

Depression, Anxiety, and Substance Use Incidence in Northern Plains Indians

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Background: Mood disorders including depression and anxiety are among the major health problems of American Indians. Depression is estimated to be a leading cause of disability worldwide (Murray and Lopez, 1996). American Indians (AI), among the most heterogeneous and impoverished minority groups in the U.S., suffer disproportionately from depression, with a per capita suicide rate 247% the national average and, among 15-24 year olds, 429% the national average (IHS, 2000). Unfortunately there are few available data addressing the co-morbidity of depression and other mental and physical health problems in AI (Daniels et al, 2001; Daniels et al, 2000), or the relationships between depression and possible moderating factors such as nutrition and cultural identification. Further, the Center for Epidemiological Studies - Depression scale (CES-D) has been the most commonly used measure of depression in epidemiological studies of AI, while mental health practitioners (those who diagnose and treat depression and other mood disorders) most frequently use the Beck Depression Inventory II (BDI-II). The relationship between the CES-D and BDI-II has not been determined for AI, and there are no community-based normative data for the BDI-II in AI.

Many psychological tests for mood disorders are used with American Indian behavioral health clients, however; very few have been examined to see if they are valid, reliable, and culturally appropriate for AI populations. Some of the mediating factors that could contribute to these mood disorders in American Indians are: historical trauma, culture identification issues, quality of life, socioeconomic status, and health status. This study examines the psychometrics of common measures of depression, anxiety and substance use with Northern Plains Indians (NPI). The measures included the Beck Depression Inventory-II (BDI-II), Center for Epidemiology Studies-Depression Scale (CES-D), Tri-Ethnic Depression Scale (TEDS), Beck Hopelessness Scale (BHS), Beck Anxiety Inventory (BAI), Symptom Checklist-90-Revised (SCL-90-R), Substance Abuse Subtle Screening Inventory-III (SASSI-III), Quality of Life Inventory (QOLI), Rumination Scale (RS), Northern Plains Bicultural Inventory-Revised (NPBI-R). Information concerning type and quantity of substance use are also included. Data also include the use and frequency of use of substances including: alcohol, tobacco, marijuana, cocaine, methamphetamine, steroids, heroin, peyote, ecstasy, and IV drugs. The study also examines the spiritual, traditional, and cultural practices of participants and if they may provide a protective factor from mood disorders.

Methods: Three hundred twenty male and female adult, Northern Plains Indians were recruited from IHS and tribal behavioral health clinics on six North and South Dakota Reservations to complete a series of mood disorder assessments. The participants were recruited from three groups: 1) diagnosed depressed (by clinician), 2) diagnosed anxious (by clinician), and 3) no mental health diagnosis (control). Assessments were completed by paper and pencil, placed in an envelope and returned to the site coordinator. Participants received \$10 in gift/gas cards in compensation for their time and the tribe received \$5/participant for compensation. Site coordinators added the clinical diagnoses to the envelopes and returned them in separate envelopes from the consent forms to the researchers. Data was then entered using SPSS for all returned measures. Assessments included depression, anxiety, hopelessness, rumination, culture, quality of life, substance abuse, substance use, demographics, and the clinician's diagnosis code.

Results: A total of 320 participants from 6 approved sites have completed the assessments. Data from 112 male and 208 female participants between the ages of 18 and 72 years have participated. Diagnoses included: Depressed 31%; Anxious 36%; Co-Morbid 23%; Substance Abuse 26%; and no diagnosis 54%. Substance use reports indicate: 64% smoke tobacco (20% for spiritual purposes); 46% use alcohol (38% binge drink); 16% use marijuana; 24% use methamphetamine; 18% use cocaine; 6% use heroin; and 8% use illegal IV drugs. Analyses include a 2X3 MANOVA across gender and diagnosis and ANOVAs of diagnostic groups.

Conclusions: There is a high incidence of co-morbidity between depression and anxiety among AI behavioral health patients. There is a high frequency of substance use among those who have a mood disorder diagnosis.