researchers in various disciplines. Many theories about alcohol use have evolved from these different perspectives, theories that range from genetic propensity to social deprivation. One explanation held by a number of tribal communities is that the high prevalence of alcohol abuse is a result of the loss of tribal culture or tribal identity, a perspective that has strongly influenced the orientation and intervention strategies offered by prevention and treatment programs.

Beauvais (1998), however, notes that this perspective has not been useful for treating or working with adolescents and young adults. Most of these young people, he writes, have difficulties because they do not yet have the strong cultural identification necessary to want to quit drinking. He therefore concludes that culturally enriched intervention programs may not be meaningful for young Native Americans.

This observation is understandable because colonization either displaced or successfully erased the place for traditional tribal teachings and learning cultural values. Many Native American families, for example, lament that their children or grandchildren do not speak or understand their tribal language (Joe, 1997).

In the past, most Indian parents were purposefully excluded from participating in their children's education and were discouraged from visiting schools where their children were being groomed for the White world. In addition, teachers and administrators made every effort to keep the children from retaining any vestiges of their culture. Students who dared to speak their tribal languages were severely punished; tribal customs were publicly ridiculed, labeled primitive, and

were totally unacceptable. It did not take long for many Indian children to become ashamed of their cultural heritage.

COMMENT

The effort to conquer the Americas and its inhabitants displaced and destroyed the culture of many indigenous peoples; the subsequent colonization further altered the traditional lifestyles of those indigenous peoples who survived the warfare, displacement, and repeated waves of devastating communicable diseases. Most of the statistics on poverty, early mortality, and morbidity among young Native American men that I have presented are reminders that significant proportions of each new generation of Native American men continue to suffer long-term consequences of colonization. Unhealthy lifestyles, unintentional accidents, suicide attempts, alcohol abuse, and societal neglect are symptoms of this disenfranchisement.

On the other hand, a significant number of Native American men who enter collegiate communities may be the lucky ones. For a variety of reasons, they have been spared the health problems prevalent in their age group. The collegiate environment, however, does not ensure health. Intense academic, family, or economic stresses have been known to trigger problems that lead to alcohol abuse or other unhealthy lifestyle behaviors.

Some colleges with sizable Native American enrollment have instituted strategies to prevent these problems. Some assist Native American students by designating a space in college residences staffed with peer counselors for incoming students from rural reservation communities. Some colleges and universities promote a Native American resource center, a special place on campus where these students can seek assistance and campus healthcare providers are invited to speak on specific health topics or be available for health discussions. The latter is especially helpful for young Native American men who are less likely than other students are to use campus health services.

Including campus healthcare providers in student orientation programs is also helpful. In some colleges and universities, Native American student organizations have created resource booklets containing information or names of campus healthcare providers. Efforts such as these help support those students who need this type of individual support from their college healthcare providers.

CRITICAL-THINKING QUESTIONS

1. Compare the Native American and White population in terms of median age, income, and employment. How does educational attainment explain some of these variations? Why are such demographic variables inadequate in explaining the overall health picture of Native American men?
2. Researchers have often attributed high and early death rates to “unhealthy lifestyles” during the latter part of the twentieth century. How does unhealthy living increase the mortality rates of young Native American men? Why are car accidents, suicide, homicide, and alcohol abuse higher for Native American men than for their White counterparts?
3. What does Joe mean when she says that the health of most Native American men is “out of harmony”? Out of harmony with what? Why does colonization appear to have had a greater negative impact on the cultural identity and health of Native American men than women? What strategies does Joe propose to restore Native American harmony with themselves and their environment?

REFERENCES

- BACHMAN, R. 1992. *Death and violence on the reservation*. New York: Auburn.
- BEAUVAIS, F. 1998. American Indian youth and alcohol: A study in perplexity and ambivalence. *Alcoholic Beverage Medical Research Foundation Journal* (suppl. 3), 8(33): 61–65.
- BROUDY, D. W., and P. A. MAY. 1983. Demographic and epidemiological transition among the Navajo Indians. *Social Biology*, 30: 1–6.
- Cancer facts and figures—1997*. 1997. Atlanta, Ga.: American Cancer Society.
- COBB, N., and R. E. PAISANO. 1997. *Cancer mortality among American Indians and Alaska Natives in the United States: Regional differences in Indian health, 1989–1993*. Rockville, Md.: USPHS, Indian Health Service.
- GREENWALD, J. P., E. F. BORGATTE, R. McCORKLE, and N. POLISSAR. 1996. Explaining reduced cancer survival among the disadvantaged. *Milbank Quarterly*, 74: 215–38.
- GREGORY, G. G., A. C. ABELLO, and J. JOHNSON. 1997. The individual economic well-being of Native American men and women during the 1980s: A decade of backwards. *Population Research and Policy Review*, 16: 115–45.
- HAYNES, M. A., and B. SMEDLEY, eds. 1999. *The unequal burden of cancer*. Washington, D.C.: National Academy Press.
- Homicide and suicide among Native Americans, 1879–1992*. 1996. Washington, D.C.: U.S. Dept. of Health and Human Services, Centers for Disease Control, National Center for Injury Prevention and Control.
- Injuries among American Indians/Alaska Natives*. 1990. Rockville, Md.: USPHS, Indian Health Service.
- JAMES, W. H., B. HUTCHINSON, D. MOORE, and A. J. SMITH. 1993. Predictors of driving while intoxicated (DWI) among American Indians in the Northwest. *Journal of Drug Education*, 24(4): 317–24.
- JENSEN, G. F., J. H. STRAUSS, and V. W. HARRIS. 1977. Crime, delinquency, and the American Indian. *Human Organization*, 36(3): 252–57.
- JOE, J. R. 1996. The health of American Indian and Alaska Native women. *Journal of the American Medical Women's Association*, 51: 141–45.
- . 1997. *Iina ili* (life is valuable): The Hardrock community's efforts to address substance abuse problems. Unpublished report. Tucson: University of Arizona, Native American Research and Training Center.
- JOE, J. R., and R. S. YOUNG, eds. 1994. *Diabetes as a disease of civilization: The impact of culture change on indigenous peoples*. Berlin: Mouton de Gruyter.
- KETTL, P. and E. O. BIXLER. 1993. Alcohol and suicide. *American Indian and Alaska Native Mental Health Research*, 5(2): 34–45.
- MAIL, P. D. 1995. Early modeling of drinking behavior by Native American elementary school children playing drunk. *International Journal of Addiction*, 30(9): 1187–97.
- 1990 Census of the population: American Indians and Alaska Native areas*. 1993. Washington, D.C.: U.S. Dept. of Commerce, Bureau of the Census.
- OETTING, E., and F. BEAUVAIS. 1986. Peer clusters theory: Drugs and the adolescent. *Journal of Counseling and Development*, 65(1): 17–22.
- OETTING, E., and J. DONNERMEYER. 1998. Primary socialization theory: The etiology of drugs and deviance. *Substance Abuse and Misuse*, 33: 995–1026.
- OLSHANSKY, S. J., and A. G. AULT. 1986. The fourth stage of epidemiological transition: The age of delayed degenerative disease. *Milbank Quarterly*, 64: 390–91.
- OMRAN, A. R. 1983. The epidemiology transition theory: A preliminary update. *Journal of Tropical Pediatrics*, 29: 305–16.

- PAISANO, E. L., D. L. CAROLL, J. H. COWLES, et al. 1994. *We, the first Americans*. Washington, D.C.: U.S. Dept. of Commerce, Bureau of the Census.
- Projected American Indian and Alaska Native population for the United States, 1990–2005*. 1994. Rockville, Md.: USPHS, Indian Health Service.
- Regional differences in Indian health*. 1997. Rockville, Md.: USPHS, Indian Health Service.
- SANDEFUR, G. D., and C. A. LIEBLER. 1997. The demography of American Indian family. *Population Research and Policy Review*, 16: 95–114.
- SNIPP, C. M. 1997. The size and distribution of the American Indian population: Fertility, mortality, and residence. *Population Research and Policy Review*, 16: 61–93.
- STEARNS, E. W., and A. E. STEARNS. 1945. *The effects of smallpox on the destiny of Amerindians*. Boston: B. Humphries.
- SUGARMAN, J. R., and D. C. GROSSMAN. 1996. Trauma among American Indians in an urban county. *Public Health Report*, 111(4): 320.
- SWAIM, R. C., E. R. OETTING, P. J. THURMAN, F. BEAUVAIS, and R. W. EDWARDS. 1993. American Indian adolescent drug use and socialization characteristics: A cross-cultural comparison. *Journal of Cross-Cultural Psychology*, 24(1): 53–70.
- Tobacco use among U.S. racial/ethnic minority groups: A report of the Surgeon General*. 1998. U.S. Dept. of Health and Human Services: Office of Smoking and Health, Centers for Disease Control.
- Trends in Indian health, 1994*. 1994. Rockville, Md.: USPHS, Indian Health Service.
- U.S. CONGRESS. 1986. *Indian health care*. Washington, D.C.: Office of Technology Assessment. U.S. Government Printing Office.
- YOUNG, T. K. 1997. Recent health trends in the Native American population. *Population Research and Policy Review*, 16(1, 2): 147–67.
- YU, P. N. 1991. Heart disease in Asian and Pacific-Islanders, Hispanics, and Native Americans. *Circulation*, 83(4): 1475–77.