

# **Relationship Between Acculturation and Psychological Distress 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, 2010). 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).

Cultural identification has an important effect on the experience of depression within American Indian communities. High cultural affiliation has been found to moderate the effects of low behavioral activation in contributing to depressive symptoms. Northern Plains American Indian adolescents with low behavioral activation had higher depressive symptoms when they scored low on cultural identification; however, individuals with high cultural identification did not experience increased depressive symptoms regardless of the level of behavioral activation (Hamill, Scott, Dearing, & Pepper, 2009). This research highlights the importance of examining the cultural context in psychological examination.

Many psychological assessments 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 inaccuracy or inappropriate use of these assessments with American Indians are: historical trauma, culture identification issues, quality of life, socioeconomic status, and health status. This study examines the influence of acculturation in the outcomes of various measures of psychological stress in Northern Plains Indians (NPI). The Northern Plains Biculturalism Inventory, Revised was used as the measure of level of cultural affiliation.

The Northern Plains Biculturalism Inventory was originally developed by Allen and French (1994) and later revised by Baker (2005). The inventory was based off of the Alternation Model of Cultural Acquisition and the Orthogonal Theory of Biculturalism (Baker, 2009). Resulting from these two theories was the 20-item Northern Plains Biculturalism Inventory, Revised. Two factors were isolated; American Indian Cultural Identification (AICI) and European American Cultural Identification (EACI) subscales create four levels of acculturation. A high score on the AICI scale and low score on the EACI scale indicate American Indian Cultural Identification while a low score on AICI scale and a high score on the EACI scale indicate European American Cultural Identification. Scores that fall above the median on both AICI and EACI indicate biculturalism while scores that fall below the median on both scales indicate marginality.

## Methods:

Six hundred male and female adult, Northern Plains Indians were recruited from IHS and tribal behavioral health clinics on seven 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 600 participants from eight approved sites have completed the assessments. Data from 233 male and 360 female participants between the ages of 18 and 80 years have participated. The mean age was 36.2 years with a standard deviation of 12.7 years. Seventy-nine percent of participants had at least a high school education and 54% had household incomes below \$8,000/year. Diagnoses based upon clinician reports included: depressed 25.1%; anxious 22.6%; co-morbidity with depression and anxiety 13.7%; substance abuse 24.3%; and no diagnosis 54.5%.

Descriptive statistics were conducted on all assessments. One-way ANOVA analyses were run to examine the mean of the groups of NPBI-R and scores of depression and anxiety. Post hoc multiple comparisons reveal significant relationships between the level of acculturation and measures of depression, anxiety, and Quality of Life. Individual Pearson correlations reveal significant correlations between the various measures of depression, anxiety, and rumination.

#### Conclusions:

- 1) There is a high correlation between the depression, anxiety and rumination measures and an inverse correlation with Quality of Life.
- 2) Reliability and validity of the measures are reported.

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