Limited information exists about the prevalence of mental illness among American Indian and Alaska Native (AIAN) women. The 2 major US prevalence studies—the Epidemiologic Catchment Area Study1 and the National Comorbidity Survey2—did not report data on AIANs. Extrapolation of prevalence rates from other populations is problematic, because AIAN women are subject to unique factors that may affect their susceptibility to mental illness. Although the support of their traditional culture may protect AIAN women from common mental disorders,3–5 it is plausible that AIAN women may be at higher risk for mental illness because of adverse factors faced by their ethnic group.6–12

The Mental Health of American Indians and Others in Primary Care

Available evidence suggests that mental illness, mental dysfunction, or self-destructive behavior affects approximately 21% of the total AIAN population, costing an estimated $1.07 billion and causing incalculable human suffering.13 The overall mental health picture for AIANs is not fully documented3,14–16 because many previous studies have been restricted by small sample sizes, limited funding, racial misclassification, focus on single mental disorders, and incompatible instrumentation. No prior studies have examined the prevalence of common mental disorders among predominately urban-dwelling AIAN women who use Indian Health Service (IHS) primary care facilities.

Information on mental disorder prevalence and health service utilization among AIAN primary care populations is scarce. Wilson et al. investigated depressive syndromes in an AIAN primary care clinic population (n = 106), finding that 20% of the patients scored positive for a depressive syndrome and 8.9% met International Classification of Diseases, 9th Revision (ICD-9) criteria for a major depressive syndrome.17 In another study, May reported that 21.4% of primary care patients had seen a provider for a psychological problem.18 On average, these patients presented with 2.7 episodes of mental health problems over a 10-year period, and these episodes were associated with large numbers of primary care visits (3 to 8 visits per episode). Parker et al. used the Primary Care Evaluation of Mental Disorders (PRIME-MD) in a sample of IHS primary care patients; they found that 18% of the patients had a psychological disorder diagnosis and another 17% had a subthreshold diagnosis.19 In the only published study that specifically investigated the correlates of AIAN women’s mental health status, Napholz found that AIAN women who adhered to rigid gender roles had significantly higher depression scores, higher role-conflict scores, lower self-esteem scores, and lower life satisfaction scores than did women who adhered to less rigid gender roles.20

The present study aimed to extend research on American Indian women’s mental health by (1) using the well-validated Composite International Diagnostic Interview (CIDI) to determine mental disorder prevalence estimates, (2) investigating a wide range of mental disorders among AIAN women who presented for primary care, and (3) identifying associations among specific sociodemographic variables, cultural variables, and mental disorders.

METHODS

Study Location

We conducted our study at the outpatient and urgent care clinics of the IHS hospital in Albuquerque, New Mexico, where data were collected between June and October 1999. The hospital is part of the regional IHS unit, which provides health care to 5 local tribes and the urban Albuquerque AIAN population. The Albuquerque unit records approximately 97,000 visits per year, 60% of which are at the hospital site. Women were approached in the waiting area to determine their eligibility, and they were considered eligible if they were aged 18 to 45 years and received their medical care from IHS facilities. Those who were too physically ill to tolerate a long interview were excluded. The eligible women were then taken to another room to begin the study. The 234 women who completed all aspects of the study were fluent in English and were offered an incentive of $20 per hour for participating.

Objectives. We examined the lifetime and the past-year prevalence and correlates of common mental disorders among American Indian and Alaska Native women who presented for primary care.

Methods. We screened 489 consecutively presenting female primary care patients aged 18 through 45 years with the General Health Questionnaire, 12-item version. A subsample (n = 234) completed the Composite International Diagnostic Interview. We examined associations between psychiatric disorders and sociodemographic variables, boarding school attendance, and psychopathology in the family of origin.

Results. The study participants had high rates of alcohol use disorders, anxiety disorders, and anxiety/depression comorbidity compared with other samples of non–American Indian/Alaska Native women in primary care settings.

Conclusions. There is a need for culturally appropriate mental health treatments and preventive services. (Am J Public Health. 2004;94:71–77)
Sampling Design and Measures

The study was designed as a 2-stage procedure to maximize the yield of cases while permitting estimates of common mental disorders among the population of consecutive primary care patients who met study criteria.21 Stage I used the 12-item version of the General Health Questionnaire (GHQ) as a screener for mental distress; a score of greater than 3 was considered positive for distress. Stage II interviews were completed within 4 months of the initial contact. The interviewers used the CIDI and asked additional questions to assess demographic and cultural variables. The CIDI, which was developed by the World Health Organization (WHO) and the US Alcohol, Drug Abuse, and Mental Health Administration, is a clinical instrument that determines psychiatric diagnoses through interviews by lay interviewers. The validity of the instrument has been established in cross-cultural settings.22,23 The CIDI allows for case ascertainment according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV).24

Participants were stratified into high (≥3) and low (≤2) GHQ scores. We anticipated that a majority of the stage I participants would have low scores on the GHQ; thus, all women with high GHQ scores, as well as a random sample of 65% of those with low GHQ scores, were originally selected for participation in stage II interviews. The subjects’ ages were recorded at the time the GHQ was administered; all other demographic variables were obtained during the stage II interviews. The demographic and social variables included marital and lifestyle status, level of education, boarding school attendance (yes/no), family history of alcohol problems, annual household income (calculated as percentage of the 1999 federal poverty level), debt (identified as none, some, or very much), employment status, residence (urban or reservation/rural), and self-rated health (identified as poor, fair, okay, good, or excellent). Self-rated health is a global measure that encompasses the physical, mental, and social dimensions of health and that reflects an awareness of symptoms, diagnoses, and disability.25

Statistical Analysis

We carried out descriptive analyses of all the demographic variables we collected and all the psychiatric diagnoses that resulted from the CIDI. The prevalence estimates were calculated with diagnostic exclusions based on DSM-IV hierarchy rules. Prevalence rates and standard errors, which were weighted for the distribution of high and low GHQ scores, were obtained with the SAS-callable version of SUDAAN 7.5 (Research Triangle Institute, Research Triangle Park, NC).

Associations between the demographic variables and the psychiatric diagnoses were assessed with Pearson χ² or Mantel–Haenszel χ² tests that used a significance level of .05. Prevalence ratios (PR) with 95% confidence intervals (CI) were calculated for 7 selected demographic variables. Both univariate and multivariate analyses for prevalence ratios were calculated with the generalized estimating equation approach in PROC GENMOD from SAS version 8.01 (SAS Institute Inc, Cary, NC).26

RESULTS

Response Rates

Among the eligible study participants, 489 completed the GHQ; 243 (49.7%) obtained low scores, and 246 (50.3%) obtained high scores. Sixty-five percent of the 243 women with low GHQ scores (n = 158) were selected for stage II interviews, and 97% of the 246 women with high GHQ scores (n = 238) were selected for stage II interviews (8 women with high GHQ scores were not selected for stage II because the sample size was larger than we anticipated). Of the 396 women selected, 61 (15%) could not be located, 56 (14%) refused to participate in stage II, and 45 (11%) did not show up for their scheduled interviews. Full data were obtained from 234 women (59%).

The selected but not interviewed group of women (n = 162) was younger (mean age = 27.8 years) than the interviewed group (n = 234; mean age = 29.8 years; P = .001). The interviewed group had a higher proportion of women with high GHQ scores (66%) than did the group that was selected but not interviewed (52%; P = .05). The lifetime and the past-year prevalence estimates were adjusted for these differences in GHQ scores.

Demographic Variables

The mean age of stage II participants was 29.8 years; 81% were unmarried, although 52% of the unmarried women were living with a partner. Although 89% of the sample had completed high school, 65% reported incomes below 185% of the poverty level. Fifty-five percent worked full-time, 88% lived in urban areas, 41% attended boarding school for early and/or secondary education, and 70% reported that they had a family or household member with an alcohol problem serious enough to interfere with normal functioning.

Prevalence of DSM-IV Psychiatric Disorders

Table 1 shows observed and estimated CIDI prevalences for substance use, mood, anxiety, and somatoform disorder diagnoses during the subject’s lifetime and during the 12-month period prior to the interview. Of the women who reported any lifetime drug use disorders (32%), 89% had abused or were dependent on marijuana; cocaine was the second most widely reported drug of choice. Among those with any lifetime alcohol or drug problem (65%), only 7% reported any lifetime drug abuse or dependence without a concurrent problem with alcohol abuse or dependence; by contrast, 51% reported any lifetime alcohol abuse or dependence without a co-occurring drug diagnosis.

The past-year alcohol abuse or dependence rate was 14% (SE = 2.4), and the past-year drug abuse or dependence rate was 4.2% (SE = 1.4). Marijuana accounted for 80% of past-year drug abuse or dependence; we found no past-year dependence on cocaine, amphetamines, hallucinogens, inhalants, or PCP.

The lifetime prevalence of any mood disorder was 44% (SE = 3.4), and 86% of women who reported mood disorders suffered from major depression. The rate of past-year mood disorder was 20.9% (SE = 2.7), and 81% of these women who had mood disorders in the past year suffered from major depression. Nearly one third of all lifetime cases (29%) and past-year cases (30%) of major depression among the interviewed women were recurrent (data not shown) and were moderate or severe. All but 1 of the interviewed women who met criteria for lifetime bipolar I...
disorder had recurrent manic episodes. No one met criteria for bipolar II disorder.

Anxiety disorders were the most common mental disorders, a finding consistent with results of other epidemiological studies of mental disorders in primary care. Among the women who reported any lifetime diagnosis of depression, 82% also had a lifetime anxiety disorder, and 54% of the women who reported any lifetime diagnosis of anxiety disorder also experienced depression. Of the women with any past-year depression, 75% had a concurrent anxiety disorder, and 28% of the women with a past-year anxiety disorder also experienced depression.

There was high comorbidity between substance-related disorders and mood and anxiety disorders. Among the women with any lifetime substance-related disorder, 74% had a lifetime anxiety disorder and 57% had a lifetime mood disorder. Of those women with any past-year substance disorder, 72% reported a past-year anxiety disorder and 39% reported a past-year mood disorder.

**Associations Between Mental Disorders and Demographic Variables**

We examined univariate associations between lifetime and past-year mental disorders and certain demographic variables. Lifetime diagnosis of mood disorders was associated with a large amount of debt (PR=1.5 [95% CI=1.0, 2.1]), urban residence (PR=0.5 [CI=0.3, 0.9]), and low (less than good) self-rated health (PR=1.5 [95% CI=1.2, 2.0]). Lifetime diagnosis of anxiety disorders was associated with being older than 35 years (PR=1.4 [95% CI=1.02, 1.8]), high debt

---

**TABLE 1—Prevalence of Selected Lifetime and Past-Year Mental Disorder Diagnoses in AIAN Women (n = 234) in Primary Care: Albuquerque, NM, June–October 1999**

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Lifetime Interviewed Sample Prevalence (%)</th>
<th>Estimated Prevalence (%) Prevalence (%, SE)</th>
<th>Past Year Interviewed Sample Prevalence (%)</th>
<th>Estimated Prevalence (%) Prevalence (%, SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance disorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol abuse</td>
<td>28.2</td>
<td>28.0 (3.1)</td>
<td>9.0</td>
<td>10.1 (2.2)</td>
</tr>
<tr>
<td>Alcohol dependence</td>
<td>32.5</td>
<td>29.3 (3.1)</td>
<td>4.7</td>
<td>3.9 (1.2)</td>
</tr>
<tr>
<td>Any alcohol abuse or dependence</td>
<td>60.7</td>
<td>57.9 (3.4)</td>
<td>13.7</td>
<td>14.0 (2.4)</td>
</tr>
<tr>
<td>Any drug abuse</td>
<td>12.8</td>
<td>12.2 (2.2)</td>
<td>0.9</td>
<td>0.9 (0.7)</td>
</tr>
<tr>
<td>Any drug dependence</td>
<td>19.2</td>
<td>17.6 (2.5)</td>
<td>3.4</td>
<td>3.2 (1.2)</td>
</tr>
<tr>
<td>Any drug abuse or dependence</td>
<td>32.1</td>
<td>29.8 (3.1)</td>
<td>4.3</td>
<td>4.2 (1.4)</td>
</tr>
<tr>
<td>Any substance abuse</td>
<td>27.8</td>
<td>27.7 (3.1)</td>
<td>9.0</td>
<td>9.8 (2.1)</td>
</tr>
<tr>
<td>Any substance dependence</td>
<td>37.6</td>
<td>34.6 (3.2)</td>
<td>6.4</td>
<td>5.8 (1.5)</td>
</tr>
<tr>
<td>Any substance use disorder</td>
<td>65.4</td>
<td>62.3 (3.4)</td>
<td>15.4</td>
<td>15.6 (2.5)</td>
</tr>
<tr>
<td>Mood disorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any major depression</td>
<td>41.5</td>
<td>38.2 (3.3)</td>
<td>18.8</td>
<td>17.6 (2.6)</td>
</tr>
<tr>
<td>Dysthmic disorder</td>
<td>2.6</td>
<td>2.3 (1.0)</td>
<td>0.9</td>
<td>0.7 (0.5)</td>
</tr>
<tr>
<td>Bipolar I</td>
<td>6.0</td>
<td>5.2 (1.4)</td>
<td>3.8</td>
<td>2.9 (1.0)</td>
</tr>
<tr>
<td>Any mood disorder</td>
<td>48.3</td>
<td>44.0 (3.4)</td>
<td>23.1</td>
<td>20.9 (2.7)</td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obsessive-compulsive disorder</td>
<td>7.7</td>
<td>6.5 (1.5)</td>
<td>6.8</td>
<td>5.8 (1.5)</td>
</tr>
<tr>
<td>Posttraumatic stress disorder</td>
<td>33.3</td>
<td>29.0 (3.0)</td>
<td>14.5</td>
<td>12.6 (2.1)</td>
</tr>
<tr>
<td>Any specific phobia&lt;sup&gt;a&lt;/sup&gt;</td>
<td>32.9</td>
<td>30.7 (3.1)</td>
<td>29.1</td>
<td>26.9 (3.0)</td>
</tr>
<tr>
<td>Social phobia</td>
<td>15.0</td>
<td>14.1 (2.3)</td>
<td>10.7</td>
<td>9.6 (1.9)</td>
</tr>
<tr>
<td>Generalized anxiety disorder</td>
<td>15.0</td>
<td>13.8 (2.3)</td>
<td>10.7</td>
<td>9.3 (1.9)</td>
</tr>
<tr>
<td>Any anxiety disorder</td>
<td>62.8</td>
<td>58.0 (3.5)</td>
<td>51.3</td>
<td>46.9 (3.4)</td>
</tr>
<tr>
<td>Somatoform disorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any somatoform disorder</td>
<td>5.6</td>
<td>5.1 (1.5)</td>
<td>4.7</td>
<td>4.2 (1.3)</td>
</tr>
<tr>
<td>Any disorder</td>
<td>84.2</td>
<td>80.6 (2.9)</td>
<td>61.5</td>
<td>56.8 (3.5)</td>
</tr>
</tbody>
</table>

<sup>a</sup>Specific phobia types are animal, natural environment, blood-injection-injury, and situational.
The mood, alcohol-related, and somatoform disorder rates in our study are most similar to those reported in the Parker et al. AIAN primary care study (Table 2). The rate of any past-year alcohol use disorder found among the women in our study (14%) is substantially higher than the rates of such disorders found among non-AIAN women or men in the other cited primary care prevalence studies (from 1.6% to 9.7%). Past-year mood disorder rates for our sample (20.9%; SE=2.7) fell between the estimates for non-AIAN women in primary care samples evaluated with the PRIME-MD (31%) and the CIDI (WHO–Seattle 6.6%, WHO–Chile 40.8%), but our rates are approximately 50% higher than the past-year mood disorder rates found among women in the NCS (14.1%). In addition to their similarity to the results of the Parker et al. study, the rates in our sample are similar to those from 1 other study of depressive symptoms among AIAN patients in primary care, which reported clinical and subclinical symptom rates in 20% of the sample. Our mood disorder rates are substantially higher than the past-year rates for female depression (12%) in the combined data from the international WHO Study of Mental Illness in General Health Care.
Our past-year anxiety disorder rate (46.9%; SE = 3.4) is 10 times higher than the combined WHO anxiety disorder finding (4.7%) and is double the rates found in the Parker et al. study\textsuperscript{39} and the highest individual-center rate for any WHO site (Chile, 24.4%). The lifetime rate (29%; SE = 3) of posttraumatic stress disorder in our sample was nearly 3 times the lifetime rate (10.1%) reported for women in the NCS, and our past-year rate (12.6%; SE = 2.1) of the disorder was more than 2 times the past-year rate (5.4%) found in the NCS.

Our past-year somatoform disorder rates (4.2%; SE = 1.3) are considerably lower than the rates found in the WHO–Chile sample (23.3%) and the PRIME-MD study (18%), but they are similar to the overall WHO rates and the rates found in the WHO–Seattle site (4.2%).

**Context of High Prevalence Rates**

The rate of lifetime substance use disorder found among the women in our study (62.3%; SE = 3.4) is considerably higher than any other reported rate in women. This finding should be put into context. Research on AIAN drinking indicates that (1) alcohol consumption and abuse levels vary widely by tribe and over time, (2) women have very high rates of alcohol abstention, (3) alcohol consumption is higher in urban areas than on reservations, and (4) alcohol consumption patterns are bimodal—there are large numbers of both abstainers and heavy binge drinkers in the population.\textsuperscript{30–12}

Rates of periodic binge drinking may overestimate the proportion of women with an “alcohol abuser” diagnosis in the DSM-IV algorithm. Although the DSM-IV criterion for diagnosis of alcohol abuse may be problematic in this population,\textsuperscript{12} it is plausible that the unreliability of recall as a measure of lifetime use may equally lead to underestimates of the prevalence of alcohol abuse. In spite of the unreliability of the lifetime use rates reported here, the dramatic difference between lifetime and past-year rates does suggest that AIAN women routinely “recover” from at-risk alcohol consumption with or without the help of treatment, which also has been suggested of AIAN men.\textsuperscript{36}

More than two thirds of the participants with lifetime and past-year substance abuse disorders also experienced at least 1 co-occurring anxiety disorder. Multiple plausible and conflicting theories exist regarding alcohol, other drugs, and anxiety: (1) anxiety is posited as both a cause and a consequence of heavy drinking,\textsuperscript{37,38} (2) child abuse and other traumas put women at risk for both disorders,\textsuperscript{37} and (3) anxiety disorders contribute to both the maintenance of and the relapse into pathological alcohol and drug use.\textsuperscript{38} Regardless of the temporal relationship of these diagnoses, timely treatment of either disorder may be a secondary prevention for the other.

In addition to higher rates of substance use disorders, AIAN women appear to suffer from much higher rates of anxiety disorders and also from high rates of combined anxiety disorder and depression. Depression and anxiety disorders may be both an outcome of and risk factor for the low socioeconomic condition of AIAN women.\textsuperscript{39,40} The amount of disability caused by depression has been found to be as great as or greater than the disability caused by common medical conditions such as hypertension, diabetes, arthritis, and gastrointestinal problems.\textsuperscript{41} In addition, the amount of disability caused by a combination of depression and anxiety disorder is greater than the disability caused by either condition alone.\textsuperscript{42,43}

Our investigation suggests that measures of socioeconomic deprivation, such as low education level and high debt, are associated with current mental disorders in AIAN women. Measures of self-rated health at the less than good health levels also are associated with mental disorders and may reflect the impact of poor physical health and/or other social problems.

We found that boarding school attendance was not related to either lifetime or past-year mental illness. Although this lack of association may be the result of improvements in boarding school management during the past 3 decades, it also is possible that the attendance measure we used had limitations. In particular, the measure of attendance alone may not capture the trauma associated with aspects of boarding school exposure. More research is needed to determine the health effects of boarding school exposure on AIAN populations.

**Treatment/Prevention Implications and Future Research**

Our research, which to our knowledge is the first prevalence study of AIAN women to have used a structured psychiatric diagnostic instrument at a primary care site, documents the magnitude of mental illness among AIAN women. Although the IHS does provide mental health services, the current-year behavioral health budget accounts for less than 5% of the overall IHS program costs,\textsuperscript{44} and funding for urban AIAN behavioral health is even less. The needs of this population impose a great strain on the drastically underfunded IHS primary care delivery system, and may inappropriately place urban and reservation leaders in competition for very limited resources.\textsuperscript{44,45} AIAN leaders and community members may find it useful to work with IHS leadership to advocate for more mental health funding and to establish pathways to specialized, culturally competent mental health services from primary and urgent care settings.

Mental disorder prevention and treatment for AIAN women must take into account comorbid conditions, specifically anxiety disorders with both substance abuse and major depression. Successful alcohol abuse prevention may depend upon and increase the need for other mental disorder treatments.\textsuperscript{46} In addition, longitudinal research is needed to understand the nature of co-occurring conditions.

A recent Native American women’s “stress and coping model”\textsuperscript{47} hypothesizes important individual- and community-level variables that may both heighten vulnerability to and protect against mental illness. This model, which is an important guide for future research, draws attention to both external and internalized attitudes and behaviors—racism, sexism, religious intolerance, and homophobia—and the other forms of colonial stratification that continue to affect AIAN families from within and without.

**About the Authors**

Bonnie Duran, DrPH, Margaret Sanders, PhD, Betty Skipper, PhD, Howard Waitzkin, MD, PhD, and Lorraine Halina Malcore, PhD, are with the Department of Family and Community Medicine, University of New Mexico School of Medicine, Albuquerque, NM. Susan Paine, MPH, and Joel Yager, MD, are with the Department of Psychiatry, University of New Mexico School of Medicine.
Requests for reprints should be sent to Bonnie Duran, DrPH, Associate Professor, MPH Program, MSC09 5060, 1 University of New Mexico, Albuquerque, NM 87131-0001 (e-mail: bonduran@unm.edu).

Contributors
B. Duran designed and coordinated both the research and the writing of the article. H. Waiztkin and J. Yager contributed to the study design and to the writing of the article. M. Sanders, B. Skipper, S. Paine, and L. H. Malcoe scored the Composite International Diagnostic Interview, conducted the statistical analysis, and contributed to the writing of the article.

Acknowledgments
This research was made possible by grants 1R24MH58404, K01MH02018, and R23MH60288 from the National Institute of Mental Health (NIMH).

We would like to acknowledge the contributions of several individuals and tribes without whom this work would not have been possible. Special thanks to each woman who agreed to be interviewed for this study: to Florence Chavez and all the members of the Indian Health Service (IHS) Albuquerque Service Unit (ASU) Tribal Health Board and Tribal Administrations, Cheri Lyon, Charles North, and other IHS ASU administrators and employees for their support, feedback, and use of facilities; to Leslie Randall, Roger Golub, William Freeman, Ervin Lewis, and other National IHS institutional review board members for their support and feedback; and to Julie Lucero, Jolene Aguilar, and the other study interviewers for their data collection efforts. Special thanks also are owed to Spero Manson, Phillip May, Jan Beals, and Claudia Honeywell for the help with instruments, feedback, and support.

Note. Opinions expressed in this article are those of the authors and do not necessarily represent the official views of NIMH.

Human Participant Protection
The human subjects review boards of the University of New Mexico Health Sciences Center and the National Research Office of the IHS approved the protocol for this study. The IHS ASU Tribal Health Board approved both this study and this article.

References
Race and Research: Perspectives on Minority Participation in Health Studies

Edited by Bettina Beech, DrPH, MPH, and Maurine Goodman, MA, MPH

Race and Research: Perspectives on Minority Participation in Health Studies is a teaching text and resource guide for students, health professionals, public health researchers, and the general public that extends the discussion of environmental factors that influence ethnic minority participation in health studies. This book examines the lack of minority participation in health studies from social, historical, and scientific perspectives.

This book is divided into three main sections: 1) The Meaning of Race, Culture and Ethnicity in Research; 2) Health Studies and Ethnic Minority Populations and 3) The Impact of Revolutionary Changes in Medicine and Health Care on Minority Participation in Health Studies.

ISBN 0-87553-030-3

softcover 2004
$27.50 APHA Members
$35.95 Nonmembers
plus shipping and handling

NEW!

Race and Research Perspectives on Minority Participation in Health Studies

Edited by Bettina Beech, DrPH, MPH, and Maurine Goodman, MA, MPH

Race and Research: Perspectives on Minority Participation in Health Studies is a teaching text and resource guide for students, health professionals, public health researchers, and the general public that extends the discussion of environmental factors that influence ethnic minority participation in health studies. This book examines the lack of minority participation in health studies from social, historical, and scientific perspectives.

This book is divided into three main sections: 1) The Meaning of Race, Culture and Ethnicity in Research; 2) Health Studies and Ethnic Minority Populations and 3) The Impact of Revolutionary Changes in Medicine and Health Care on Minority Participation in Health Studies.

American Public Health Association
Publication Sales
Web: www.apha.org
E-mail: APHA@TASCO1.com
Tel: (301) 893-1894
FAX: (301) 843-0159

NEW!