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The Effect Of Biculturalism On Self-Esteem In Northern Plains Native American College Students

Mary J. Wilkie

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THE EFFECT OF BICULTURALISM ON SELF-ESTEEM IN NORTHERN PLAINS
NATIVE AMERICAN COLLEGE STUDENTS

by
Mary J. Wilkie
Bachelor of Science, University of North Dakota, 1996

A Thesis

Submitted to the Graduate Faculty

of the

University of North Dakota

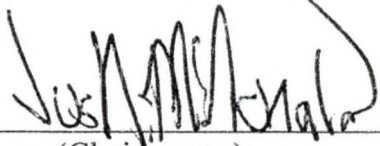
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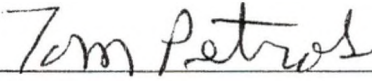
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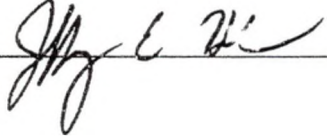
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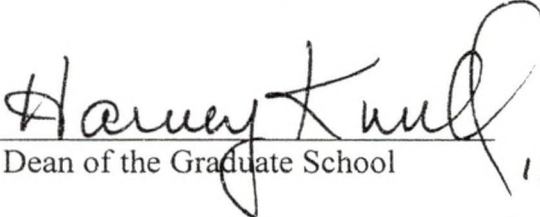
This thesis, submitted by Mary J. Wilkie in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.



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This paper is for him.

ABSTRACT

The main purpose of this study was to examine the effect of biculturalism on self-esteem in a sample of 51 Northern Plains Native American college students (29 females, 22 males). Subjects completed the Northern Plains Biculturalism Inventory (NPBI; Allen & French, 1994) and the Index of Self-Esteem (ISE; Hudson, 1982). Pearson Product-Moment correlations, independent t-tests, a multiple regression analysis, and an one-way analysis-of-variance was performed using the SPSS statistical package to examine, if any, the relationships between the NPBI subscales and the ISE total scores. This design tested the applicability of the Orthogonal Theory of Biculturalism (Oetting & Beauvais, 1990). It was predicted that higher combined scores on the NPBI subscales would predict lower ISE total scores. Results suggested a trend, bordering on statistical significance, indicating the NPBI subscales were weak-to-moderate predictors of self-esteem. The multicollinearity of the NPBI subscales requires caution in interpreting this and any other data which utilizes this scale. Recommendations for future research in Biculturalism Measurement and Native American Mental Health are discussed.

INTRODUCTION

Few would argue that self-esteem affects many facets of life, including mental and physical health (Gilberts, 1983; LaFromboise, Coleman, and Gerton, 1993; Oetting and Beauvais, 1990). It has been suggested that those with higher self-esteem tend to have less problems with socialization, physical illness, and job security (Gilberts, 1983). It would follow, then, that mental health professionals should strive to both research and reinforce greater self-esteem for their client's therapeutic success (Gilberts, 1983). Although the significance of self-esteem's impact on mental health makes intuitive sense, the relationship between the two is not always clear.

If clients perceive themselves as having good self-esteem, they feel more empowered to control their situations, as opposed to those with low self-esteem who may allow others to take charge (Oetting and Beauvais, 1990). Although contemporary therapeutic strategies seek to empower the client; it was often the case for Native American clients to be "acculturated" to the Western world views in hopes of restoring their mental health (LaFromboise, 1988). There was typically insufficient consideration of the significance of differing world view and value systems pertaining to mental health and healing.

Several cross-cultural studies have suggested Native Americans have lower self-esteem than their majority culture peers (Dinges & Hollenbeck, 1978; Dukes & Martinez,

1994; Halpin, Halpin & Whiddon, 1981; Lefley, 1976; Richardson, 1987). One major problem with these studies is that cultural identification and competence were not assessed or controlled. Many tribes are “common” communities; evaluating the individual “self” is a difficult and foreign task, more typical of majority-culture researchers’ world view (Long & Hamlin, 1988). Trimble (1981) describes this phenomena as the individual seeing themselves as part of the social whole and not as a singular entity. Because traditional Native Americans see themselves as part of a larger whole, there is little research which incorporates cultural identification and competence in ways that capture the interactions caused by this variable. While a possibility exists that older, more traditional Native Americans cannot differentiate “self” from “community”, the majority of self-concept research has focused on children and adolescents; it is very difficult to find literature focusing on the older Native American and self-esteem (Trimble, 1987).

Definition of Key Terms

A consensus on the definition of self-esteem has been difficult to achieve. Instead, researchers have focused on different factors that comprise the concept of self-esteem. Richardson (1987) discusses many different definitions of self-esteem from various articles, ranging from global measures (i.e. how competent, effective, and deserving one feels in the world) to a single feeling or emotion one possesses. Gilberts (1983) includes constructs of *private* as well as *public* aspects of functioning to describe self-esteem. Private constructs includes such things as how one feels about his/her physical appearance, social abilities, and personal attributes. Public constructs may be

how others define one's self-concept by observing behavior. Dana (1993) stresses a self-esteem concept as being comprised of many other concepts such as: "... acceptance of self, acceptance of others, and stability of self"(p. 81). The definition which will be used for this study is given by Abell, Jones, and Hudson (1984), which states that self-esteem is viewed as a linear construct upon which the client evaluates him/herself. Using a single dimension rather than multiple dimensions simplifies the definition of self-esteem. One example of multiple constructs is used by Addeo, Green, and Geisser (1994) which splits self-esteem into two constructs. These two constructs are very similar yet are separated in the analysis of the study. Looking at how an individual views him/herself and not what others think of him/her also narrows the definition sufficiently enough for use in this study.

Other definitions that must be clarified at the onset of research include Native Americans, biculturalism, and cultural competence. McDonald, Morton, and Stewart (1993) define Native Americans/American Indians as anyone belonging to a federal, state, or locally recognized tribe through blood quantum or descendency, and/or anyone adopted into such a tribe through a tribal ceremony and attempts to live within tribal customs. Oetting and Beauvais (1990) describe biculturalism as being involved with one culture while acquainting with another, thus becoming highly identified with both cultures without losing the identify of either. The Oetting and Beauvais definition will be utilized in this study. Buriel (1994) describes biculturalism as being similar to acculturation without the loss of one culture over another. McDonald, Morton, and Stewart describe biculturalism as having knowledge of two cultures' values and

behaviors. All definitions cited share the same concept of identifying with two cultures and not losing one culture's values over the other.

LaFromboise, Coleman and Gerton (1993) offer the following list of criteria to achieve cultural competence: strong individuality, awareness of and proficiency with the beliefs and values of the culture, display receptiveness to the affective workings of the culture, converse intelligibly in the language of the given ethnic group, demonstrate socially-approved behavior, participate in community exchanges within the group, and navigate the organizational framework of that group. Jordan (1998) defines cultural competence as a set of corresponding behaviors, viewpoints and procedures that come together in a such a way that enables them to work effectively in different cultural situations.

The Orthogonal Theory of Biculturalism (Oetting & Beauvais, 1990) suggests individuals may fall into one of four categories based on their degree of identification with two cultures (see Figure 1). One category is that of Bicultural competence, or highly identifying with both cultures. A second category, Traditional, is identifying highly with one culture while at the same time having a moderate identification with another. A third category is Marginal, or having low identification with both cultures. If identification is low with both cultures, or Marginal, then problems with mental health may increase. The final category is where identification is very high with one culture but extremely low in another, often called Assimilation. Self-esteem problems may occur particularly when a person is Marginal, not identifying with either culture, whereas self-esteem may increase when identification with one or more cultures increases accordingly. According to this

theory, those who are more highly bicultural have the greatest sense of self-esteem (Oetting & Beauvais, 1990).

Studying the concept of self-esteem with Native American college students may help clinicians from both cultures to better understand what effect cultural orientation has on self-esteem for a sample that represents the Western-educated, and -prospective leaders of their respective Native American communities.

Test Bias

Many psychological assessment instruments are biased against minority groups, particularly Native Americans (Dana, 1993). Many assessment instruments are standardized using middle-class, White subjects (Sue & Sue, 1990; Dana, 1993). Elevated scale scores (on the MMPI for example, Pollack and Shore, 1980) occur when cultural and language differences are not accounted for in the scoring process (Hoffmann, Dana, & Bolton, 1985). An assessment of a Native American client's level of acculturation is the most important clinical measurement a mental health professional can take, yet no such instrument exists. Neglecting acculturation level could lead to misdiagnosis of the client, especially of the more traditional clients that seek assistance. Each test must be modified to be culture or tribe specific, only then can the clinician get an accurate diagnosis (McDonald, Morton, & Stewart, 1993). More research in the area of modifying and/or creating new assessment tools still needs to be done. This is an area of Native American mental health research that could greatly benefit both Native people and the field.

Literature Review

There have been few studies addressing the self-esteem of Native Americans and even fewer taking acculturation into account. Lefley (1974) looked at acculturation, maternal child-rearing practices, and self-esteem in two Florida tribes. Results showed that members of the less acculturated tribe had more positive self-esteem, although it should be noted that this tribe also had more similarity to majority culture child-rearing practices than the more acculturated tribe. This finding shows that there may be core common practices among races, and when one culture clashes with another, a disorganization occurs that creates additional stress while the process of acculturation takes place. Rosenthal (1974) did a longitudinal study of Chippewa children of Wisconsin to monitor the development of the Native identity of the children. His conclusions showed young children have very low self-esteem when asked about their Native identities, but self-esteem increases with age as the children gain a clearer identification with their heritage. Lefley (1975) tested Mikasuki Seminole Indian children's self-concept/self-esteem two ways: in their Native language with Native examiners and in English with White examiners. Self-esteem was defined using various concepts. These concepts included how they felt about being Native, how they perceived their Native lifestyle, character, intellect, and how they perceived their body image. Results suggested that in their Native language, the children showed a higher personal self-concept, and a higher Indian self-concept with the White examiners, suggesting a context-dependent pattern of self-concept. When the self-concept test was given by Native examiners, the context could have been construed in a "family-familiar" setting,

so the personal self-concept was higher whereas in a context with an Anglo examiner, the subjects could have been defensive about their ethnicity, so the self-concept construct that described Native ethnicity was lower. Annis & Corenblum (1986) also came to a similar conclusion when testing Ojibwa children in either English or their Native language. Children were tested on the preference of how they see themselves (self-identity) by pointing to one of two pictures (both pictures same sex as the subject), either a picture of an Indian child (depicted by darker skin coloring) or a picture of a White child. The children identified with the Native picture preference more often when given instruction in Ojibwa than when presented instructions in English. Dinges and Hollenbeck (1978) varied the instructions on a self-esteem measure (Children's Self-Social Constructs Test) given to Navajo children. In standardized conditions, a list of pictures is shown to the child with no indications given that the top (in a vertical list) or the leftmost picture (in a horizontal list) was to be the best of all the pictures, then asking the child to pick the one they feel best represents themselves. In these standardized conditions, the Navajo children had lower scores. Instructions were varied in two ways. One was that instead of repeating the instructions three times, they only repeated them twice but explained the rationale of the test more thoroughly (i.e. the top/left means the best, the bottom/right the worst). Secondly, since the testers were bilingual, if the subject asked any questions, the answers were given in the Native language (Navajo). When giving the better rationale for the test, the self-esteem scores increased. The basic theory of this study was to look at if there would be differences in self-esteem if subjects looked at the vertical list as opposed to the horizontal list. The results of this hypothesis showed third-graders had

better self-esteem when using the horizontal list and both second and third graders had high self-esteem on the vertical list.

Halpin, Halpin and Whiddon (1980) looked at the association between parental locus of control and their offspring's self-esteem among Flathead Indians and White adolescents. This study utilized two self-report questionnaires that tapped into students' perceptions of success and failure in academics. Twelve different parental qualities (i.e. nurturance, principled discipline, affective punishment) were studied by questionnaire and a self-esteem inventory. For the Native sample, an internal locus of control was positively correlated to instrumental companionship (from parents) and negatively correlated with external punishment (from parents). For the White subjects in the study, an internal locus of control was positively correlated with instrumental companionship, nurturance, principled discipline, and pressure to achieve (parental qualities). Results showed that, while not statistically different, the two groups varied on the external punishment measure. Adolescent perceptions were the same as far as self-esteem and parental factors that heighten or lower self-esteem. When parents dole out external punishment such as scolding, White adolescents perceive this as not having internal control but rather the perception his/her life is run by others. White adolescents feel less in control due to varying degrees of parental qualities than their Native counterparts, who rated parental qualities less of a significance in regards to locus of control and self-esteem. Halpin, Halpin and Whiddon (1981) researched self-esteem and locus of control among junior and senior high school Flathead Indians and Whites. Halpin, Halpin and Whiddon (1981) used the same self-esteem measure and locus of control measure as they

did in their 1980 study mentioned above. Results showed the Indians had much lower self-esteem than the Whites. The authors cite several possible explanations for this significant difference. One possibility is that majority-culture biases were incorporated into student's self-esteem. Another possibility is that parents viewed the child negatively and this was internalized. There were no significant differences in locus of control for the groups. Both groups felt an internal locus helped in achieving junior/senior status thus far and that increased self-esteem. Barnes and Vulcano (1982) studied the self-esteem component of school self-acceptance among Canada's Native, White, and Metis children to try to establish validity of the measure with Native children. School self-acceptance is one construct of an individual's self-concept. This study tried to lend validity data for use of a self-concept measure (entitled the Self-Appraisal Inventory by the Instructional Objectives Exchange (1972)) with Natives. Results showed that Native and Metis children scored lower on school self-acceptance than White children; however, the validity and reliability was judged to be adequate, and acculturation was not a contributing factor in predicting school self-acceptance. The authors offer socioeconomic status (SES) and age as possible explanations for the lower self-esteem scores (those in low SES levels and older students had lower self-esteem). Acculturation level and parental control (from the child's perspective) had no significant bearings on the findings. Halpin, Halpin and Whiddon (1985) compared Native American and White teenagers on aspirational levels when effected by varying failures, successes, or monetary incentive. Self-esteem and race were among the list of possible moderating variables. Aspirational levels are based on phenomena whereby people have a tendency to raise their goals after

they succeed at something and likewise to lower their goals after a failure. This study used a questionnaire designed specifically to measure such phenomena. This questionnaire contained 5 puzzles that varied in degrees of difficulty. The five puzzles are laid out on a table. Instead of actually doing the puzzles, the instructions were adapted and the subjects got to choose which puzzle to do first. After a failure or success, the subject is asked which they would choose if they were given a monetary reward for a correct and complete puzzle. Results showed that although race did not matter, self-esteem did. Students with low self-esteem chose more difficult puzzles following success and when money became a factor, this group chose even more difficult puzzles. The authors suggest that this group figured they had nothing to lose and even more to gain if they correctly solved the puzzle. The high self-esteem group lowered their goals when money became a factor. The authors contribute this to more self-confident individuals who set goals they could realistically obtain to insure success.

Dukes and Martinez (1987) looked for relationships between the areas of public and private self-esteem with race and gender. This study looked at private and public self-esteem in Black, Chicano, Native American, Asian, and White males and females. Private self-esteem is one dimension of the authors's multi-dimensional definition of self-esteem. According to the authors' definition, self-esteem refers to how satisfied one is with their perception of themselves. Public self-esteem is defined as that self-esteem perception based on one's success in social contexts, such as social, occupational, and familial. This self-esteem is usually based according to majority-culture standards. For the Native Americans in their study, it was found they had lower self-esteem on both

domains than their White counterparts. In addition, Native American men had lower self-esteem than Native American women. The authors offer few explanations why some minorities (Blacks and Chicanos) differ on each high-low domain and some score low on both domains (public and private), such as the Native and Asian Americans do. The explanation the authors do offer is the 1960's Civil Rights activities which may have empowering ideologies of Blacks and Chicanos to heighten their self-esteem. The latter two groups (Native and Asian Americans) had no such empowerment movement

Long & Hamlin (1988), while testing psychometric properties of the Piers-Harris Self-Concept Scale, compared self-concepts of White and Indian children living in Montana. Teachers rated the student's self-esteem based on classroom observation. These observational ratings often do not reflect a true self-esteem score, merely teacher perceptions. Due to prejudice within White/Native communities, negative self-esteem may be internalized through various negative experiences. Results showed that the Native children scored lower on scales that tapped self-esteem in the contexts of behavior and school status, which are usually evaluated by teachers, most of whom are non-Indian. The Piers-Harris Scale ratings of poor self-esteem may be culturally inappropriate for this group of Native Americans. As mentioned earlier, "common" communities do not look favorably upon things that bring notice to an individual, which self-concepts scales intend to do. Long and Hamlin recognize this point and caution the reader about their interpretations. This study is another example of self-concept being context-dependent (the others being Lefley (1975) and Annis and Corenblum (1986)).

Dukes and Martinez (1994) studied the effects of race and gender on self-esteem. Core self-esteem, as defined by Dukes and Martinez (1994) is an overall perception of the self. Public self-esteem is one part of the core self-esteem and is the perception of yourself in school and other public settings. This was measured by having the subjects rate themselves on a Likert scale (4 choices) with three statements regarding perceived intelligence, potential, and ability to achieve in school. These statements asked the subject to compare the him/herself with others the same age. Results showed that Native American self-esteem, for both sexes, was higher than Asian counterparts, and lower than Hispanic, White and Black counterparts on core self-esteem measures. For public self-esteem, however, Native American males were lowest of the male group and Native American females were only slightly higher than Asian females and lower than Hispanic, White and Black females.

Daniels & D'Andrea (1995) looked at self-esteem and moral development of Native Hawaiians in grades 5-11. The inventory subscales used for this study look at the general self-esteem (overall perception of self) and the social/peer subscale which measured subject social-context self-perception. Their results showed that self-esteem was lowest in grade 7; typical of adolescent growth. Typical changes include transition to (often) larger middle schools, physical changes in body shape, size and appearance, and possibly new and varied social interactions (i.e. dances, sports, clubs).

Bee-Gates, Howard-Pitney, LaFromboise, and Rowe (1996) used self-esteem as a variable to predict help-seeking behavior of Zuni adolescents. The Coopersmith Self-Esteem Inventory (1990) was used to measure global self-esteem (overall concept). With

regard to self-esteem, they concluded that those who had higher self-esteem were more psychologically fit, had fewer problems, and did less help-seeking.

Increased understanding of the relationship between bicultural competence and self-esteem provided by this research project may help clinicians better relate to Native American clients. Non-Native counselors/psychologists may also become more aware of the uses and limitations of assessment instruments with the differing bicultural states that the Native client may present. With more information being disseminated regarding level of biculturalism and self-esteem, it may allow therapists one more step toward achieving cross-cultural competence.

Present Study Hypothesis

I chose to investigate the effects of biculturalism on self-esteem. The Orthogonal Theory of Biculturalism suggests those more Biculturally competent will display higher levels of self-esteem, and those more Marginal would display lower levels of self-esteem. It was specifically hypothesized that those individuals in the proposed sample who scored higher on both scales of the NPBI (more Bicultural) would also record lower overall ISE scores (higher self-esteem), while those recording lower NPBI scores (more Marginal) would also score higher on the ISE (lower self-esteem).

METHODOLOGY

Subjects

The sample consists of fifty-two (22 male, 30 female) Native American college students who attended the University of North Dakota in the Spring and Summer Semesters, 1998. Subjects were not screened for age, tribal affiliation, or any other demographic variable (see Table 1). Age, gender distribution, education level, GPA, and tribal affiliation were included on the demographic sheet and analyzed as described later.

Materials

The research packet (see Appendix A) consisted of: 1) informed consent form; 2) demographic questionnaire; 3) Northern Plains Biculturalism Inventory (NPBI); and 4) Index of Self-Esteem. (This item is not included in Appendix A due to copyright laws.) These are discussed in greater detail below.

Informed Consent. Participation was anonymous. The subject's name appeared only on the Informed Consent Form. These forms are secured in the Indians into Psychology Doctoral Education (INPSYDE) Program office by the researcher to ensure security and to prevent any association of individuals with the experiment. On this form, subjects were advised that participation was completely voluntary, amount of time involved, potential risks and benefits were listed, and extra credit slips for spring, summer or fall psychology classes were given for those who chose to complete the

questionnaires or five dollars cash for those who were not currently in psychology classes. Also included was my name (Mary J. Wilkie) and phone number as well as my advisor's name (Dr. J. D. McDonald) and phone number in case any subject had questions regarding this study.

Demographic Sheet. Items on the demographic sheet assessed the participant's background. The demographic survey established: age, gender, year in school, major, mean GPA (grade point average), and specific tribal identity. These variables were examined for other interesting covariations with scale items and to provide information regarding general characteristics of the sample.

Northern Plains Biculturalism Inventory. The Northern Plains Biculturalism Inventory (NPBI; Allen & French, 1993) is a 30-item, Likert-scaled inventory assessing Upper Midwest Native Americans and Midwestern White (EuroAmerican) cultural identification. The inventory focuses mainly on social behavior, which is thought to be driven by fundamental attitudes that many authors have described as viewpoints, perceptions, and cultural identification. There are currently two different versions of the NPBI for use depending on the sample characteristics. The College version is meant for use with Native American college students. The Community version is for use in Native American communities and was not used in this study. The only difference noted between the two versions can be found in the NPBI manual which refers to the reading level needed of each participant. The College version requires at least a high school reading level ability whereas the Community version of the NPBI has questions rewritten for easier comprehension in case participants do not possess a high school reading level.

The NPBI was developed in accordance with the Orthogonal Theory of Biculturalism (Oetting & Beauvais, 1990).

Instead of a unidimensional model of cultural identification, the NPBI proposes a circular adaptation (see Figure 1). Many researchers of Native Americans advocate that efficacious coping in more than one culture leads to better mental adaptation and more self-fulfillment among Native Americans (LaFromboise, Coleman, & Gerton, 1993). The NPBI has three subscales, an American Indian Cultural Identification (AICI) subscale, a European American Cultural Identification (EACI) subscale, and a Language subscale. Each item on the NPBI loads on one of the subscales as follows: AICI, item numbers 2, 3, 8, 10, 11, 14, 15, 18, 23, 24, 26, 28, 29; EACI, item numbers 1, 4, 7, 9, 12, 13, 16, 17, 25, 27, 30; and for the Language subscale, item numbers 5, 6, 19, 20, 21, 22. A subject with strong traditional ties would have high scores on the AICI (American Indian Cultural Identification) subscale of the NPBI. A subject with more identification with the majority culture would procure high scores on the EACI (European-American Cultural Identification) subscale of the NPBI. If a subject scored highly on both the AICI and EACI scales, then they would be described as possessing a Bicultural Identification, whereas if a subject scored low on both scales, he or she would be described as Marginal (no clear identification with either culture). There is also a Language subscale, but this scale was not used in this study since the Language subscale looks at a participant's knowledge and preference for using an American Indian Language and this particular topic is not addressed in this study, which focuses on only the Cultural Identification subscales of the NPBI. Response choices range from 1 (Not at All) to 4 (Very Much).

Raw scores were obtained by summing the response number for each of the questions belonging to each of the two scales that were utilized. There are four items that are reverse-keyed, of which only one was used in the two scales in this study as per the NPBI manual subscale construction. A six-month test-retest reliability for the College version showed the AICI scale to have $r = .82$, the EACI scale $r = .70$, and the Language scale to have $r = .74$ (Allen and French, 1994).

Index of Self-Esteem. The Index of Self-Esteem (ISE; Hudson, 1982) began as an unpublished manuscript by Hudson and Proctor at the University of Hawaii. The ISE is one of nine, short-form assessment devices that are collectively referred to as the "Clinical Measurement Package" (Hudson, 1982). The Clinical Measurement Package tracked various types of individual, interpersonal, and community functioning such as self-esteem, parental, marital, and peer relations. As more self-report measures became available and were in the process of validation, they constituted a collection of measures now known as the "WALMYR Assessment Scales" (Walmyr Publishing Co., 1997). The ISE is a 25-statement inventory that requires the subject to respond to each statement in terms of the amount of time (e.g. none of the time, some of the time, all of the time) they would concur with that particular statement. The scores can range from 0-100, with a lower score showing little or no problems with self-esteem and a higher score showing a possible problem with self-esteem. The ISE manual (Walmyr, 1997) gives a clinical cut-off score of 30. Below 30 indicates no problems with self-esteem, and a score above 30 indicates a likely problem with self-esteem. A second clinical cut-off score of 70 is given, indicating that for those scoring above 70, the therapist should be on guard that a

client may be considering suicide to “deal” with problems in this area. The statements that were reverse-scored are given in the lower lefthand corner of the scale under the copyright year and author of test. After the reverse-scoring was completed, the total score was derived by using the manual formula of $(SUM - N)(100)/[(N)(K-1)]$, where N = number of correctly answered items and K = the largest value for any item (7). In samples done by the researchers (Abell, Jones, & Hudson, 1984; Hudson, 1982), they repeatedly found internal consistency (reliability) to be $>.90$. When studying the various types of validity (e.g. construct, content, factorial, and group) of the ISE, validity coefficients consistently reached .60 or greater (Walmyr, 1997).

Procedure

After securing approval from the Institutional Review Board (IRB), a mailing list of all currently enrolled Native Americans was obtained from the Native American Programs Office. Subjects were solicited by regular mail, and a self-addressed stamped envelope was included with the research packet so subjects would not incur additional expenses for the research other than their time. Upon return of the research packet, subjects were mailed an extra credit slip or \$5.00, documenting their participation in the study. Subjects could exchange the credit slip for academic research credit in their psychology course, if applicable. My minimum of 100 subjects (N = 22) was not obtained via this mail-out procedure, so a second subject-recruitment effort was employed. I recruited subjects from summer session classes taught through the Indian Studies (obtaining consent from instructors to speak to classes; N = 8) and psychology (sent memo to instructors asking if a research assistant could come into their classes to

recruit subjects; only one instructor replied; N = 0) departments. Other recruitment techniques employed included asking friends for names and going door-to-door in my neighborhood of known Native American college students (N = 22).

Data Analysis

All returned questionnaires were coded and computer analyzed using the SPSS statistics program. Descriptive statistics were conducted on all the variables (See Table 1).

After examining the descriptive statistics, four other analyses were conducted. These include Pearson Product-Moment Correlations, Independent T-Tests, a Multiple Regression analyses, and a one-way Analysis of Variance (ANOVA) test with a post-hoc Tukey test. The Pearson Product Moment (PPM) Correlation analysis determined the strength and direction to which any of the subscales covaried, as well as their relationships with the demographic variables. The T-Tests investigated the differences between male and female mean responses on the NPBI subscales, GPA, and the ISE scale scores. The Multiple Regression analysis was done to observe the predictive power of the two NPBI subscales (IVs) on self-esteem (DV). The ANOVA investigated how the four quadrants of the scatterplot differed on demographic variables and mean self-esteem scores.

RESULTS

Respondent Characteristics

There were 30 female respondents and 22 males. The mean age for all respondents was 30.21. The average year in college for all respondents combined was 3.69, with 1 pertaining to freshman status, 2 pertaining to sophomore status, 3 to junior status, 4 to senior status, 5 pertaining to graduate status, and 6 pertaining to other (requested specification). The mean grade point average was 2.99. There were 26 subjects of Objibwe/Chippewa ancestry, 14 variants of the Sioux Nation, 6 variants of the Three Affiliated Tribes (composed of Arikara, Mandan, and Hidatsa), 2 Cherokee, and 3 Other, and one subject who left his/her tribal affiliation blank. Forty-two of the participants chose \$5.00 compensation; 5 chose extra credit, 5 chose neither. Of the five that chose neither, they were graduate students who knew how costly research can be and did not accept payment for their participation. Table 1 displays the percentages and frequencies of age, gender, year in college, tribal affiliation, GPA.

The Figure 2 scatterplot represents how subjects data fit with the orthogonal NPBI subscales as theorized by Oetting and Beauvais (1990). Quadrant 1 lists those identified as Bicultural (N=10). Quadrant 2 identifies those of Traditional Native American orientation (N=16). Quadrant 3 identifies those whose identification is low in either culture or Marginal (N=8). Quadrant 4 identifies those who are of Majority culture

orientation (N=18). In the Bicultural group, there were 4 males and 6 females, majors included psychology (4), education (2), biology (2), English (1), and social work (1).

Tribal affiliation for the Bicultural group is broken down as follows: Chippewa ancestry (5), Sioux (3), Blackfoot (1), and Three Affiliated Tribes (1). The mean age was 32.5, the mean class (as defined earlier) was 4.3, the mean GPA was 3.5, and the mean ISE scale score was 25.8. In the Traditional group, there were 10 males and 6 females, majors included Indian Studies (3), criminal justice (2), social work (2), communications (1), biology (1), sociology (1), counseling (1), recreational therapy (1), and visual arts (1).

Tribal affiliation for the Traditional group is broken down as follows: Sioux ancestry (7), Three Affiliated Tribes (4), Chippewa (4), and Navajo (1). The mean age was 32.6, the mean class was 3.9, the mean GPA was 3.0, and the mean ISE scale score was 24.6. In the Marginal group, there were 2 males and 6 females, majors included education (2), biology (1), social science (1), pre-nursing (1), social work (1), communication (1), and Indian Studies (1). Tribal affiliation for the Marginal group is broken down as follows:

Chippewa ancestry (4), Sioux (2), Cherokee (1), and Three Affiliated Tribes (1). The mean age was 30.4, the mean class was 3.8, the mean GPA was 2.9, and the mean ISE scale score was 43.5. In the Assimilated group, there were 6 males and 12 females, majors included criminal justice (3), psychology (3), nursing (2), physical therapy (1), computer science (1), pre-med (1), information management (1), public administration (1), communication (1), social work (1), biology (1), physics (1), and undecided (1).

Tribal affiliation for the Assimilated group is broken down as follows: Chippewa ancestry (13), Sioux (2), Kinew (1), Cherokee (1), and item left blank (1). The mean age was

26.7, the mean class was 3.1, the mean GPA was 2.9, and the mean ISE scale score was 26.7. This information is summarized (with the exception of college majors and tribal affiliation) in Table 2.

Pearson Product-Moment Correlation

The Pearson Product-Moment correlational analyses of the NPBI subscales, age, ISE score, and gender revealed a statistically significant negative correlation between the NPBI's two subscales (the AICI and the EACI). A statistically significant positive correlation was also observed between age and GPA. No other statistically significant correlations were obtained. These correlations can be found in Table 3.

Independent T-Test

Although not statistically significant, there was a gender difference on the ISE score. The mean score for the females on the ISE was 31.87, which incidentally, is above the first clinical cutoff score. The mean score for the males on the ISE was 23.79. No statistically significant differences were found (see Table 4).

Multiple Regression

A linear multiple regression analysis using the two NPBI subscales as predictor variables for the ISE total score suggested identification with either culture bordered on statistical significance as a predictor. As shown in Table 5, the NPBI subscale of European-American Cultural Identification was found to be a significant predictor of self-esteem. Of the two predictors, the EACI subscale suggested higher relative predictive power. The negative Beta weights lend strength to the study, indicating that as cultural identification increases (with either culture), self-esteem is more positive.

Analysis of Variance

A one-way analysis of variance (ANOVA) of the ISE scale scores of each of the four Quadrants of the scatterplot was significant, $F(3,48) = 3.19, p < .05$. A subsequent Tukey test revealed that there was a significant difference between the Traditional group and the Marginal group (see Table 6). Approaching statistical significance was a difference noted between the Marginal and the Assimilated groups.

DISCUSSION

The mean age of the research sample was older than the mean age for UND's 1997-98 highest enrollment age group of 20-21 years of age for all races combined, with an eighty-seven percent Majority culture populace (UND, 1997). This could be one reason for the higher GPA's found among the subjects. More females participated in this study, most likely due to the greater numbers of Native American females attending UND compared to males for the 1997-1998 school year (UND, 1997). From the investigator's personal experience, more single-parent females seek out educational avenues before low-paying jobs when attempting to provide for their families. Following this line of thinking, the older-than-average student also has more of a commitment to school than their younger counterparts. Thus, we see the majority of subjects in upper-level classes, with higher GPAs. These demographic characteristics are typical of those for Native American college students and suggest adequate subject representativeness in this sample.

There was a notable difference in the ISE total score by gender that approached statistical significance. Without conducting any statistical analyses, the researcher has made the following conclusions by visually reviewing the data: the males had lower GPAs, were more Traditional, less European-American, and had higher self-esteem. Females had lower self-esteem as a whole, yet a higher mean GPA than the males. In comparing the gender differences, the females in this study had higher GPAs, were less

traditional, more European-American, and possessed lower self-esteem. In fact, the mean score for the females exceeded the first clinical cutoff for low self-esteem offered by the manual (Hudson, 1982). One possible explanation could be the ISE was not culturally appropriate for this sample population. Research using the ISE with Native Americans to test its validity has not been done. One example of how a researcher would test the cultural validity of an instrument is given by Pollack and Shore (1980) with the MMPI. In their research, they found elevated subscales consistently across gender, age, and diagnoses for their sample of Native Americans. This shows an inequality in the test, which was not standardized on Native Americans. Scales such as the MMPI need to be culturally-sensitive to minorities and the repetitive biases made known. There were no studies available which studied Native American college students with the ISE. Another possible explanation of the gender differences noted was the likelihood that the subjects inflated their GPA self-report. This has been shown to be true in previous studies (McDonald, Storey, Griffith, Kerr, Carlos, & Wilkie, 1997). Independently, the NPBI subscales may possibly be moderate predictors of self-esteem. When combined, the NPBI subscales have slightly better predictive power, as evidenced by the part and partial correlations (see Table 5).

The results of this study did somewhat support the primary hypothesis that higher levels of cultural identification would suggest more positive self-esteem and lower levels of cultural identification would predict lower self-esteem. The negative Beta weights and the part and partial correlations of the multiple regression of the lend strength to the study, indicating that as cultural identification increases (with either culture), self-esteem

is more positive. The highest ISE scale score (i.e. lowest self-esteem) was found in the Marginal group. The most positive self-esteem score was shown to be the Traditional group, with the Bicultural group close behind. Further observations by the researcher, without statistical analyses, shows that when comparing groups, the Traditional group was oldest, with the Bicultural group close behind. There were upperclassmen in the Bicultural group, with the Assimilated group having the lowest class ranking. The Bicultural group also had the highest mean GPA, with the Marginal and Assimilated groups sharing the lowest GPA.

One reason this study did not observe stronger additive predictive utility for the NPBI on the ISE may be that the two predictor variables on the NPBI were so highly correlated. The high correlation of the two subscales of the NPBI may be an indication of a lack of internal validity for the NPBI. This multicollinearity problem suggests that the two factors of cultural identity were not orthogonal, but indeed highly related. This strong association between two presumably independent subscales hampers the NPBI's ability to test the Orthogonal Theory of Biculturalism. While the bulk of Native American participants fell into the "Assimilated" cultural identification group according to the NPBI (see figure 2), the NPBI may be a weak guide for discriminating Native Americans due to its above mentioned lack of internal validity. The NPBI did not demonstrate conclusive utility as a predictor of self-esteem in this study, and the notably correlated subscales, which are presumed (by the test creators) to be orthogonal, could have contaminated their predictive power. Although the analysis-of-variance had a significant finding for the Marginal group, it should be noted that there were only eight

subjects in this group, which may have accounted for some of the increased mean score. Suggestions for future research include the creation of a new scale with the same concepts of the NPBI to measure the concept of biculturalism. If the NPBI were to remain in use, new techniques to combat the multicollinearity problems it has repeatedly shown must be undertaken. Perhaps the items themselves are not culturally discriminating. Another limitation of this study was its small sample size. It was confined to one campus which had a Native American population of three percent of the total school population during the school year (University of North Dakota, 1997). During the summer, the population of Native Americans on campus are even smaller, making it harder to reach students since many of them return to their hometowns for the summer, often without leaving a forwarding address. Using other campuses in the state (urban and reservation), might have greatly increased the number of subjects, and increased variance.

Although the Orthogonal Theory of Biculturalism was only moderately supported in this study, the assessment of a Native American client or student's level of Bicultural competence is still considered a relevant and important effort. It is my belief that cultural identification does indeed play some role - and a significant one - in every person's sense of identity and ultimately their behavior. Perhaps the best lesson taken from this study is not that the Bicultural Theory is irrelevant, but that our measurement tools simply are not yet powerful and sophisticated enough to accurately and consistently test it. It is my sincere hope this study can provide one small step in that direction.

APPENDIX A
RESEARCH PACKET

APPENDIX A INFORMED CONSENT

You are invited to participate in a study that is attempting to examine the effect of biculturalism on self-esteem among Native Americans. During the session you will complete two short questionnaires. The purpose of this study is to increase the understanding of the relationship between biculturalism and self-esteem. Research in this area is scarce, especially research including Native Americans. The benefits will make non-Native counselors/psychologists more aware of the uses and limitations of assessment instruments with the differing bicultural states that the Native American client may present.

All information is strictly confidential and anonymous. You will be assigned a subject number and at no time will your name be used in the data collection process.

In return for your participation, you will be given class credit according to the system that your instructor employs or \$5.00. If you decide to participate, you are free to quit at any time without penalty.

If you have any further questions regarding this study or related matters, or if in the future you have questions or want to know the results, please contact the investigators. Dr. McDonald is the supervisor of this study and can be reached at 777-4495. Mary Wilkie, a University of North Dakota graduate student, is the primary investigator and can be reached at 777-4497.

I have read the above information and I am willing to agree to participate in this study.

Signature of Subject

Date

Phone Number

Signature of Investigator

Date

Phone Number

Please check your preference:

_____ I would like extra credit in a Psychology course

Name: _____

Address: _____

Psych. Course in which you are (or plan to) enroll: _____

_____ I would like to receive \$5.00 for my participation (give name & address to mail \$5 to)

Name: _____

Address: _____

APPENDIX A
Demographic Questionnaire

Please complete the following information as accurately as possible. All information is strictly confidential and anonymous. This form will not include your name, only a subject number and at no time will your name be used in the data collection process. This will ensure that you will not be linked to the information given. Please complete all questions. Thank you.

1. **Your age:** _____
2. **Your gender (check one):** Male _____ Female _____
3. **Your tribal affiliation:** _____
4. **What is your current class ranking? (Check only one)**
 a. Freshman
 b. Sophomore
 c. Junior
 d. Senior
 e. Graduate
 f. Other (please specify): _____
5. **What is your current major?** _____
6. **What is your current GPA?** _____

These questions ask you to describe your attitudes, feelings, and participation in Indian and White culture. Some of the questions may not apply to you. In these cases, one of the possibly answers allows you to note this.

Read each question. Then fill in the number above the answer that seems most accurate for you, as in the example below.

Example: What is your degree of comfort with paper and pencil questionnaires?

1. ____	2. ____	3. ____	4. <u>X</u>	5. ____
No comfort		Some comfort		Great comfort

In this example, the person felt moderate but not complete comfort with paper and pencil questionnaires, so filled in 4.

In the case of attitudes and feelings, your first impression is usually correct. We are interested in how much you are influenced by Indian and White culture regardless of your own ethnic background, keeping in mind that no two people have the same background.

1. What is your degree of comfort around White people?

1. ____	2. ____	3. ____	4. ____	5. ____
No comfort		Some comfort		Great comfort
2. What is your degree of comfort around Indian people?

1. ____	2. ____	3. ____	4. ____	5. ____
No comfort		Some comfort		Great comfort
3. How interested are you in being identified with Indian culture?

1. ____	2. ____	3. ____	4. ____	5. ____
No desire		Some desire		Great desire
4. How interested are you in being identified with White culture?

1. ____	2. ____	3. ____	4. ____	5. ____
No desire		Some desire		Great desire

5. How often do you think in English?
 1. ____ 2. ____ 3. ____ 4. ____ 5. ____
 Rarely or Half the time Often or
 never think think in always think
 in English in English in English
6. How often do you think in an American Indian language?
 1. ____ 2. ____ 3. ____ 4. ____ 5. ____
 I rarely or Half the Often or
 never think in time think in always think in
 Indian language Indian language Indian language
7. How much confidence do you have in a medical doctor?
 1. ____ 2. ____ 3. ____ 4. ____ 5. ____
 I do not Have some Have strong
 use medical faith in faith in medical
 doctors medical doctors doctors
8. How much confidence do you have in the medicine man/woman?
 1. ____ 2. ____ 3. ____ 4. ____ 5. ____
 I do not Have some Have strong
 use the faith in the faith in the
 medicine medicine medicine
 man/woman man/woman man/woman
9. How much is your way of tracing ancestry White (focus on biological relative, descent through father)?
 1. ____ 2. ____ 3. ____ 4. ____ 5. ____
 I trace none I trace some I can trace
 of my ancestry of my ancestry all of my ancestry
 according to White according to White according to White
 custom custom custom
10. How much is your way of tracing ancestry Indian (cousins same as brothers and sisters, descent more through mother)?
 1. ____ 2. ____ 3. ____ 4. ____ 5. ____
 I trace none I trace some I can trace
 of my ancestry of my ancestry all of my ancestry
 according to according to according to
 Indian custom Indian custom Indian custom

11. How often do you attend Indian religious ceremonies (sweatlodge, Indian Peyote churches, Sundance, vision quest)?
- | | | | | |
|---|---------|--|---------|---|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I have never attended Indian religious ceremonies | | I sometimes attend Indian religious ceremonies | | I attend Indian religious ceremonies frequently |
12. How often do you attend Christian religious ceremonies (Christenings, Baptisms, Church services)?
- | | | | | |
|---|---------|---|---------|--|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I never attend Christian religious ceremonies | | I sometimes attend Christian religious ceremonies | | I attend Christian religious ceremonies frequently |
13. How often do you participate in popular music concerts and dancing?
- | | | | | |
|--|---------|--|---------|---|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I never participate in popular concerts/dances | | I sometimes participate in popular concerts/dances | | I participate in popular concerts/dances frequently |
14. How often do you participate in Indian dancing (Indian, Owl, Stomp, Rabbit, etc.)?
- | | | | | |
|--------------------------------------|---------|--|---------|---|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I never participate in Indian dances | | I sometimes participate in Indian dances | | I participate in Indian dances frequently |
15. To how many social organizations do you belong where a majority of the members are Indian?
- | | | | | |
|-------------------------------------|---------|---------------------------------------|---------|---|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I belong to no Indian organizations | | I belong to some Indian organizations | | Several of the organizations I belong to are Indian organizations |
16. To how many social organizations do you belong where a majority of the members are non-Indian?
- | | | | | |
|---|---------|---|---------|---|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I belong to no non-Indian organizations | | I belong to some non-Indian organizations | | Several of the organizations I belong to are non-Indian |

17. How often do you attend White celebrations (White ethnic festivals, parades, barbecues)?
- | | | | | |
|---|---------|--|---------|--|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I never attend
White
celebrations | | I attend
some White
celebrations | | I attend
White celebrations
frequently |
18. How often do you attend Indian celebrations (Pow-Wows, Wacipi, Indian rodeos, Indian softball games, Indian running events)?
- | | | | | |
|--|---------|---|---------|---|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I never attend
Indian
celebrations | | I attend
some Indian
celebrations | | I attend
Indian celebrations
frequently |
19. Does anyone in your family speak an American Indian language?
- | | | | | |
|---|---------|--|---------|---|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| They rarely
or never
speak Indian | | They speak
Indian part
of the time | | They often
or always
speak Indian |
20. How often does your family use English?
- | | | | | |
|--|---------|---|---------|--|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| They rarely
or never
speak English | | They speak
English part
of the time | | They often
or always
speak English |
21. What is your use of English?
- | | | | | |
|---------------------------------------|---------|--|---------|---------------------------------------|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I rarely
or never
speak English | | I speak
English part
of the time | | I often
or always
speak English |
22. Do you speak an American Indian language?
- | | | | | |
|--------------------------------------|---------|---------------------------------------|---------|--------------------------------------|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I rarely
or never
speak Indian | | I speak
Indian part
of the time | | I often
or always
speak Indian |
23. To what extent do members of your family have traditional Indian last names (like "Kills-in-Water")?
- | | | | | |
|---------------------------|---------|---------------------------|---------|--------------------------|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| None have
Indian names | | Some have
Indian names | | All have
Indian names |

24. To what extent do members of your family have last names that are not traditional Indian last names (like "Smith")?
- | | | | | |
|--------------------------|---------|--------------------------|---------|-------------------------|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| None have
White names | | Some have
White names | | All have
White names |
25. How often do you talk about White topics and White culture in your daily conversation?
- | | | | | |
|---|---------|---|---------|--|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I never engage
in topics of
conversation
about Whites and
their culture | | Sometimes
engage in topics
of conversation
about Whites and
their culture | | I engage in
topics of
conversation about
Whites and their
culture frequently |
26. How often do you talk about Indian topics and Indian culture in your daily conversations?
- | | | | | |
|--|---------|--|---------|---|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I never engage
in topics of
conversation
about Indians and
their culture | | Sometimes
engage in topics
of conversation
about Indians and
their culture | | I engage in
topics of
conversation about
Indians and their
culture frequently |
27. Do you wear White fashion jewelry?
- | | | | | |
|------------------------------------|---------|--|---------|------------------------------------|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I never
wear fashion
jewelry | | I sometimes
wear fashion
jewelry | | I often
wear fashion
jewelry |
28. Do you wear Indian jewelry?
- | | | | | |
|-----------------------------------|---------|---------------------------------------|---------|-----------------------------------|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I never
wear Indian
jewelry | | I sometimes
wear Indian
jewelry | | I often
wear Indian
jewelry |
29. How Indian is your preference in clothing (dressing in bright colors, clothes with Native artwork)?
- | | | | | |
|---|---------|---|---------|---|
| 1. ____ | 2. ____ | 3. ____ | 4. ____ | 5. ____ |
| I never dress
according to
Indian style | | I sometimes
dress according
to Indian style | | I often dress
according to
Indian style |

30. How White is your preference in clothing (dress according to White style and fashion)?

1. ____ 2. ____

I never dress
according to
White style

3. ____ 4. ____

I sometimes
dress according
to White style

5. ____

I often dress
according to
White style

APPENDIX B

FIGURES

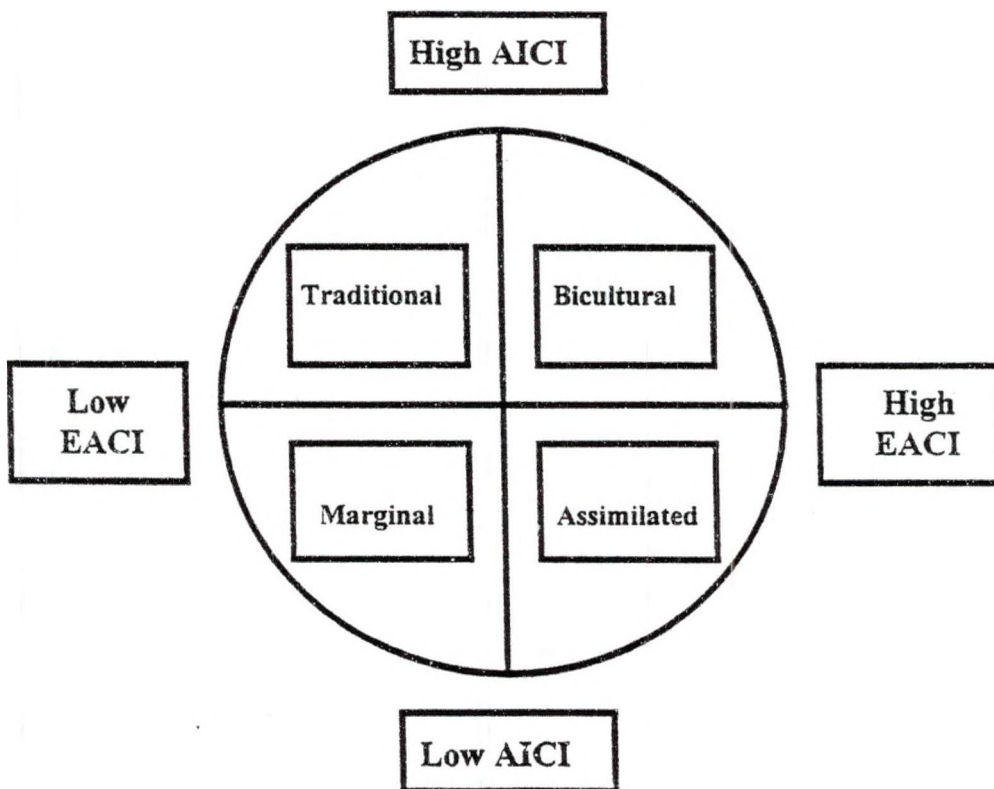


Figure 1. Orthogonal Theory of Biculturalism (Oetting & Beauvais, 1990)

EACI refers to European American Cultural Identification

AICI refers to American Indian Cultural Identification

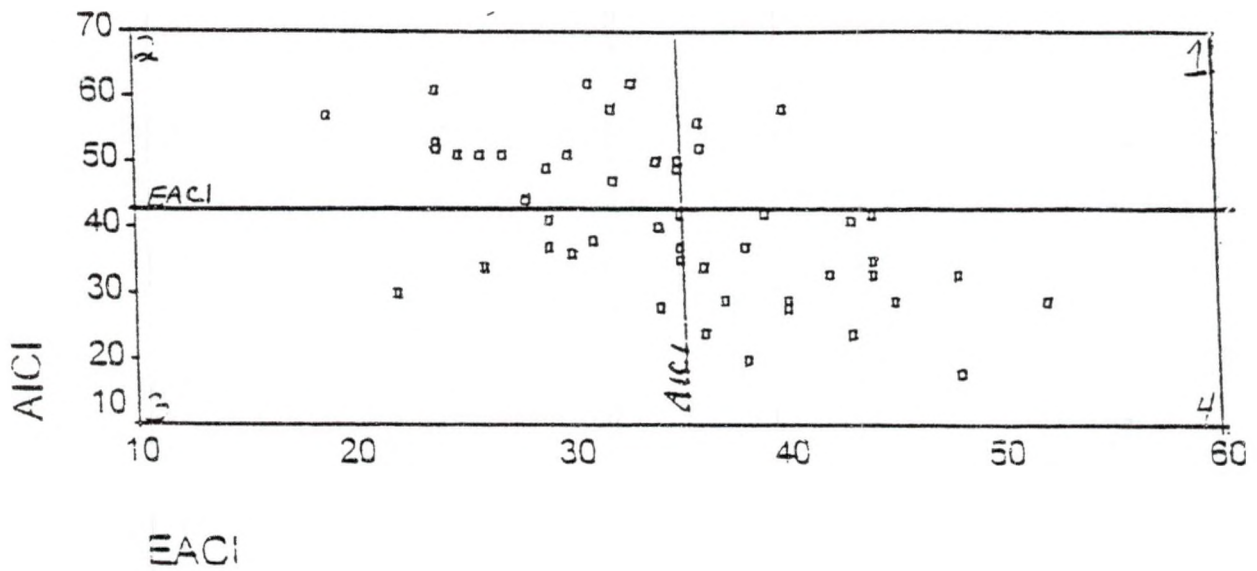


Figure 2. NPBI Subscales Scatterplot

Q1 = Bicultural, Q2 = Traditional, Q3 = Marginal, Q4 = Assimilated

EACI refers to European American Cultural Identification

AICI refers to American Indian Cultural Identification

APPENDIX C

TABLES

Table 1

Descriptive Demographics

Characteristic	<u>M</u>	<u>SD</u>	%
Age	30.21	8.83	
Gender			
Female			57.7
Male			42.3
College Year			
Freshman			3.8
Sophomore			11.5
Junior			21.2
Senior			40.4
Graduate			21.2
Other			1.9
Major			
Psychology			15.4
Education			11.5
Criminal Justice			9.6
Biology			9.6
Social Work			9.6
Other			44.2
GPA	3.01	0.59	
Tribal Affiliation			
Ojibwe/Chippewa			50.0
Sioux			26.9
Three Affiliated Tribes			11.5
Cherokee			3.8
Other			5.8
Blank			1.9

Note: females, n=30, males, n=22

Table 2

Descriptive Data by Group

<u>Group</u>	<u>N</u>	<u>M, F</u>	<u>Mean Age</u>	<u>Mean GPA</u>	<u>Mean ISE score/SD</u>	
1. Bicultural	10	4, 6	32.5	3.5	25.8	15.1
2. Traditional	16	10, 6	32.6	3.0	24.6	16.0
3. Marginal	8	2, 6	30.4	2.9	43.5	18.8
4. Assimilated	18	6, 12	26.7	2.9	26.7	12.3

Note. (1) N refers to total number of subjects in each quadrant.
 (2) M refers to number of Male subjects in each quadrant, F refers to Females in each quadrant.
 (3) GPA refers to Grade Point Average.
 (4) ISE score refers to the mean Index of Self-Esteem (ISE) scale score for each quadrant. SD refers to the Standard Deviation for the ISE score.

Table 3

Pearson Product-Moment Correlational Results Matrix

<u>Item</u>	<u>ISE</u>	<u>AICI</u>	<u>EACI</u>	<u>AGE</u>
AICI	-.145	--	-.529**	.223
EACI	-.159	-.529**	--	-.202
GPA	-.147	.221	-.019	.310*

Note: ISE refers to Index of Self-Esteem scale score
 AICI refers to American Indian Cultural Identification
 EACI refers to European American Cultural Identification
 GPA refers to Grade Point Average

*Correlation is significant at the 0.05 level
 **Correlation is significant at the 0.01 level

Table 4

Selected Independent T-Test Results

Item	<u>T</u>	<u>M</u>		<u>SD</u>	
		Females	Males	Females	Males
AICI	-1.01	40.13	43.36	9.88	13.11
EACI	1.63	35.90	32.64	7.07	7.22
ISESCORE	1.83	31.87	23.79	17.25	13.18
GPA	1.92	3.15	2.83	0.53	0.62

Note. (1) AICI refers to American Indian Cultural Identification.
 (2) EACI refers to European American Cultural Identification.
 (3) ISESCORE refers to subject's scale score on Index of Self-Esteem.
 (4) GPA refers to Grade Point Average.
 (5) No T-Test analyses were significant at the .05 level.

Table 5

Multiple Regression Analyses for Variables Predicting Self-Esteem

Item	Beta	<u>SE B</u>	<u>P</u>	Part	Partial
ISESCORE					
AICI	-.448	.226	.053	-.269	-.273
EACI	-.722	.354	.047	-.277	-.280

Note. (1) AICI refers to American Indian Cultural Identification.
 (2) EACI refers to European American Cultural Identification.
 (3) ISESCORE refers to subject's scale score on Index of Self-Esteem.
 (4) Multiple Regression analyses approached statistical significance.
 (5) For the combined predictors (AICI and EACI), $R = .313$, $R^2 = .098$, $F = 2.65$, with $p < .081$.

Table 6

Post-Hoc Tukey Test Comparing Groups on ISE Scale Scores

Group	Compared With (Group)	Mean Difference	Significance
Bicultural	Traditional	1.22	.997
	Marginal	-17.70	.077
	Assimilated	- 0.87	.999
Traditional	Marginal	-18.92	.028*
	Assimilated	- 2.08	.978
Marginal	Assimilated	16.83	.054

Note: * denotes significance at the .05 level.

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