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Development of the American Indian Biculturalism Inventory - Northern Plains

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DEVELOPMENT OF THE AMERICAN INDIAN BICULTURALISM INVENTORY - NORTHERN PLAINS

by

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This dissertation, submitted by Jessica L. Gourneau in partial fulfillment of the :quirements for the Degrec of Doctorate of Philosophy from the University of North 'akota, has been read by the Faculty Advisory Committee under whom the work has :een done and is hereby approved.

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This dissertation meets the standards for appearance, conforms to the style and)rmat requirements of the Graduate School of the University of North Dakota, and is ereby approved.

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ABSTRACT

American Indians' "place" in the context of the Majority Culture has never been ar to either them or their non-Indian counterparts. Many authors of cross-cultural rature suggest the experience of "living with one foot in two canoes" is stressful, ıfusing, and can even lead to reduced life success and increased psychopathology. is study attempted to develop a factor-analytically devised inventory intended to aid in ntification of bicultural identification in hopes it may contribute to greater lerstanding between cultural orientation and healthy or maladaptive American Indians' ıctioning.

One hundred and ninety-eight American Indian and Caucasian students and nmunity members from four year, non-tribal institutions of higher learning and tribal leges in North and South Dakota provided data for the refining of the American Indian ulturalism Inventory-Northern Plains (AIBI-NP). The AIBI-NP was designed to asure participants perceived level of cultural identification within both American lian and Majority Culture perspectives.

Results of Factor and Item Analyses produced a 25-item scale that suggested a o-factor solution. The nature of these factors were interpreted to represent an ıerican Indian Cultural Identification Factor or subscale 1, and an European American ltural Identification Factor or subscale 2. Suggestions for interpretation of subscale

scores, study limitations, future research directions, as well as the potential applicability for scales such as the AIBI-NP are discussed within.

CHAPTER I

INTRODUCTION

The experience of being American Indian in this country has never been easy simple, and its complexity grows with each passing day. American Indians' "place" in contemporary America has never been adequately conceptualized or defined. Many Indian people struggle with the stressors inherent in living in two culturally distinct worlds, while striving to retain their tribal customs and values. This struggle to establish both an individual and group cultural identity will ultimately determine their "place" in the world. The challenge for psychology lies first, in the measurement of these phenomena and second, in the development of appropriate interventions. This study attempted the factor analytic development of a Biculturalism scale designed to respond to the former of these challenges, at least where American Indians are concerned.

The American Indian population is a culturally heterogeneous group comprised of approximately 530 distinct tribes of which 478 are recognized by the federal government. Of these, 280 have a land base or reservation (Wise & Miller, 1983). Of the over 1 million American Indians living in the United States, approximately 50% live on reservations. The Tribes vary in customs, religion, language, and type of family structure. According to Tefft (1967) variable differences between certain tribal groups are greater than between Indians and Caucasians.

Exactly what constitutes "Indian-ness" is a topic of considerable controversy. As Trimble and Fleming (1989) suggest, unlike other ethnic groups, American Indians have a legal definition that is mandated by Congress. While the United States (US) government mandates that each tribe determine and maintain its own membership, it does not specify the criteria. Therefore, some tribes have adopted blood quantum level criteria as high as .25, or even as low as .0254. As a result of this inconsistency, physiological or "racial" qualifications are not that helpful in terms of clarification of "Indian" status. Besides which, many Indian people are very traditional, may have a very high blood quantum, but in a non-federally-recognized tribes. Are they not "Indian"? To further confuse the issue, some individual tribes and their members will adopt people into their tribe regardless of blood quantum or cultural background. Understandably, this constellation of issues has caused much controversy within and outside the Indian community. Some in both groups feel that only an individual of 100% blood quantum is a true American Indian, yet the modern reality is that very few tribal members have no Caucasian, Latino, or African-American ancestry. The arbitrary and fluctuating tribal membership criteria have sometimes resulted in dissension among Indians due to the limited amount of funds available for social, economic, and educational development (Wise & Miller, 1983). Likewise, considerable controversy exists about whether the term "American Indian" or "Native American" should be used. I have chosen to use the former because I believe it to be the generally preferred term among most Indians from my own tribe and region.

American Indians and Education. The lack of formal education is another challenge hindering the advancement and adaptability of American Indian people. American Indians and Alaska Natives 25 years and older have an average of 9.6 years of formal education. This is below the national mean of 10.9 years and is the lowest of any major ethnic group in the United States (Brod & McQuiston, 1983). Nearly one-third of all American Indian adults are classified as illiterate, and only one in five men has a high school education (Price, 1981). Dropout rates between the eighth and ninth grades in some urban areas range from 48% to 85% (Jacobson, 1973) and approach 50% in Bureau of Indian Affairs boarding schools and day schools on reservations (Hopkins & Ready, 1978; U.S. Senate Committee on Labor and Public Welfare, 1969). Only 16% of the American Indian students who enter universities complete an undergraduate degree, compared to 34% of their White counterparts (Astin, 1982). If one considers educational achievement as a significant aspect of bicultural identity, and biculturalism is a predictor of positive mental health (discussed in detail in following sections), the need for both increased educational opportunities and measurement of bicultural competence becomes strikingly clear.

Tribalism

For many Indians living on reservations and for those living in urban areas, the concept of tribalism is of fundamental significance. It is noteworthy to mention that this value can also vary between tribes and also between individuals within a tribe. The relationship that American Indians have with their tribes is different from that between non-Indians and their community or society. American Indians, for the most part, see

themselves as an extension of their tribe. This identity provides them with a sense of belonging and security, from which they form an interdependent system. Status and rewards are obtained by adherence to tribal structure (Blanchard, 1983). American Indians often judge themselves, and their behavior, in terms of whether or not they are of benefit to the tribe first. Personal achievements, such as leaving the reservation, are supported by the tribe if it serves to benefit the whole tribe. Many who leave the reservation to seek greater opportunities for themselves, such as a job or receiving a higher degree to attain a higher level job, have a difficult time keeping their tribal identity (Anderson & Ellis, 1988).

Family Characteristics

It is difficult to conceptualize and describe "the American Indian family." Red Horse (1979) states that only tribes exist and that the family structure varies from tribe to tribe. However, I do believe that some broad generalizations can be made. If one were to contrast family structure according to the sociological perspective, the basic majority culture family unit would consist of the immediate family (i.e., mother, father, and children). In contrast, most tribes consider the extended family as the basic unit. Indian children are often raised by extended family relatives such as aunts, uncles, and grandparents in separate households (Staples & Mirande, 1980). In one tribe (Sue & Sue, 1990), over 90% of the grandparents lived in separate households but were involved and fulfilled traditional family roles on a daily basis with their children, grandchildren, and great-grandchildren (Sue & Sue, 1990). This concept of the extended family is often misunderstood by majority culture members operating under the concept of nuclear

amily and misinterpretations can be made (i.e., only the parents should raise and be esponsible for the children). An example of this difference between American Indian nd majority culture families is presented again by Red Horse (1982). He presents a case istory of a 15-year-old girl who was doing well in school but chose not to live with her arents because they had substance abuse problems. Instead, she lived with relatives in ive different households during a 3-year period. The majority culture caseworker felt the attern of moving around suggested the girl was irresponsible and the parents were eglectful. If this girl was a member of the majority culture this interpretation might be ppropriate. At 17 the girl requested to live in a place of her own. This request was esisted by the social worker, stating the girl was irresponsible and had displayed a attern of instability. However, American Indian professionals argued the girl was doing ery well in school and that many members of her extended family lived within an 8-lock radius of her apartment. Furthermore, she had the support of the school counselor nd local Indian professionals. It has also been suggested a pattern of living in the ouseholds of the extended family was not only a common experience, but a healthy one or American Indian children. This example notes many factors at play in these isinterpretations of the cultures. First, the pattern of behavior has to be considered in a ultural context. Second, the decision regarding the girls' request was based not only on ultural knowledge, but also on her individual strengths and weaknesses. If she had not lone well in school or had not displayed responsible behavior, the decision would most ikely have been different.

American Indian value systems in general, are pertinent to the present study and worthy of discussion. It is important to note that these are "pan-Indian" generalizations that reflect the values of most tribes, but because of the great diversity and variation among the tribes are by no means comprehensive. The specific generalizations that I am presenting regarding Indian values have been posited by Everett, Proctor and Cortmell (1980) and Wise and Miller (1983), yet naive overgeneralizations should still be avoided.

The first general value concept is **sharing**. In the dominant culture, status is gained by the accumulation of material goods, but among American Indians honor and respect are gained by sharing and giving. An example is given by Trimble (1981). He presented the case of Lower Elwha Indian woman who sent her grandson to school with a large lunch which she intended for him to share with the rest of the children. The teacher assuming that the lunch was only for the child, made him consume all of it. The child then requested that the grandmother not prepare large lunches for him again.

Another generalized native concept is **cooperation**. Most American Indians have the belief that the family and group take precedence over the individual. American Indian children are often perceived as unmotivated in school because of a reluctance to compete with peers in the classroom. Competition between individuals is seen as important in the majority culture but is viewed as counterproductive and selfish to the family and tribe. American Indians typically work very hard to keep and maintain the status quo and prevent discord and disharmony.

Another area where American Indians are similar in values is in the area of **noninterference**. Indians are taught not to interfere with others and to observe rather than react impulsively. Rights of others are highly respected.

Time orientation has also been an area of considerable controversy between the two cultures. American Indians are much more present-oriented rather than future oriented. Life is to be lived in the here and now. Things get done because of a rational, circular order and not according to linear deadlines. Time is typically thought of differently and is future oriented in the majority culture. Planning for future goals is seen as an important quality, much more so, in the majority culture.

Another common value among several tribes is the value of **harmony with nature**. Rather than seeking to control and possess the environment, American Indians accept things as they are. In the majority culture, there are attempts to master and control the environment.

Within-Group Differences

Although some value differences between American Indians and the majority culture have been presented, many Indians, at least partially, are cognizant of and accept majority culture values and behavioral norms. The degree of biculturalism must always therefore be considered. Lowrey (1983) these types of differences among the Navajo. Some have had minimal contact with the majority culture and are strongly oriented to their traditional Navajo culture. Others are considered very assimilated and do not identify with their Navajo values, and wish to move the Navajo nation into the modern (i.e. Majority Culture) world. There is also another group that seems able to move

comfortably between both cultural stances. They are also interested in "advancing" their tribe yet desire to retain their traditional and cultural values. They want the freedom to choose what they want from both cultures. There is also a small group that does not feel comfortable in either culture, expressing a more culturally "marginalized" orientation. Urban American Indians also often experience changes in cultural orientation. What appears to be emerging is a "pan-Indian movement" (Wise & Miller, 1983) where these individuals are adapting values of other tribes as well as their own.

These broad generalizations about American Indians as a whole aside, I would also like to emphasize the importance of recognizing the individual differences that exist between and among American Indians.

Sources of Cultural Interchange

In this day and age it is virtually impossible for the American Indian people not to interact with the majority (and other minority) culture(s). All minorities must interact with the dominant culture to some extent in order to adapt and survive. There do exist some notable exceptions (i.e., The Amish) to this rule. Due to the high unemployment rates on most reservations many American Indians are forced to leave the reservations for urban settings for jobs to support themselves and their family. To be successful in this environment it is necessary for American Indians to learn to interact effectively with the white majority culture. This interaction or *social interchange* requires a certain level of cultural competence for American Indian individuals.

Culture and Cultural Competence. One significant difficulty understanding the concept of cultural competence is that scholars can not agree on an accepted definition of

"culture" itself. For the purpose of this study, I concur with a more behaviorally-oriented definition offered by LaFromboise, Coleman, and Gerton (1993). They state that in order to be culturally competent, an individual would have to (1) possess a strong personal identity, (2) have knowledge of and facility with the beliefs and values of the culture, (3) display sensitivity to the affective processes of the culture, (4) communicate in the language of the given cultural group, (5) perform socially sanctioned behavior and, (6) negotiate the institutional structures of that culture.

The amount and complexity of the skills required to meet this definition reflect the difficulty in developing an adequate model of cultural competence. According to LaFromboise et al., (1993) we should not perceive cultural competence to be a dichotomous construct whereby one is either fully competent or not at all proficient. Cultural competence should be viewed within a multi-continuum of social skill and personality development. As an example, an individual may be able to perform socially sanctioned behavior in two cultures with great ease but can have difficulty negotiating diverse institutional structures. There are also members of groups within different social strata that may have differential access to social, occupational, and political roles associated with cultural competence (Ogbu, 1979). The assumption, however, is that the more levels in which one is competent the fewer the problems an individual will have functioning effectively within the two.

Models of Second-Culture Acquisition

Below are summaries of five models that have been used over the years to understand the process of change that occurs in transitions, within, between, and around

ultures. These include assimilation, acculturation, alternation, multiculturalism, and ısion. After discussion of these models the Orthogonal Theory of Biculturalism will be iscussed. I utilized this theory in my study.

Assimilation Model

One of the models that was once utilized for explaining the psychological state of person living within two cultures assumed an ongoing process of absorption into the ulture that was perceived as dominant or more desirable. The underlying assumption vith all assimilation models assumes that a member of one culture must lose his/her ıriginal cultural identity as they acquire a new identity in a second culture. This loss nvolves some loss of awareness and loyalty to one's culture of origin.

Three major dangers are associated with assimilation. The first is the possibility ıf being rejected by members of the majority culture. The second is the likelihood of ıeing rejected by one's culture of origin. The third is the likelihood of experiencing :xcessive stress as one attempts to learn the new behaviors associated with the ıssimilative culture and to shed the inoperable behaviors associated with the culture of ırigin.

Acculturation Model

The acculturation model is similar to the Assimilation model in three ways. Each model (1) focuses on the acquisition of the majority group's culture by members of the minority group, (2) emphasizes a unidirectional relationship between the two cultures, and (3) assumes a hierarchical relationship between the two cultures. What differentiates these models is that the assimilation approach emphasizes that individuals, their children,

or their cultural group will eventually become full members of the majority group's culture and lose identification with their culture of origin. By contrast, the acculturation model implies that the individual, while becoming a competent participant in the majority culture, will always be identified as a member of the minority culture. Some authors (Burnam et al., 1987) indicate in their studies that acculturation can be a stressful experience. This loss of their culture of origin can have negative economic and psychological effects on the individual. It has been found by Oetting and Beauvais (1990-91) that people who feel like they do not fit into any one societal group have more difficulty in the areas of social, emotional, and physical strength. This observation led one investigator (Taft, 1977) to argue that the detrimental effects of acculturation can be ameliorated by encouraging biculturalism. Oetting and Beauvais (1991) report that the more control people have over their relationship with the majority culture, the more social and emotional strength they feel and the less likely they are to experience the negative effects of acculturation stress.

Alternation Model

This model assumes that it is possible for an individual to know and understand two different cultures. Essentially, they are able to alter their behavior to fit a particular social context. As Ogbu and Matute-Bianchi (1986) have argued, "it is possible and acceptable to participate in two different languages, perhaps for different purposes, by alternating one's behavior according to the situation " (p. 89). Furthermore, this model assumes that it is possible for an individual to have a sense of belonging in two cultures without compromising his or her sense of cultural identity. LaFromboise and Rowe

(1983) defined this type of biculturalism for American Indians as involving dual modes of social behavior that are appropriately used in different situations.

This theory implies that individuals who can alternate their behavior between two cultures will be less anxious than a person who is assimilating or undergoing the process of acculturation. Furthermore, some authors (Garcia, 1983; Rashid, 1984; Rogler, Cortes, & Malgady, 1991) have speculated that individuals who can alternate between cultures may well exhibit more emotional strength as well as higher cognitive functioning than people who are monocultural, assimilated, or acculturated.

The alternation model does differ from the assimilation and acculturation models in two significant ways. First, it suggests that a bidirectional and orthogonal relationship exists between

the individual's culture of origin and the second culture in which he or she may be living rather than the linear and unidirectional relationship of the other two models. In fact, this particular model suggests that it is very well possible to maintain a positive relationship with both cultures without having to choose between the two. Second, this model does not assume a hierarchical relationship between two cultures. Therefore, it is possible for the individual to assign equal status to the two cultures, even if he or she does not value or prefer them equally.

In summary, what we see as the strength of the alternation model is its ability to include the cognitive and affective processes that allow an individual to withstand the negative impact of acculturative stress. It also examines the role the individual has in choosing how he or she will interact with the second culture and the person's culture of

origin. This model forces us to consider a bidirectional impact of cultural contact which seems more realistic and reasonable when we view American Indians and other minorities. In other words, it allows us to consider the impact that individuals from both cultures have on each other.

Multicultural Model

This model promotes a pluralistic approach to understanding two or more cultures. It also attempts to address the feasibility of cultures maintaining distinct identities while individuals from one culture work with those of other cultures to serve common national or economic needs. Berry (1986) claimed that a multicultural society encourages all groups to (a) maintain and develop their group identities, (b) develop other-group acceptance and tolerance, (c) engage in intergroup contact and sharing, and (d) learn each other's language.

The multicultural model generates the hypothesis that public and private identities need not become fused. The tension of solving internal conflicts caused by bicultural stress need not have a negative psychological impact but could instead lead to personal and emotional growth.

Fusion Model

This model suggests that cultures which share an economic, political, or geographic space will *fuse* together until ' 'ndistinguishable and form a new culture. Each culture brings strengths a ses in new forms through the interaction of the two cultures to form a new common culture. The fusion model is different from the assimilation or acculturation model in that there is no necessary

assumption of cultural superiority. However, it seems that minority groups become assimilated into the majority group at the price of their ethnic identity.

Bicultural Competence

This construct grows out of the Alternation model. Although there are a number of behaviors involved in the acquisition of bicultural competence (i.e., shifts in cognitive and perceptual processes, acquisition of a new language), the existing literature (Olmedo, Martinez & Martinez, 1978; Olmedo & Padilla, 1978; Ramirez, 1984) on biculturalism assumes that an individual living within two cultures will have to, eventually, suffer from various forms of psychological distress such as, ineffective problem solving and coping skills. As well there are difficulties maintaining interpersonal relationships and communicating effectively with others. Although it is clear that many American Indians, as well as other ethnic minorities in the United States and elsewhere, experience high levels of economic (e.g., high unemployment rates on reservations) and social discrimination as well as other disadvantages, it is inappropriate to assume that these disadvantages will produce a predictable negative psychological outcome. Some research even suggests that some individuals living in two cultures may find the experience to be more beneficial than living a monocultural life-style. The key to psychological well being may well be the ability to develop and maintain competence in both cultures.

There is a need to recognize that even though broad generalizations are being made, there are a number of individual characteristics that may be considered significant in the development of bicultural competence. These include personal and cultural

identity, age and life stage, gender, gender role identification, and socioeconomic status among others. Not all of these individual characteristics have equal impact on the individual's ability to develop and refine the necessary skills.

It has been stated that bicultural competence requires a substantial degree of individuation (LaFromboise, Coleman & Gerton, 1993). They also suggested that bicultural competence requires a substantial degree of personal integration for one to avoid the negative consequences of a bicultural living situation (Burnam et al., 1987). Triandis (1980) points out the importance of individual personality in the development of bicultural competence.

It is important to view bicultural competence in relation to two facets of identity development. The first involves the evolution of an individual's sense of self-sufficiency and ego strength. Most psychologists have theorized that an internal sense of self exists that is separate from the individual's environment. This internal sense develops in relationship to the individuals' psychosocial experience, to the point where a psychologically healthy person has a secure sense of who he/she is or is not (De La Torre, 1977). This sense of self interacts with the individual's cultural context in a reciprocal deterministic manner to create an ethnic identity (Mego, 1988). The second facet of identity development involves the development of cultural identity. This is the evolution of a sense of self in relation to the culture of origin and who that individual is within and without that cultural context. This is how the individual interprets and analyzes his or her sense of sociological reality.

Several authors (Atkinson, Morten, & Sue, 1989; Cross, 1971; Helms, 1990; Sue & Sue, 1990) have developed models of ethnic identity development. All of these models have some variation, but they emphasize a similar process by which a minority individual proceeds in order to develop a coherent and healthy sense of self within a bicultural context.

All of these models imply that one's stage of ethnic identity development is crucial in affecting the manner in which the individual will cope with the psychological impact of biculturalism. The more integrated the individual's identity, the better he or she will be able to exhibit what majority culture considers to be healthy coping patterns (Gonzalez, 1986; Murphy, 1977; Rosenthal, 1987). Furthermore, these models generate the hypothesis that a minority individual who feels comfortable with one culture, either in the minority or majority groups, will experience the negative psychological effects of bicultural context. However, as that person develops a stronger personal identity, he or she can become biculturally competent, thereby reducing the negative psychological impact of biculturalism (Zuniga, 1988).

Oetting and Beauvais (1990) have recently identified an orthogonal model of cultural identification that includes four categories: (1) high bicultural identification, (2) high identification with one culture and medium identification with another, (3) low identification with either culture, and (4) monocultural identification. They advocated the independent assessment of identification with multiple cultures (e.g., culture of origin and American Indian, Mexican American, Asian American, African American or Anglo American). A series of studies with American Indian youth (Beauvais, 1992; Oetting,

dwards, & Beauvais, 1989) indicated that most children and adolescents on reservations howed medium identification with both Anglo and Indian cultures. Their research with lexican American youth living in Southwestern US towns and cities containing ubstantial Hispanic populations, however, showed a different pattern of high Hispanic lentification and moderate Anglo identification. This line of research into minority dolescents supports the contention that identification with any culture may serve as an ndividual's source of personal and social strength and that such an identification will orrelate with one's general well-being and positive personal adjustment. Oetting and eauvais (1990) concluded that it is not mixed but weak cultural identification that reates problems.

Oetting and Beauvais' (1990) Orthogonal Theory of Biculturalism is becoming idely accepted and has proven to be particularly useful for assessing cultural lentification and its relationship to societal attitudes and behaviors. This theory can best e understood by first placing the theory in context. Typical process models are resented and compared with orthogonal cultural identification theory to show how their heory differs from prior models. While this model would suggest more specifically that iculturally competent American Indians would experience greater off-reservation life uccesses and lower incidence rates for psychopathology, this has never been empirically emonstrated in the recent literature. This study represents an attempt to address that eed by developing a more accurate biculturalism measurement device.

This presentation of typical models is not exhaustive, however it does show how ifferent types of models have been used to discuss what occurs when minority groups

interact with the majority culture. The *Dominant Majority* models of cultural adaptation tended to reflect ethnocentric values. Movement was seen as unidirectional movement uphill, from the "old" or "bad" culture to the "new", "good" one. Failure of the individual to accept and incorporate the values, beliefs, and behaviors of the dominant culture implied weakness and inadequacy.

The *Transitional* model represents a major change. Unlike the dominant majority model, it accepts the minority culture as valuable and attributes problems to the process of moving from one culture to another. There tends to be, however, an implicit assumption that there is always movement toward the majority culture. Acculturation stress theory is an example of a transitional model. According to (Mail & McDonald, 1980; Schinke, Moncher, Palleja, Zayas, & Schilling, 1988) in this system, the "transitional" individual is caught between the two cultures, losing the strength that derived from the original culture and unable to utilize the assets of the newly acquired culture until near the point of assimilation.

The *Alienation* model incorporates the concept of anomie in examining the functioning of people who are making the transition from one culture to another. Graves (1967), for instance, found that some individuals could operate effectively even though they were in transition, while others could not. This model avoids one major problem of transitional models by providing alternative routes of movement that do not involve stress, but there is still an implied assumption that movement must and will take place.

The *multidimensional* models add further complexity. They are similar to the other models previously discussed in that they view people as making a transition, but

they see that transition as involving a number of different dimensions, for example, "language" and "loyalty." A person could, for example, have changed to the dominant majority language, while retaining a high level of loyalty to the minority ethnic group. Olmedo and his colleagues have explored these dimensions (Olmedo, Martinez, & Martinez, 1978; Olmedo & Padilla, 1978), finding that they were able to reliably place people on a scale between Hispanic and Anglo cultures on each dimension. In their work there is less assumption that one culture will dominate and that movement is essential, and both cultures are valued, but people are still placed somewhere between cultures.

Bicultural models, sometimes called transcultural models, point out that it is not essential to lose contact with one culture while adapting to another, an individual can have a high level of involvement in both cultures. Ramirez (1984) describes the bicultural or multicultural person as having "had extensive socialization and life experiences in two or more cultures and participates actively in these cultures". The bicultural model, however, does not usually leave room for low cultural identification nor show that there is a continuum of identification with any culture or that there may be levels and subtypes of bicultural identification.

All of these models can help provide insights into the process of adaptation when cultures interact. They all, however, illustrate a common thread or element. In each, the two cultures (minority and majority groups) are placed at opposite ends of a line.

The *Orthogonal Identification* takes a different approach. Identification with any one culture is seen as being essentially independent of identification with any other culture. The two dimensions of cultural competence are proposed to be uncorrelated, or

orthogonal. Figure 1 depicts the relationship between these dimensions, as well as the four quadrants within an individual's scores may place them in terms of their Biculturalism.

A person can fall anywhere in this two-dimensional space. A person who is high in American Indian and European American identification is viewed as being ***Bicultural.*** The person who highly identifies with European American culture but does not identify highly with American Indian culture is viewed as being ***Assimilated.*** The person who identifies highly with the American Indian culture but does not identify well with the European American culture is viewed as ***Traditional.*** The person who does not highly identify with either culture is viewed as being ***Marginal.*** This change from the previous models may appear to be minor, but the differences are profound. All of the other models place limits on what patterns of cultural identification and on what adaptations to change are possible. The orthogonal identification model indicates that any pattern, any combination of cultural identification, can exist and that any movement or change is possible. There can be highly bicultural people, unicultural identification, high identification with one culture and medium identification with another, or even low identification with either culture.

Attempts have been made, in the past, to develop scales to assess cultural identification. For example, scientists influenced by the dominant majority model or transitional models, use measures that only assess adaptation to the majority culture. Their implicit assumption is that there will be movement toward that culture, and they choose measures that reflect identification with that culture, sometimes assuming that this

automatically means less identification with the minority culture. Guinn and Hurley (1976) for example, used socioeconomic status, defined in majority culture terms, to classify subjects along a cultural continuum. However, the Orthogonal Theory of Biculturalism requires that the items on the scale allow the subject to independently express identification or lack of identification with each of the respective cultures. Many authors feel that the Orthogonal Theory of Biculturalism may have significant applications in mental and physical health, education, vocation, prevention, and rehabilitation research and treatment. Therefore, development of an inventory that utilizes this theory to measure biculturalism would be seen as valid.

One such instrument, the Northern Plains Biculturalism Inventory (NPBI), was devised by Allen and French (1993) that was based on the Orthogonal Theory of Biculturalism. This instrument attempts to measure an American Indian's or European-American's degree of bicultural competence in each cultural realm in accordance with the Orthogonal Theory of Biculturalism. The NPBI is a brief, 30-item measure of identification with Northern Plains American Indian and Midwestern white (European-American) culture. The inventory focuses largely upon social behavior, which is assumed to be directed by underlying constructs that have been described as attitudes, beliefs, world view, and acculturation. Dana (1993) believed that it was important to focus upon acculturation as an important moderator variable that required assessment as a part of competent multicultural psychological assessment practice. Level of acculturation is also an important factor to consider in mental health service delivery.

The NPBI is composed of selected and revised items from the Rosebud Personal Opinion Survey (RPOS/Hoffman, 1984; Hoffman, Dana, and Bolton, 1985). The RPOS was developed by Hoffman, Dana and Bolton (1985), in collaboration with Rodger Hornby of Sinte Gleska University, Mission, SD. RPOS items were originally selected from questionnaires developed by Green and Haymes (1973), Howe Chief (1940), and Jessor, Graves, Hanson, and Jessor (1968).

Parallel items were written for the NPBI from the RPOS in order to capture similar domains of behavior within Midwestern European-American culture. Though the NPBI items were originally developed to comprise two scales, tapping American Indian Cultural Identification (AICI) and European American Cultural Identification (EACI), factor analytic work by McDonald et al., (1995) suggested several of the items instead grouped into a third Language factor. Therefore, a third language scale is scored to assess this domain tapped by the NPBI. Currently two self-report versions of the NPBI exist. The College version is designed for use with college student populations. The Community version is intended for general community populations.

Although it was the first instrument used with Northern Plains American Indian samples, some short-comings have been found with the NPBI (McDonald et al., 1995). Some studies employing the NPBI have suggested that some American Indian subjects had cultural/conceptual confusion with the wording of the items which may have affected their answers. The possibility of obtaining invalid answers has therefore arisen. Many of the questions were very open to broad interpretation and made inconsistent assumptions regarding American Indian cultural orientation and values. For example, some of the

questions if respondents participate in "traditional dances" or attend American Indian ceremonies. Some American Indians may highly identify with their culture but not participate in traditional American Indian religious ceremonies or dance. Because of the way that they would interpret and answer the essence of the question one might record a lower American Indian cultural identification score when in fact they identify highly with their traditional culture. Thus, some subjects would be inappropriately classified into perhaps more assimilated or marginal categories, thereby diminishing the reliability of the inventory. Since higher degrees of Biculturalism are assumed related to positive markers of increased mental health and other life successes (Oetting & Beauvais, 1991), valid and accurate measurement of Biculturalism becomes of paramount importance.

General Intentions of the Study

The goal of this study was to develop a more valid and reliable instrument that improved upon the NPBI to provide a more accurate measurement device regarding American Indians level of biculturalism. In the rough draft of the scale's manual, Allen & French, (1993) report a high degree of association ($r = .57$, $p < .001$) between the two primary subscales: American Indian Cultural Identification (AICI); and European American Cultural Identification (EACI). Theoretically, these subscales should be uncorrelated if they indeed represented items reflecting two distinct (orthogonal) realms of cultural identity. McDonald et al., (1995) suggested that in the scale development of the NPBI the authors did not employ a focus group. Some cross-cultural authors (see Fuller, Edwards, Vorakitphokatorn, & Semsri, 1995; Hughes & DuMont, 1993) state that same-culture focus groups should always be employed to provide item and prototype

scale feedback during psychological tests development, or revision, that are intended to be applied cross-culturally. McDonald et al., (1995) did conduct a post-hoc focus group (n=8) of American Indian college students that provided feedback that 56% of the NPBI scale items did not accurately assess aspects of their cultural identity. If this feedback is an accurate reflection it may account for the non-orthogonal (i.e. highly correlated) relationship between the two scales.

The reason and need for conducting this study is to develop a more valid and reliable instrument which would result in more accurate identification of American Indians' level of biculturalism, which might in turn inform us (if the Orthogonal Theory is valid) as to the degree of adaptability and functioning of American Indian individuals and even groups. This identification might then lead to earlier and more appropriate interventions with particular at-risk Indian people.

Intended Contributions of this Study

The primary proposed use of the American Indian Biculturalism Inventory - Northern Plains (AIBI-NP) is to identify those American Indian people who would be at higher risk for problems functioning in the majority culture. McDonald (1992) found that low levels of biculturalism in the majority culture can lead to increased risks of lower mental and physical mental health, higher rates of attrition from college, and slower rehabilitation recovery rates. The development and use of the AIBI-NP would allow Northern Plains researchers and clinicians to more accurately identify those American Indians at risk and therefore offer preventive measures to deter or ameliorate future difficulties. For example, McDonald (1992) found that those more "traditional" or

"marginal" (people who do not identify with either culture) tend to drop out of college more. If these people could be identified a support system could be devised that might help to lower the attrition rates. College administrators, prospective American Indian college students (and their families), high school and college instructors, counselors and therapists, tribal officials, advisors, legislators and others invested in American Indian college student retention need valid and reliable data that reflect the level of biculturalism of American Indian students. They may utilize this information in a variety of ways, including: (1) to provide as culturally appropriate and sensitive advice and support as possible to American Indian students; and, (2) to provide a database that may contribute to establishment of fair and relevant administrative, financial and educational procedures.

Valid and reliable information from instruments developed in studies like the present may help provide that data. By gaining such information as may be supplied by instruments like the

AIBI-NP, these officials may begin to make decisions based on more accurate empirically-derived data. The AIBI-NP may hopefully be utilized in many different settings to produce quantifiable and replicable representations of American Indian biculturalism in the Northern Plains, instead of relying on vague notions, stereotypes or subjective feelings.

The inventory that was developed and utilized in this study is intended to provide a valid and useful tool that will contribute toward these goals. It was developed to assess Northern Plains American Indian's biculturalism or lack thereof. This scale would allow

the American Indian groups to be active participants in developing an inventory that measures their level of biculturalism.

CHAPTER II

METHOD

This study followed factor-analytic methods of scale development procedures stablished by relevant literature (Anastasi, 1988; Comrey, 1988). The development of ıe scale followed a three-step process. Step 1 involved the development of the merican Indian Biculturalism Inventory - Northern Plains Prototype. Step 2 involved ıe administration of the AIBI-NP to a focus group containing 10 American Indian ıbjects. These two steps were combined to form Phase 1 in the following section. The :edback received helped to shape the structure of the questions so that they were more nderstandable to the population that I was attempting to study. Step 3 involved dministration of the AIBI-NP to American Indian people who resided on-and-off the :servation as well as data analyses necessary to provide the development of the finalized :ale.

Phase 1: Focus Group

There were two primary goals involved in Phase 1. The first involved the ;eneration of scale items. Some items were revised from the NPBI to become more eadable and applicable to Northern Plains American Indians. Other items were ;enerated by the researcher who received feedback from other American Indians on :ampus and on reservation communities. The next goal was administration of the American Indian Biculturalism Inventory - Northern Plains for feedback to a focus group

of 10 American Indian students who were divided equally by gender. The focus group was constructed according to the existing literature (Fuller, Edwards, Vorakitphokatorn & Sermsri, 1993 ; Hughes & DuMont, 1993) on scale development which states that a group comprised of the people we are studying should be done in order to determine if the questions have face validity. This particular scale attempted to measure an American Indian's or European-American's degree of cultural competence in each cultural realm in accordance with the Orthogonal Theory of Biculturalism (Oetting & Beauvais, 1991).

Subjects

Subjects in the focus group consisted of 10 American Indian college students from UND. Focus group participants were equally represented by gender. There was also an effort made to achieve maximum variance in age with ages ranging from 23-43 years of age. All participants were of American Indian descent. The criteria for inclusion as "American Indian" consisted of self-reported ethnic preference. Several American Indian student advisors were also approached to provide consultation concerning the validity of student responses prior to item finalization.

Instruments

The research packet (see Appendix A) that the American Indian students received in Phase 1 included an Informed Consent form and the American Indian Biculturalism Inventory-Northern Plains prototype (AIBI-NP). The informed consent form identified the goals of Step 2 and provided information concerning potential risks and benefits in accordance with standards set forth by the APA and the UND Human Subjects

Committee. Subjects were allowed to keep a copy of the informed consent form. These items are discussed in greater detail below.

Informed Consent. 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. The focus group members were provided information concerning the potential risks and benefits in accordance with APA standards. Group members were not reimbursed for their time and effort.

American Indian Biculturalism Inventory – Northern Plains prototype. This inventory is a 33-item, Likert-scaled inventory assessing Northern Plains American Indians and Midwestern White (EuroAmerica) cultural identification. The inventory focuses mainly on social behavior, which is thought to be driven by fundamental attitudes that authors have described as viewpoints, perceptions, and cultural identification.

Procedures

American Indian college students from the UND campus were solicited to participate in the study. Those students who agreed to participate were then administered the AIBI-NP Prototype and asked for their feedback about the questions to determine their face validity. All of the feedback resulted in item revisions. Items were analyzed regarding readability, length, and cultural appropriateness for inclusion as scale items. The pool of items was then organized into a prototype scale (the AIBI-NP), which is described in greater detail in the second phase.

Phase 2: Administration of the AIBI-NP and Finalized Scale Development

The second phase consisted of development of the finalized scale, the AIBI-NP. This required administration and statistical refinement of the AIBI-NP. The finalized AIBI-NP was designed with the intent that American Indian students would provide answers indicative of their level of biculturalism.

Subjects

The participant sample in this phase of the study consisted of 198 (85 male, 112 female) Northern Plains American Indians. Criteria for inclusion as "American Indian" consisted of self-reported ethnic preference on admissions and/or financial aid information filed with each university. Ethnic self-identification as American Indian was considered satisfactory criteria. Subjects were solicited from reservation communities, college student populations, both on- and off-reservation to attain maximal variation and representativeness. The participants ranged in age from 17 years of age to 75 years of age.

Established standard scale development literature (Anastasi, 1989; Comrey, 1988) suggests a target of 200 subjects for scales that have 20-30 items to ensure statistical integrity. Many Northern Plains tribes were represented in this sample.

Instruments

All subjects participating in Step 3 (final scale development) were administered a research packet consisting of (1) study introduction and informed consent (Appendix A); (2) demographics section (Appendix A); and (3) AIBI-NP. These instruments are discussed in greater detail below.

Study Introduction and Informed Consent. The study introduction and informed consent consisted of a one page cover sheet describing the background and intent of the study. Subjects were allowed to keep a copy of this form as evidence of participation and consent. Participation is anonymous. The subject's name appeared only on the Informed Consent Form which was separated from the inventory. 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. Subjects who completed the inventory were given the choice of receiving extra credit slips for spring, summer or fall psychology classes or five dollars cash. My name (Jessica L. Gourneau) and phone number as well as my advisor's name (Dr. J.D. McDonald) and phone number were also listed in case any subject had questions regarding the study or wanted feedback after the research project was finished.

Demographic Sheet. Students who agreed to participate completed the demographics section. Items comprising the demographics section have been selected for inclusion in this study because they demonstrated statistical significance in previous, similar studies (Jeanotte, 1980; Wilson, 1983). The demographic survey established: age, gender, primary language spoken, year in school, major, and specific tribal identity. These variables were examined for other interesting covariations with scale items and to provide information regarding general characteristics for the sample.

American Indian Biculturalism Inventory – Northern Plains (AIBI-NP). Subjects were then administered the AIBI-NP. The AIBI-NP is a 33-item inventory arranged in a standard four-point Likert-scale format ranging from "always" to "never" (Anastasi, 1989; Hughes, D. & DuMont, K., 1993). Subjects were reassured that there were no right or wrong answers, and asked to endorse the statements to the degree they believed them to be true for them. Items were designed to assess degree of agreement with the statements provided.

This inventory attempted to assess Northern Plains American Indians and Midwestern White (EuroAmerican) cultural identification. The inventory which was developed in accordance with the Orthogonal Theory of Biculturalism (Oetting & Beauvais, 1990) focused primarily on social behavior, which is thought to be driven by fundamental attitudes that many authors have described as viewpoints, perceptions, and cultural identification. It was hypothesized the AIBI-NP would ultimately yield at least 2 subscales, an American Indian Cultural Identification (AICI) subscale, and a European American Cultural Identification (EACI) subscale. Thus, a subject with strong traditional ties would exhibit high scores on the AICI (American Indian Cultural Identification) subscale of the AIBI-NP. A subject identifying more highly with the majority culture would receive a high score on the EACI (European American Cultural Identification) subscale. A subject scoring highly on both subscales, would be described as bicultural, whereas a subject who scored low on both scales, would be described as Marginal. As discussed in greater detail below, "high" and "low" scores are determined for each subscale by employing a median-split technique. This process involves simply

lentifying the median for each subscale and using both as 0/0 intersect points on X/Y
ɛes, thereby establishing the four quadrants of cultural orientation.

rocedures

Obtaining sufficient numbers of subjects for these studies was a rigorous task. everal methods of subject solicitation were employed to achieve this goal. These ıethods are outlined below.

For American Indian college students, the faculty advisors of the American Indian lubs, or the UND Indian Association (UNDIA) student officers were contacted ersonally by the researcher and asked to allow a recruitment presentation at a UNDIA eneral membership meeting. The researcher then administered the AIBI-NP. The ɛsearcher asked UND psychology and Indian Studies professors to notify their students bout the study as well. The researcher also traveled to reservation tribal colleges to ecruit participants. Other American Indian students were solicited to administer the AIBI-NP at various reservation and community pow-wows. They were compensated vith extra credit for their classes or $5.00.

Data Analysis

After all the questionnaires were returned they were coded and computer analyzed ısing the SPSS statistics program. Two stages of data analysis were conducted. The first ɜtage involved analysis of descriptive statistics for the demographic variables and AIBI-NP items. Second, Pearson Product-Moment Correlation coefficients were computed among the demographic information and AIBI-NP factor scores. The second stage of data analyses was concerned with completion of scale development. This stage consisted

of Factor Analyses and Item Analysis, including an analysis of internal stability (Chronbach's Alpha). During this stage, the data set was factor analyzed to determine if item endorsement suggested a framework or pattern of factors. It was originally hoped that bicultural identification would be reflected among the first few derived factors. Since the derived factors were conceptualized as orthogonal, a varimax rotation was conducted during the analysis to provide maximal, independent distinction of factors. Initially, a Principle Components analysis with an open factor solution, was utilized. The number of factors derived were decided in accordance with three criteria: 1) eigenvalues; 2) scree breaks criterion; and 3) logic of the factor content. Once the number of factors derived had been determined, factor loadings of individual items were examined. Items not loading .4 or above were dropped. An attempt was made to eliminate any items that loaded on more than one factor.

Item Analysis were then conducted to ascertain item-total correlations and the contribution of each item to Chronbach's Alpha. Items which detracted from alpha reliability were deleted. Items were generally deleted one at a time, with reanalysis being conducted before additional deletions. Once the scale was revised, it was again factor analyzed to assess consistency of factor distinction, item-to-factor loadings, and variance accounted for. More specific results of these efforts are included in the next section.

CHAPTER III

RESULTS

Respondent Characteristics

There were 112 (56.6%) female respondents and 85 (42.9%) males with one person not identifying gender. The mean age for all respondents was 33.67. One hundred and fifteen out of 198 (58%) respondents indicated that they attended college either at a university or on the reservation. Thirty-six (18.2%) of the respondents attended a reservation college while 79 (39.9%) attended a state university. Out of the 115 respondents the average year in college was 1.69, with 1 pertaining to high school status, 2 pertaining to freshman status, 3 to sophomore status, 4 to junior status, 5 pertaining to senior status, 6 pertaining to graduate status, and 7 pertaining to other (requested specification). Six (3%) freshman, 17 (8.6%) sophomore's, 24 (12.1%) junior's, 18 (9.1%) seniors, 18 (9.1%) seniors, 22 (11.1%) graduate students and 19 (9.6%) stating another classification.

Numerous academic majors were represented in the sample. Therefore, the researcher has combined related fields for the sake of clarification. Some subjects even listed minors as well as majors. Again, in the interest of brevity the researcher took the liberty of listing only majors. One (.5%) identified Anthropology as their major, while eighteen (9.5%) subjects identified their major as Business Administration/Management (which included, Administrative Assistants, BBA/BSPA, management, marketing and

sales). Business administration/Management was the largest major group identified in this study. Two (1%) subjects stated that they were involved in public administration while two (1%) others identified as an automobile technician and a heavy equipment operator. Two (1%) people identified just a general Bachelor of Arts degree while two (1%) others identified as attempting to obtain a Bachelor of Sciences degree. Two (1%) subjects identified Biology as their major while only one (.5%) subject identified clinical lab as their major. Two (1%) subjects were Communication majors, one (.5%) was a Computer Science major while eight (4%) participants of the study were obtaining their degree in Criminal Justice/Law Studies (this included criminal justice, law enforcement, and pre-law).

Education majors were the second largest group identified among participants with fifteen (7.5%) subjects stating that they were attempting to obtain an Education degree (which included education administration, education, education leadership, elementary education, secondary education, special education, physical education, and home economics). Two (1%) subjects listed English as their major, one (.5%) reported Geology, and one (.5%) other listed Government as their major. Two (1%) participants listed their major as Indian Studies. A small minority did list Indian Studies as a minor. One (.5%) participant listed Information management as their major while 7 (3.5%) listed Nursing as their major (included in this is pre-nursing and rural health nursing). One (.5%) subject listed Occupational Therapy, another (.5%) listed Physical Therapy and still another (.5%) Recreational Therapy as their major. Five (2.5%) listed themselves as Pre-Medicine.

The third largest major group who participated in the study was Psychology with 11 (5.5%) subjects listing this as their major. The fourth largest major group was social work with 10 (5.1%) subjects. Five (2.5%) subjects were undecided in a major. Two (1%) subjects listed their major as "social sciences" and two (1%) others listed Sociology as their major. One (.5%) participant was Physics major. Only one (.5%) subject stated that they had completed their GED.

Three major states were identified as the primary residence for the majority of the respondents. This was not unexpected since the NPBI was designed to assess level of biculturalism among Northern Plains American Indians. The majority of the sample (76.5%) were from North Dakota. Subjects were obtained from every representative tribe in ND. These numbers, however, were not equally represented across tribes. Ten (5%) subjects represented Minnesota while 7 (3.5%) represented South Dakota.

There were 26 (12.5%) participants of the sample reporting that they identified as American Indian. One (.5%) participant claimed descendency but did not name a particular tribal membership. Six (3%) of the participants in the sample were 3 affiliated which comprised 1(0.5%) Arikara, 1(0.5%) Mandan and 1(0.5%) Hidatsa. Three (1.5%) of the participants identified only as 3 affiliated. One (0.5%) participant was of Arikara/Dakota descent. One (0.5%) was of Arikara/Chippewa descent. There was 1(0.5%) participant of Assinaboine descendency. Two (1%) participants were of Cherokee descent, 4 (2%) were Cheyenne River Sioux, 5 (2.5%) were Crow Creek Sioux, 4 (2%). There were 26 (13.2%) of the sample who claimed Chippewa membership, with one (0.5%) variant of Chippewa/Cree. There was also 4 (2%) reporting Ojibway descent.

The primary language spoken in the household for the sample was primarily English. However, some subjects did identify Native second languages. Second languages reported were Dakota, Lakota, Chippewa, Cree, Hidatsa, Ojibeway, Navajo and American Sign Language.

AIBI-NP Descriptive Statistics

Means and standard deviations were also recorded for individual AIBI-NP responses. The results of this analysis are contained in Table 1.

Table 1. Results of Descriptive Analysis: AIBI-NP

AIBI-NP Scale Items	Mean	SD
1. How comfortable are you around non-Indian people?	3.3	.71
2. How comfortable are you around American Indian people?	3.8	.52
3. How much do you understand about what goes on at a pow-wow?	3.1	.94
4. How well can you tell the difference between American Indian songs?	2.4	1.1
5. How much do you identify with non-Indian culture?	2.8	.79
6. How much do you identify with American Indian culture?	3.1	.82
7. How much do you prefer to socialize with American Indians?	3.6	.63
8. How much do you prefer to socialize with non-Indians?	2.9	.82
9. How often do you attend American Indian gatherings or celebrations?	2.7	.91
10. How often do you attend non-Indian gatherings or celebrations?	2.5	.76
11. Can you speak an American Indian language?	1.8	.80

"Table 1 cont."

12. If you can speak an American Indian language, how often do you use it?	1.7	.72
13. Can you understand your American Indian language when it is spoken by others?	2.1	.86
14. When at home with your family how often do you speak an American Indian language?	1.6	.80
15. How often is English spoken around your home?	3.8	.62
16. How comfortable do you feel speaking an American Indian language?	2.2	1.1
17. How comfortable do you feel speaking English?	3.8	.50
18. How often do you use American Indian "slang" in your normal everyday speech?	2.6	1.0
19. How much contact do you have with your relatives?	3.6	.69
20. How much time do you spend visiting with relatives?	3.3	.78
21. How involved were your relatives in your upbringing?	3.3	.84
22. How often do you talk about American Indian topics and Indian culture in your daily conversation?	2.7	.85
23. How often do you talk about different cultures and the topics that are important to them?	2.5	.79
24. Do you wear American Indian jewelry?	2.0	.94
25. Do you collect American Indian cultural art?	2.4	.97
26. How important is it to you to know your American Indian ancestry or descent?	3.5	.73

"Table 1 cont."

27. How important is it to you to know your non-Indian ancestry or descent?	2.7	1.0
28. How often do you attend American Indian religious ceremonies?	2.2	.99
29. How much do you identify with other religions that are not a traditional American Indian "religion"?	2.6	.97
30. If you had a physical or mental illness how likely would it be for you to seek help from a medicine man/healer?	2.4	1.1
31. If you had a physical or mental illness how likely would it be for you to seek help from a medical doctor?	3.3	.80
32. How likely would it be for you to date someone who is non-Indian?	2.7	1.1
33. How likely would it be for you to marry someone who is non-Indian?	2.4	1.2

Pearson Product-Moment Correlations

The second set of analyses produced Pearson-Product Moment correlations coefficients for the entire data set. Anastasi (1988) notes that significance levels for these analyses are determined in accordance with the degree of certainty to which the researcher wishes to maximize probable freedom from error. Tables from Kachigan (1986) suggest minimum coefficients of .354 and .504 would be necessary at the .01 and .001 significance levels for the AIBI-NP data set. A .01 level of significance is considered standardly acceptable (Anastasi, 1988), and was deemed appropriate for application as criterion for the first analysis incorporating the demographic variables. The demographic information, while important in terms of understanding the nature of

the sample, did not require the same level of scrutiny as information from AIBI-NP items alone. Significant correlations involving demographic variables ($p<.01$, $r>.35$) will be discussed first, with relationships of AIBI-NP items ($p<.001$, $r>.50$) discussed second. The entire correlation coefficient matrix is represented in Appendix B.

Correlations of Demographic and AIBI-NP Variables

The Pearson Product-Moment correlational analyses of the AIBI-NP subscales, age, and gender revealed a statistically significant negative correlation between the questions that were designed to measure AICI and EACI, respectively. A statistically significant positive correlation was also observed between age and question number 6 (How much do you identify with American Indian culture?). It was also discovered that gender correlated with everything. No other statistically significant correlations were obtained. These correlations can be found in Table 2.

Table 2. Pearson Product-Moment Correlational Results Matrix

Item	Age	Gender	AICI	EACI
Age	1.000	.028	.096	-.127
Gender	.028	1.000	.191**	.071
AICI	.096	.191**	1.000	-.195**
EACI	-.127	.071	-.195**	1.000

Note: AICI refers to American Indian Cultural Identification
EACI refers to European American Cultural Identification

* Correlation is significant at the .05 level
**Correlation is significant at the .01 level

Factor Analyses

The following sections provide first a general procedural outline and then a detailed accounting of the progression of steps, criteria, and guidelines utilized in the factor analyses that took the raw data provided by the AIBI-NP prototype and refined them into the final scale version, the AIBI-NP.

The initial factor analysis employed an open factor solution. The primary purpose of this analysis was to determine, with the aid of established criteria, the fewest number of factors that still accounted for as much variance as possible. These criteria suggested examination of eigenvalues and scree breaks in order to further support the determination of how many factors were indicated (Cattell, 1972; Eysenck, 1969). These analyses suggested a three-factor solution. Individual factor loadings and Item Analyses were then performed in order to determine if any non-contributing items could be removed to streamline the scale without sacrificing overall scale stability. Eight items were identified and removed one at a time. Factor Analyses and Item Analyses were conducted each time an item was removed. Final interpretations of the resulting factors were then performed.

Criteria for determination of eigenvalues, number of factors, acceptable factor loading values and patterns, rotations, item analysis and exclusion criteria, and interpretation of factors were based on suggestions from relevant scale literature (Anastasi, 1988; Cattell, 1972, 1973; Eysenck, 1969; Spielberger et al, 1983). These criteria included the following. First, factors had to demonstrate an eigenvalue of 1 or more. An eigenvalue of 1 indicates that the specified factor accounts for as much

variance as a single scale item. This was therefore established as the minimal tolerance level. Second, factor loadings of .4 were established as minimum criteria for item retention on the final scale. Third, a varimax rotation was employed in accordance with the theoretical standpoint that the items contributing to the correlation matrix were indeed unrelated conceptually. Fourth, item-exclusion criteria consisted of both low internal reliability and violation of the factor loading principles described above. Finally, factor interpretation would be accomplished by examining the relationship between items that load acceptably on each factor to determine the nature of that factor. The overall goal consisted of producing an instrument with the least number of items that retained maximum variance accountability and conceptual salience.

Initially an open-solution, principle component factor analysis was run in order to: (1) determine if item endorsement patterns provided a framework or pattern of identifiable factors; and, (2) ascertain the likely number of these factors. Figure 2 provides a representation of the scree-breaks criteria chart for this analysis. Indications from eigenvalues, variance accounted for, scree-breaks, salience of factors based on item patterns and loadings all suggested a three-factor solution. The third factor, however, barely met the eigenvalue criterion and the scree breaks chart depicted the third factor as very close to the line of scree.

A three-factor, common factor analysis was then run to further elicit factor loading patterns and values. A varimax rotation was employed in order to maximize distinction between factors. All but eight items met or exceeded factor-loading criterion.

Fifty percent of total variance was accounted for by these three factors. Item analyses were then run. The primary intentions of these analyses were to assess which items could be eliminated and in what order. Eight items met both factor and item analysis criteria for elimination, but were not yet removed.

At this point Factor 1 represented identification with American Indian culture. Eighteen items loaded to criteria on this scale. Factor 2 represented identification with European American culture. Seven items loaded to criteria on this scale. Factor 3 was not as clear. However, questions that loaded on this factor discussed language. Four items loaded to criteria. Since, the contribution of Factor 3 was minimal and loaded on two factors we collapsed this factor amongst the first two.

Two-factor Solution

A two-factor solution was run on all 33 items. Items that had previously loaded on factor 3 were collapsed amongst the other factors (See Table 5). Total variance accounted for only dropped to 45%. The same items that loaded on Factor 1 did so as before. Following rotation, items that had loaded on both Factor 1 and 3 loaded onto Factor 1. It was concluded that the qualitative and interpretative nature of Factor 1 did not change by employing a two-factor solution. The items comprising Factor 2 became more distinct. This analysis satisfactorily demonstrated a two-factor solution to the data set that met statistical criteria and also provided interpretative salience to the way in which the scale was perceived by the subjects.

Table 3. Results of Common Factor Analysis with 2-Factor Solution and Varimax Rotation: Eight Items Removed

Item	Factor 1	2
9 (How often do you attend American Indian gatherings or celebrations?)	.77	
28 (How often do you attend American Indian religious ceremonies?)	.74	
14 (When at home with your family how often do you speak an American Indian language?)	.73	
11 (Can you speak an American Indian language?)	.72	
6 (How much do you identify with American Indian culture?)	.72	
13 (Can you understand your American Indian language when it is spoken by others?)	.70	
16 (How comfortable do you feel speaking an American Indian language?)	.70	
12 (If you can speak an American Indian language, how often do you use it?)	.70	
3 (How much do you understand about what goes on at a pow-wow?)	.69	
4 (How can you tell the difference between American Indian songs?)	.69	
22 (How often do you talk about American Indian topics and Indian culture in your daily conversation?)	.64	
26 (How important is it to you to know your American Indian ancestry or descent?)	.59	
25 (Do you collect American Indian cultural art?)	.59	
7 (How much do you prefer to socialize with American Indians?)	.58	

"Table 3 cont."

30 (If you had a physical or mental illness how likely would it be for you to seek help from a medicine man/healer?)	.56	
18 (How often do you use American Indian "slang" in your normal everyday speech?)	.50	
24 (Do you wear American Indian jewelry?)	.50	
23 (How often do you talk about different cultures and the topics that are important to them?)	.47	
8 (How much do you prefer to socialize with non-Indians?)		.77
32 (How likely would it be for you to date someone who is non-Indians?)		.74
1 (How comfortable are you around non-Indian people?)		.74
33 (How likely would it be for you to marry someone who is non-Indian?)		.71
10 (How often do you attend non-Indian gatherings or celebrations?)		.69
5 (How much do you identify with non-Indian culture?)		.60
27 (How important is it to you to know your non-Indian ancestry or descent?)		.51

Note: (1) Total variance accounted for: Factor 1 = 32%, Factor 2 = 13%
(2) Factor loadings sorted and listed by highest value in descending order

The final tasks of item and internal scale stability analyses were then undertaken in order to determine if some items could be eliminated to make the scale more concise and streamlined. The procedure consisted of: (1) examining each of the eight items identified above as questionable in terms of factor loadings; (2) removing each from the analysis separately, checking the effects of removal on overall scale and factor internal stability; and, (3) running subsequent two-factor solution factor analyses following each removal to determine if the absence of that item changed the nature of the solution. Four

iteria for removal of an item were used. These included: (1) if, after removal of an :m, the internal stability of the entire scale and the factor it originally loaded sufficiently on was either unaffected or increased (this was determined by running item alyses for both item-total and item-factor analyses after each removal); (2) if the nature the two factors did not change (this was determined by running two factor solution mmon factor analyses with varimax rotations following each item removal); (3) if the tal variance accounted for after the item was removed either remained the same or creased; and, (4) if the loss of the face validity of the scale was deemed acceptable. If 1 of these conditions were met, the item was removed. The following outlines this ocess in more detail.

An initial analysis of internal stability (Chronbach's Alpha) produced a oefficient of .773 for the total scale. Another analysis of internal stability was taken fter the eight items were removed. An alpha coefficient of .910 was produced. The moval of the eight items greatly increased the reliability of the instrument. Table 4 epresents the alpha coefficients for the entire scale before and after the items were emoved.

Table 4. AIBI-NP Alpha Coefficients Before and After Item Removal

Number of Items	Alpha Coefficient
33 Items	.773
25 Items	.910

We also observed the alpha coefficients for the individual factors. Factor 1, which was found to be identified with American Indian Cultural Identification obtained an alpha coefficient of .91. This factor obtained a slightly higher internal stability than the corresponding factor on the Northern Plains Biculturalism Inventory (NPBI) which had an alpha coefficient of .89. Factor 2 which was indeed interpreted as representing European American Cultural Identification obtained an alpha coefficient of .77. This was somewhat lower than the alpha coefficient of .81 obtained on the corresponding factor on the NPBI. Please refer to Table 5 for a breakdown of this analysis.

Table 5. Alpha Coefficients for the American Indian Biculturalism Inventory – Northern Plains (AIBI-NP) and the Northern Plains Biculturalism Inventory (NPBI)

	AIBI-NP Alpha Coefficient	NPBI Alpha Coefficient
Factor 1	.91	.89
Factor 2	.77	.81

Note: Factor 1 = American Indian Cultural Identification (AICI);
Factor 2 = European American Cultural Identification (EACI)

With these eight items deleted, the following characteristics of the scale were demonstrated. First, the alpha coefficient for the total scale rose to .910. Second, final alpha coefficients were .91 for Factor 1 and .77 for Factor 2. Total scale variance accounted for remained stable at 45%. Third, the two-factor solution remained appropriate and virtually unchanged. This was determined by running a final two-factor common factor analysis with varimax rotation and the eight items removed. The scale

had been reduced in size from 33 to 25 items and had not lost statistical or practical utility. As noted earlier, eight items did not meet factor loading criteria. The eight items that did make criteria for exclusion were #2, 15, 17, 19, 20, 21, 29, and 31. The scale had actually gained greater simplicity and psychometric power by removing the eight items that were not contributing to criteria. The finalized version, the AIBI-NP is represented in Appendix D.

Suggested Scoring Procedures

Factor 1 and 2 scores could be obtained relatively easily by adding total scores for the items that comprise the factors (items that loaded on the factors). Please refer to Table 6 for the individual items that load on each factor.

Table 6. Factor Loadings for Individual Items

	Factor 1		Factor 2
	AICI		EACI
Items:	9	25	8
	28	7	32
	14	30	1
	11	18	33
	6	24	10
	13	23	5
	16		27
	12		
	3		
	4		
	22		
	26		

Note: AICI = American Indian Cultural Identification;
EACI = European American Cultural Identification

In accordance with the Northern Plains Biculturalism Inventory (NPBI) a median split procedure is suggested. In the procedure, the median score was calculated for the AICI and EACI factors using the dataset. A score above the median is considered high, and a score below the median is considered low. A high score on the AICI scale along with a low score on the EACI scale indicates an American Indian Cultural Identification on the dimension of biculturalism, while a low score on the AICI scale and a high score on the EACI scale indicates European American Cultural Identification. If both AICI and EACI scores are above the median, the person is classified as biculturally identified. If both AICI and EACI scores are below the median, the scales identify a person characterized by marginality.

After scoring the dataset we discovered the median score for the AICI scale is 38 and 19 for the EACI scale. Figure 3 scatterplot represents how subject's data fit with the orthogonal AIBI-NP factors as theorized by Oetting and Beauvais (1990). Quadrant 1 lists those identified as Bicultural. Quadrant 2 identifies those of Traditional American Indian orientation. Quadrant 3 identifies those whose identification is low in either culture or Marginal. Quadrant 4 identifies those who are of Majority culture orientation.

In conclusion, a two factor solution was deemed the most appropriate for interpreting the pattern of responses. While a detailed interpretative discussion follows in the section, several global characteristics were suggested. An interpretative analysis of the items clustering on each factor suggested Factor 1 could be considered an American Indian Cultural Identification (AICI) subscale, while Factor 2 represented an European American Cultural Identification (EACI) subscale, similar to the NPBI. Acceptable

internal stability and scale integrity were maintained and even increased by removing eight non-contributing items. Finally, the two factors (i.e. AJCI and EACI subscales) did demonstrate a statistically significant negative correlation. However, this correlation (r =-.19) accounted for far less variance than Allen & French (1993) observed (r =.54) in the development of the NPBI, and is small enough to be considered practically insignificant.

CHAPTER IV

DISCUSSION

The American Indian population is culturally heterogeneous, geographically dispersed, and young. The diversity found in language, customs, religion, traditions and type of family structure among 511 federally recognized native entities and an additional 365 state-recognized American tribes challenges distinct categorization (Manson & Trimble, 1982). This diversity coupled with years of trauma and victimization has made the experience of being American Indian in this country difficult and complicated. This complexity has only increased with time and contact with the Majority Culture. Today, in contemporary society American Indians' strive to define their "place" in society and the world. This goal has been difficult to obtain due for several general reasons.

One roadblock is considerable controversy over what constitutes American Indian status. American Indian's are the only minority group in the United States who require a legal definition of their identity which is mandated by Congress and differentially defined by each tribe. Attempts made by American Indian tribes to define themselves and others they choose to adopt into their tribes have been met with much controversy inside and outside the American Indian communities. This controversy has created dissension about American Indian groups and has hampered their efforts to define their sense of group and individual identity.

Another difficulty American Indians' suffer from is high rates of poverty and prolonged unemployment. This combined with substandard housing shortages, malnutrition, inadequate health care, shortened life expectancy, and high suicide and infant death rates have all affected and limited American Indians' opportunities for educational attainment and have increased our risk of a higher vulnerability to developing psychological problems.

Although it is apparent that American Indians have shown impressive reservoirs of strength and coping mechanisms in the face of these environmental realities, they experience high rates of mental health disorders associated with social stress. Cultural epidemiologists have claimed that forced acculturation to urban living increases an individuals' vulnerability for developing psychological problems (Kemnitzer, 1973; Spindler & Spindler, 1978). Barter and Barter (1974) noted the heightened stress involved when American Indians adapt to the dominant culture and at the same time are forced by their choice of residency into relinquishing their sovereign rights to health, education, and welfare on reservation land.

Due to the negative impacts of these social and environmental realities it is of paramount importance that study be focused within these populations so that we may help to reduce these negative impacts. Most research with American Indian populations has been severely imbalanced in favor of studies that focus on pathological disorders of American Indians to the neglect of investigations of milder transient problems and of research on familial or sociocultural antecedents of psychological and economic difficulties. As discussed previously, some authors have theorized that individuals who

can alternate between two ethnic groups may well exhibit higher mental health satisfaction as well as higher cognitive functioning than people who are monocultural, assimilated, or acculturated. Therefore, achieving bicultural competence would be helpful in preventing or ameliorating acculturative stress and its subsequent problems. Some research has even indicated that some individuals living in two cultures may find the experience to be more beneficial than living a monocultural lifestyle. The key to psychological well-being may very well lie in one's ability to develop and maintain competence in both cultures. But again, little or no research has been attempted to empirically test these theories, so, they remain exactly that – theories.

Attempts have been made recently to develop scales that assess cultural identification for American Indians. Allen and French (1993) developed the Northern Plains Biculturalism Inventory (NPBI) based on degree of bicultural competence in each cultural realm in accordance with the Orthogonal Theory of Biculturalism. As discussed previously, some short-comings were discovered with the NPBI concerning the small sample size, lack of a focus group and difficulties with the wording of the instrument which may have impacted the validity of the answers provided on the scale.

The primary intention of this study, therefore, was to improve upon this inventory by developing a more efficient and understandable (and hopefully valid) instrument for measuring bicultural competence among American Indian populations. More accurate measurement of the biculturalism construct is vital to early identification of those who may be prone to psychoemotional distress.

A pool of potential items were devised and then refined through a focus group effort. The items were then revised and arranged in a prototype inventory, the AIBI-NP that was implemented within university and community (urban and rural) settings in the state of North and South Dakota. Eight items did not meet statistical and practical criteria for inclusion were deleted from the prototype following a series of factor, item, and internal reliability analyses. The resulting scale, the AIBI-NP (see Appendix D), is the final product of this research. The remaining discussion will focus on the implementation of these analyses.

The demographics of this study's sample closely approximated those for their American Indian peers at urban and rural colleges in the states of North and South Dakota. This suggested the sample utilized in this study was acceptable in terms of representativeness of college (urban and rural) and community settings in the states of North and South Dakota.

After conducting Pearson Product-Moment correlations it was discovered that a positive correlation existed between age and item #6 (How much do you identify with American Indian culture?). It appears that the older the participant the higher they endorsed their identification with their culture. This may indicate a couple of things. One reason may be that the older participants who filled out the inventory may have been accessed from a more Traditional group. Another reason may be that identification with their culture becomes more salient with age. Therefore, people may become more invested in learning more about their culture as they age.

Another significant positive correlation existed between gender and the American Indian Cultural Identification scale. It was found that the males viewed themselves as more traditional than the females. There may be several reasons for this finding. One reason may be the cultural differences in roles that men and women have in society. Men tend to have a more ideological perspective of the world. Their roles in modern society, especially in American Indian societies are very different then women. Due to the breakdown of the family and more single parent households men are not as involved with holding their more traditional roles within the home. It may be that they are looking at the questions with a more ideological perspective, possibly answering the inventory the way they want to be perceived or think they should be perceived. Women tend to have a more practical perspective and likely answered the questions the way they view themselves in the current situation. Given the statistical disparity in this finding it would be useful for future research to focus on single parent households to see if the same disparity would occur in this situation.

The patterns of associations observed from Pearson Product-Moment correlations discussed above allow one to begin to anticipate the nature of the factors that emerged from factor analysis. Factor analyses and item analyses were conducted in order to determine the underlying structures represented from item endorsements, to assess whether some non-contributing items could be deleted, and to determine and maximize the psychometric power of the scale.

A series of factor and item analyses patterned after established psychological scale-development procedure were employed in an effort to refine the 33-item AIBI-NP

(prototype) into a more concise instrument that sacrificed minimal psychometric and qualitative characteristics.

The result of these analyses was a 25-item AIBI-NP that consists of two factors that may be viewed as subscales. Subscale 1 may be considered an American Indian Cultural Identification subscale, while Subscale 2 may be considered a European American Cultural Identification subscale. The overall inventory demonstrated high internal consistency. Further study with this inventory and its factors should be undertaken to address other reliability characteristics.

The utility of the subscales or factors is considerable in both scope and convenience. First, total scores for Subscale 1 and 2, may provide us with information about a person's degree of identification with American Indian or European American culture. A high score on the AICI along with a low score on the EACI scale indicates an American Indian Cultural Identification on the dimensions of cultural immersion, while a low score on the AICI scale and a high score o the EACI scale indicates European American Cultural Identification. If both AICI and EACI scores are above the median, the person is classified as biculturally identified. If both AICI and EACI scores are below the median, the scales identify a person who is considered marginal. It has been suggested that it is not necessarily monocultural or bicultural identification that causes significant acculturative stress. However, it is marginality, or low identification with either culture, that leads to more psychological and sociocultural difficulties. They are considered to be more at risk and therefore would likely benefit from more personal attention to his/her personal issues.

A significant negative correlation of -.195 was discovered among the two scales. However, this negative correlation of was significantly lower than previous studies and is therefore considered an improvement in light of the following. Previous studies by McDonald et.al (1997) and Wilkie et.al (1999) both utilized Allen and French's scale. Both of these studies discovered higher correlations between the scales. McDonald (1997) found a significant correlation of -.30 while Wilkie (1999) found a significant correlation of -.53. Both were significant at the .01 level. The Allen and French (1993) study itself had a significant negative correlation of -.57 at the .01 level. Therefore, these findings clearly suggest the two subscales from this scale demonstrated considerably more orthogonality than the NPBI subscales. However, future research is obviously needed to further theoretically and statistically distinguish the two subscales from each other.

It is of importance to note however, that this research may indicate that the level of "correctness" of the Orthogonal Theory of Biculturalism (Oetting & Beauvais, 1991) may be a matter of degree and not an all-or-none theory. If many of the social constructs and qualities that this theory is measuring are spread among all ethnic groups it is conceivable that the two factors may not be orthogonal but would correlate to a certain degree. Further research is needed to explore this concept.

This study also improved upon the NPBI by demonstrating stronger internal consistency with an alpha coefficient of .91 for the AICI subscale. However, Allen and French (1993) did receive an alpha coefficient of .81 on the EACI scale in this current

study. This generally suggests slightly greater psychometric power and utility for this AICI subscale, and yet slightly lower for the EACI subscale, yet not significantly.

Another improvement of this study over the NPBI was the higher number of subjects (N=198) utilized to develop that AIBI-NP. Allen and French (1993) only utilized 73 subjects for their original scale development. Comrey (1988) suggests a minimum of 200 subjects for scales with 40 items or less. The low number of subjects calls the factor structure validity into question. This study employed 198 subjects for a 25-item scale. Therefore, this increases the confidence in the results relative to factor structure and subsequent construct validity.

Although careful steps were taken to produce a scale that was as valid and reliable as possible, the necessity for further psychometric work is clear. Strategies for future study with the AIBI-NP may include test-retest reliability and construct and criterion related validity establishment. Questions that attempt to measure cultural identification may require refinement for other tribes in other regions (thus the designator "NP" to indicate Northern Plains applicability). A proposed method to account for this would require the standardization of the AIBI-NP with as many major tribal groups as possible. This effort would provide tribal norms in order to better interpret scores from individuals. Attempts to further establish the reliability of the AIBI-NP will provide greater assurances as to its utility and consistency. Concentrated efforts to establish whether the AIBI-NP does in fact target American Indians at higher risk for psychological and sociocultural difficulties is imperative. This may be accomplished by administering it to

clinical and non-clinical samples and analyzing differences in psychoemotional distress relevant to levels of biculturalism.

Finally, it is believed the AIBI-NP represents a general improvement over the NPBI, and therefore could be a valuable tool in assessing the bicultural competence of American Indian individuals and groups. This degree of utility should allow for both clinical and research applications. If the cross-cultural theorists are indeed correct in their assumptions that being better able to "walk in both worlds" is predictive of higher functioning for American Indians, then the development of this scale may represent an important first step in aiding that transition.

APPENDICES

Appendix A

Informed consent and Demographics

Appendix A

INFORMED CONSENT

You are invited to participate in a study that is attempting to measure cultural identification among American Indians and European-Americans. During the session you will complete a short questionnaire. The purpose of this study is to develop a questionnaire to measure cultural identification. Research in this area is scarce, especially research including American Indians. The benefits will be the development of a more reliable measure of cultural identification that can be utilized with tribes in the Northern Plains which may lead to improvement in multicultural treatment.

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 (if you are a UND student) 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. Jessica Gourneau 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 to receive $5.00 for my participation (give name & address to mail $5 to:)
Name: _____
Address: _____

____ I would like extra credit in a Psychology course
Name: _____
Psych. Course in which you are (or plan to) enroll: _____

Appendix A

Demographic and Information 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. Cultural Identification: (Check One)
   _____ a. American Indian: If so what tribe do you belong to?

   _____ b. Alaskan Native
   _____ c. Caucasian
   _____ d. African American
   _____ e. Hispanic American
   _____ f. Asian or Pacific Islander
   _____ g. Alaskan Native
   _____ h. Other (please specify): _____

4. Primary language spoken? _____

5. If you are a student what is your current class ranking? (Check only one)

   _____ a. High School
   _____ b. Freshman in College
   _____ c. Sophomore in College
   _____ d. Junior in College
   _____ e. Senior in College
   _____ f. Graduate School
   _____ g. Other (please specify): _____

6. If you attend college where is it located?

   _____ a. Reservation College
   _____ b. University College

7. What is your current major? _____

8. Where is your primary residence? _____

AMERICAN INDIAN BICULTURALISM INVENTORY-NORTHERN PLAINS
(Protoype)

These questions ask you to describe your attitudes, feelings, and participation in American Indian and non-Indian culture. Some of the questions may not seem to apply to you. In these cases, please mark the answer that you feel is the closest to your own personal feeling or attitude. In the case of attitudes and feelings, your first impression is usually correct. We are interested in how much you are influenced by American Indian and non-Indian culture regardless of your ethnic background, keeping in mind that no two people have the same backgrounds.

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

How comfortable do you feel taking paper and pencil questionnaires?

1	2	3	4
No Comfort	Some	Moderate	Great Comfort

1.) How comfortable are you around non-Indian people?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

2.) How comfortable are you around American Indian people?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

3.) How much do you understand about what goes on at a pow-wow?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

4.) How well can you tell the difference between American Indian songs?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

5.) How much do you identify with non-Indian culture?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

6.) How much do you identify with American Indian culture?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

7.) How much do you prefer to socialize with American Indians?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

8.) How much do you prefer to socialize with non-Indians?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

9.) How often do you attend American Indian gatherings or celebrations?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

10.) How often do you attend non-Indian gatherings or celebrations?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

11.) Can you speak an American Indian language?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

12.) If you can speak an American Indian language, how often do you use it?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

13.) Can you understand your American Indian language when it is spoken by others?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

14.) When at home with your family how often do you speak an American Indian language?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

15.) How often is English spoken around your house?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

16.) How comfortable do you feel speaking an American Indian language?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

17.) How comfortable do you feel speaking English?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

18.) How often do you use American Indian "slang" in your normal everyday speech?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

19.) How much contact do you have with your relatives?

1	2	3	4
None	Some	Moderate	Great Deal

20.) How much time do you spend visiting with relatives?

1	2	3	4
None	Some	Moderate	Great Deal

21.) How involved were your relatives in your upbringing?

1	2	3	4
Not at all	Somewhat	Moderately	Great Deal

22.) How often do you talk about American Indian topics and Indian culture in your daily conversation?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

23.) How often do you talk about different cultures and the topics that are important to them?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

24.) Do you wear American Indian jewelry?

1	2	3	4
Not at all	Somewhat	Moderately	Great Deal

25.) Do you collect American Indian cultural art?

1	2	3	4
Not at all	Somewhat	Moderately	Great Deal

26.) How important is it to you to know your American Indian ancestry or descent?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

27.) How important is it to you to know your non-Indian ancestry or descent?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

28.) How often do you attend American Indian religious ceremonies?

1	2	3	4

28.) How often do you attend American Indian religious ceremonies?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

29.) How much do you identify with other religions that are not a traditional American Indian "religion"?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

30.) If you had a physical or mental illness how likely would it be for you to seek help from a medicine man/healer?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

31.) If you had a physical or mental illness how likely would it be for you to seek help from a medical doctor?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

32.) How likely would it be for you to date someone who is non-Indian?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

33.) How likely would it be for you to marry someone who is non-Indian?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

Appendix B

Pearson Product-Moment Correlation Matrix

Appendix B

arson Product-Moment Correlation Coefficient Matrix: All AIBI-NP Items

		AGE	gender	AIBI1	AIBI2	AIBI3	AIBI4
AGE	Pearson Correlation	1.000	.028	-.037	.033	.130	.070
	Sig. (2-tailed)	.	.703	.614	.648	.073	.339
	N	191	191	191	190	191	191
gender	Pearson Correlation	.028	1.000	.027	.084	.167*	.174*
	Sig. (2-tailed)	.703	.	.710	.240	.019	.015
	N	191	197	197	196	197	197
AIBI1	Pearson Correlation	-.037	.027	1.000	.246**	-.206**	-.250**
	Sig. (2-tailed)	.614	.710	.	.000	.004	.000
	N	191	197	198	197	198	198
AIBI2	Pearson Correlation	.033	.084	.246**	1.000	.228**	.138
	Sig. (2-tailed)	.648	.240	.000	.	.001	.053
	N	190	196	197	197	197	197
AIBI3	Pearson Correlation	.130	.167*	-.206**	.228**	1.000	.604**
	Sig. (2-tailed)	.073	.019	.004	.001	.	.000
	N	191	197	198	197	198	198
AIBI4	Pearson Correlation	.070	.174*	-.250**	.138	.604**	1.000
	Sig. (2-tailed)	.339	.015	.000	.053	.000	.
	N	191	197	198	197	198	198
AIBI5	Pearson Correlation	.030	.020	.339**	-.024	-.069	-.043
	Sig. (2-tailed)	.681	.782	.000	.736	.334	.548
	N	191	197	198	197	198	198
AIBI6	Pearson Correlation	.147*	.183*	-.112	.372**	.553**	.553**
	Sig. (2-tailed)	.042	.010	.117	.000	.000	.000
	N	191	197	198	197	198	198
AIBI7	Pearson Correlation	.085	.118	-.060	.401**	.385**	.388**
	Sig. (2-tailed)	.244	.099	.403	.000	.000	.000
	N	191	197	198	197	198	198
AIBI8	Pearson Correlation	-.114	-.034	.571**	.096	-.168*	-.170*
	Sig. (2-tailed)	.116	.638	.000	.178	.018	.017
	N	191	197	198	197	198	198
AIBI9	Pearson Correlation	.063	.207**	-.254**	.208**	.703**	.580**
	Sig. (2-tailed)	.388	.004	.000	.003	.000	.000
	N	191	197	198	197	198	198
AIBI10	Pearson Correlation	-.119	.056	.404**	.109	.117	.016
	Sig. (2-tailed)	.101	.431	.000	.129	.099	.828
	N	191	197	198	197	198	198
AIBI11	Pearson Correlation	.186**	.284**	-.106	.127	.412**	.465**
	Sig. (2-tailed)	.010	.000	.135	.076	.000	.000
	N	191	197	198	197	198	198
AIBI12	Pearson Correlation	.130	.253**	-.080	.087	.425**	.514**
	Sig. (2-tailed)	.090	.001	.288	.250	.000	.000
	N	171	177	178	177	178	178
AIBI13	Pearson Correlation	.265**	.207**	-.229**	.103	.456**	.504**
	Sig. (2-tailed)	.000	.004	.001	.151	.000	.000
	N	191	197	198	197	198	198
AIBI14	Pearson Correlation	-.015	.230**	-.074	.182*	.411**	.500**
	Sig. (2-tailed)	.834	.001	.299	.011	.000	.000
	N	190	196	197	196	197	197

		AGE	gender	AIBI1	AIBI2	AIBI3	AIBI4
AIBI15	Pearson Correlation	.024	.006	.072	-.032	-.159*	-.104
	Sig. (2-tailed)	.745	.936	.317	.660	.026	.146
	N	190	196	197	196	197	197
AIBI16	Pearson Correlation	.024	.180*	-.126	.142*	.401**	.429**
	Sig. (2-tailed)	.744	.013	.080	.050	.000	.000
	N	186	192	193	192	193	193
AIBI17	Pearson Correlation	.041	-.126	.173*	.070	-.180*	-.234**
	Sig. (2-tailed)	.577	.077	.015	.330	.011	.001
	N	191	197	198	197	198	198
AIBI18	Pearson Correlation	-.105	.106	-.189**	.192**	.242**	.243**
	Sig. (2-tailed)	.150	.140	.008	.007	.001	.001
	N	190	196	197	196	197	197
AIBI19	Pearson Correlation	-.065	-.082	.038	.248**	.117	.086
	Sig. (2-tailed)	.375	.255	.598	.000	.100	.229
	N	190	196	197	196	197	197
AIBI20	Pearson Correlation	-.150*	-.093	.032	.260**	.136	.146*
	Sig. (2-tailed)	.039	.196	.657	.000	.057	.042
	N	189	195	196	195	196	196
AIBI21	Pearson Correlation	-.074	-.059	.011	.240**	.150*	.182*
	Sig. (2-tailed)	.307	.407	.883	.001	.035	.010
	N	190	196	197	196	197	197
AIBI22	Pearson Correlation	.065	.026	-.088	.217**	.356**	.412**
	Sig. (2-tailed)	.370	.718	.220	.002	.000	.000
	N	190	196	197	196	197	197
AIBI23	Pearson Correlation	.067	-.017	.003	.116	.252**	.192**
	Sig. (2-tailed)	.357	.814	.970	.106	.000	.007
	N	190	196	197	196	197	197
AIBI24	Pearson Correlation	.053	-.214**	-.010	.071	.304**	.217**
	Sig. (2-tailed)	.469	.003	.889	.322	.000	.002
	N	190	196	197	196	197	197
AIBI25	Pearson Correlation	.136	-.023	.077	.198**	.380**	.252**
	Sig. (2-tailed)	.062	.751	.281	.005	.000	.000
	N	190	196	197	196	197	197
AIBI26	Pearson Correlation	.026	.010	-.049	.140	.296**	.280**
	Sig. (2-tailed)	.723	.885	.492	.051	.000	.000
	N	189	195	196	195	196	196
AIBI27	Pearson Correlation	-.047	.074	.286**	.135	-.032	-.048
	Sig. (2-tailed)	.517	.304	.000	.059	.657	.501
	N	190	196	197	196	197	197
AIBI28	Pearson Correlation	.029	.247**	-.184**	.228**	.541**	.526**
	Sig. (2-tailed)	.696	.000	.010	.001	.000	.000
	N	190	196	197	196	197	197
AIBI29	Pearson Correlation	.047	-.150*	.160*	.001	-.066	-.118
	Sig. (2-tailed)	.519	.035	.025	.988	.355	.097
	N	191	197	198	197	198	198
AIBI30	Pearson Correlation	-.102	.145*	-.058	.127	.375**	.416**
	Sig. (2-tailed)	.162	.042	.421	.074	.000	.000
	N	191	197	198	197	198	198

		AGE	gender	AIBI1	AIBI2	AIBI3	AIBI4
AIBI31	Pearson Correlation	.009	-.095	.197**	-.054	-.214**	-.149*
	Sig. (2-tailed)	.896	.186	.005	.455	.002	.036
	N	191	197	198	[illegible]	198	198
AIBI32	Pearson Correlation	-.133	.103	.48[illegible]**	.042	-.258**	-.260**
	Sig. (2-tailed)	.068	.153	.000	[illegible]82	.000	.000
	N	190	196	197	[illegible]	197	197
AIBI33	Pearson Correlation	-.116	.116	.461**	-.015	-.255**	-.188**
	Sig. (2-tailed)	.112	.108	.000	.830	.000	.008
	N	189	195	196	195	196	196

		AIBI5	AIBI6	AIBI7	AIBI8	AIBI9	AIBI10
SE	Pearson Correlation	.030	.147*	.085	-.114	.063	-.119
	Sig. (2-tailed)	.681	.042	.244	.116	.388	.101
	N	191	191	191	191	191	191
nder	Pearson Correlation	.020	.183*	.118	-.034	.207**	.056
	Sig. (2-tailed)	.782	.010	.099	.638	.004	.431
	N	197	197	197	197	197	197
BI1	Pearson Correlation	.339**	-.112	-.060	.571**	-.254**	.404**
	Sig. (2-tailed)	.000	.117	.403	.000	.000	.000
	N	198	198	198	198	198	198
BI2	Pearson Correlation	-.024	.372**	.401**	.096	.208**	.109
	Sig. (2-tailed)	.736	.000	.000	.178	.003	.129
	N	197	197	197	197	197	197
BI3	Pearson Correlation	-.069	.553**	.385**	-.168*	.703**	.117
	Sig. (2-tailed)	.334	.000	.000	.018	.000	.099
	N	198	198	198	198	198	198
BI4	Pearson Correlation	-.043	.553**	.388**	-.170*	.580**	.016
	Sig. (2-tailed)	.548	.000	.000	.017	.000	.828
	N	198	198	198	198	198	198
BI5	Pearson Correlation	1.000	.079	-.123	.358**	-.124	.404**
	Sig. (2-tailed)	.	.268	.083	.000	.082	.000
	N	198	198	198	198	198	198
BI6	Pearson Correlation	.079	1.000	.512**	-.046	.604**	.067
	Sig. (2-tailed)	.268	.	.000	.524	.000	.346
	N	198	198	198	198	198	198
BI7	Pearson Correlation	-.123	.512**	1.000	.159*	.502**	.052
	Sig. (2-tailed)	.083	.000	.	.025	.000	.471
	N	198	198	198	198	198	198
BI8	Pearson Correlation	.358**	-.046	.159*	1.000	-.209**	.458**
	Sig. (2-tailed)	.000	.524	.025	.	.003	.000
	N	198	198	198	198	198	198
BI9	Pearson Correlation	-.124	.604**	.502**	-.209**	1.000	.093
	Sig. (2-tailed)	.082	.000	.000	.003	.	.194
	N	198	198	198	198	198	198
BI10	Pearson Correlation	.404**	.067	.052	.458**	.093	1.000
	Sig. (2-tailed)	.000	.346	.471	.000	.194	.
	N	198	198	198	198	198	198
BI11	Pearson Correlation	.002	.464**	.287**	-.101	.429**	.079
	Sig. (2-tailed)	.976	.000	.000	.157	.000	.271
	N	198	198	198	198	198	198
BI12	Pearson Correlation	.003	.450**	.295**	-.058	.495**	.080
	Sig. (2-tailed)	.969	.000	.000	.444	.000	.287
	N	178	178	178	178	178	178
BI13	Pearson Correlation	-.147*	.423**	.370**	-.233**	.473**	-.011
	Sig. (2-tailed)	.039	.000	.000	.001	.000	.874
	N	198	198	198	198	198	198
BI14	Pearson Correlation	-.107	.421**	.282**	-.179*	.502**	.043
	Sig. (2-tailed)	.136	.000	.000	.012	.000	.551
	N	197	197	197	197	197	197

		AIBI5	AIBI6	AIBI7	AIBI8	AIBI9	AIBI10
AIBI15	Pearson Correlation	.026	-.005	.118	.147*	-.157*	.012
	Sig. (2-tailed)	.721	.939	.099	.039	.027	.872
	N	197	197	197	197	197	197
AIBI16	Pearson Correlation	-.017	.424**	.354**	-.075	.407**	.071
	Sig. (2-tailed)	.810	.000	.000	.301	.000	.329
	N	193	193	193	193	193	193
AIBI17	Pearson Correlation	.248**	-.112	-.037	.253**	-.267**	.039
	Sig. (2-tailed)	.000	.118	.608	.000	.000	.586
	N	198	198	198	198	198	198
AIBI18	Pearson Correlation	-.158*	.349**	.304**	-.198**	.382**	-.015
	Sig. (2-tailed)	.027	.000	.000	.005	.000	.831
	N	197	197	197	197	197	197
AIBI19	Pearson Correlation	.045	.188**	.232**	.045	.193**	.070
	Sig. (2-tailed)	.527	.008	.001	.530	.006	.328
	N	197	197	197	197	197	197
AIBI20	Pearson Correlation	-.030	.181*	.212**	-.029	.185**	.018
	Sig. (2-tailed)	.675	.011	.003	.684	.010	.798
	N	196	196	196	196	196	196
AIBI21	Pearson Correlation	.113	.222**	.260**	.034	.192**	.062
	Sig. (2-tailed)	.115	.002	.000	.636	.007	.390
	N	197	197	197	197	197	197
AIBI22	Pearson Correlation	-.055	.486**	.400**	-.152*	.508**	.053
	Sig. (2-tailed)	.440	.000	.000	.033	.000	.457
	N	197	197	197	197	197	197
AIBI23	Pearson Correlation	.004	.314**	.175*	-.015	.279**	.146*
	Sig. (2-tailed)	.958	.000	.014	.838	.000	.041
	N	197	197	197	197	197	197
AIBI24	Pearson Correlation	.095	.281**	.251**	-.002	.319**	.193**
	Sig. (2-tailed)	.182	.000	.000	.973	.000	.006
	N	197	197	197	197	197	197
AIBI25	Pearson Correlation	.070	.398**	.281**	.008	.390**	.127
	Sig. (2-tailed)	.327	.000	.000	.914	.000	.075
	N	197	197	197	197	197	197
AIBI26	Pearson Correlation	.029	.383**	.317**	.080	.384**	.125
	Sig. (2-tailed)	.688	.000	.000	.263	.000	.082
	N	196	196	196	196	196	196
AIBI27	Pearson Correlation	.268**	.007	.080	.355**	-.050	.292**
	Sig. (2-tailed)	.000	.921	.262	.000	.488	.000
	N	197	197	197	197	197	197
AIBI28	Pearson Correlation	-.080	.531**	.423**	-.151*	.679**	.061
	Sig. (2-tailed)	.262	.000	.000	.034	.000	.391
	N	197	197	197	197	197	197
AIBI29	Pearson Correlation	.222**	-.050	-.028	.124	-.010	.199**
	Sig. (2-tailed)	.002	.482	.695	.081	.885	.005
	N	198	198	198	198	198	198
AIBI30	Pearson Correlation	-.069	.292**	.272**	-.060	.433**	.003
	Sig. (2-tailed)	.334	.000	.000	.403	.000	.964
	N	198	198	198	198	198	198

		AIBI5	AIBI6	AIBI7	AIBI8	AIBI9	AIBI10
AIBI31	Pearson Correlation	.239**	-.123	-.152*	.177*	-.218**	.068
	Sig. (2-tailed)	.001	.085	.032	.012	.002	.340
	N	198	198	198	198	198	198
AIBI32	Pearson Correlation	.324**	-.222**	-.179*	.461**	-.367**	.365**
	Sig. (2-tailed)	.000	.002	.012	.000	.000	.000
	N	197	197	197	197	197	197
AIBI33	Pearson Correlation	.280**	-.221**	-.227**	.472**	-.333**	.363**
	Sig. (2-tailed)	.000	.002	.001	.000	.000	.000
	N	196	196	196	196	196	196

		AIBI11	AIBI12	AIBI13	AIBI14	AIBI15	AIBI16
AGE	Pearson Correlation	.186**	.130	.265**	-.015	.024	.024
	Sig. (2-tailed)	.010	.090	.000	.834	.745	.744
	N	191	171	191	190	190	186
gender	Pearson Correlation	.284**	.253**	.207**	.230**	.006	.180*
	Sig. (2-tailed)	.000	.001	.004	.001	.936	.013
	N	197	177	197	196	196	192
AIBI1	Pearson Correlation	-.106	-.080	-.229**	-.074	.072	-.126
	Sig. (2-tailed)	.135	.288	.001	.299	.317	.080
	N	198	178	198	197	197	193
AIBI2	Pearson Correlation	.127	.087	.103	.182*	-.032	.142*
	Sig. (2-tailed)	.076	.250	.151	.011	.660	.050
	N	197	177	197	196	196	192
AIBI3	Pearson Correlation	.412**	.425**	.456**	.411**	-.159*	.401**
	Sig. (2-tailed)	.000	.000	.000	.000	.026	.000
	N	198	178	198	197	197	193
AIBI4	Pearson Correlation	.465**	.514**	.504**	.500**	-.104	.429**
	Sig. (2-tailed)	.000	.000	.000	.000	.146	.000
	N	198	178	198	197	197	193
AIBI5	Pearson Correlation	.002	.003	-.147*	-.107	.026	-.017
	Sig. (2-tailed)	.976	.969	.039	.136	.721	.810
	N	198	178	198	197	197	193
AIBI6	Pearson Correlation	.464**	.450**	.423**	.421**	-.005	.424**
	Sig. (2-tailed)	.000	.000	.000	.000	.939	.000
	N	198	178	198	197	197	193
AIBI7	Pearson Correlation	.287**	.295**	.370**	.282**	.118	.354**
	Sig. (2-tailed)	.000	.000	.000	.000	.099	.000
	N	198	178	198	197	197	193
AIBI8	Pearson Correlation	-.101	-.058	-.233**	-.179*	.147*	-.075
	Sig. (2-tailed)	.157	.444	.001	.012	.039	.301
	N	198	178	198	197	197	193
AIBI9	Pearson Correlation	.429**	.495**	.473**	.502**	-.157*	.407**
	Sig. (2-tailed)	.000	.000	.000	.000	.027	.000
	N	198	178	198	197	197	193
AIBI10	Pearson Correlation	.079	.080	-.011	.043	.012	.071
	Sig. (2-tailed)	.271	.287	.874	.551	.872	.329
	N	198	178	198	197	197	193
AIBI11	Pearson Correlation	1.000	.744**	.764**	.665**	-.065	.638**
	Sig. (2-tailed)	.	.000	.000	.000	.367	.000
	N	198	178	198	197	197	193
AIBI12	Pearson Correlation	.744**	1.000	.591**	.697**	-.099	.609**
	Sig. (2-tailed)	.000	.	.000	.000	.190	.000
	N	178	178	178	178	177	177
AIBI13	Pearson Correlation	.764**	.591**	1.000	.643**	-.091	.600**
	Sig. (2-tailed)	.000	.000	.	.000	.203	.000
	N	198	178	198	197	197	193
AIBI14	Pearson Correlation	.665**	.697**	.643**	1.000	-.225**	.622**
	Sig. (2-tailed)	.000	.000	.000	.	.002	.000
	N	197	178	197	197	196	192

		AIBI11	AIBI12	AIBI13	AIBI14	AIBI15	AIBI16
AIBI15	Pearson Correlation	-.065	-.099	-.091	-.225**	1.000	-.094
	Sig. (2-tailed)	.367	.190	.203	.002	.	.194
	N	197	177	197	196	197	192
AIBI16	Pearson Correlation	.638**	.609**	.600**	.622**	-.094	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.194	.
	N	193	177	193	192	192	193
AIBI17	Pearson Correlation	-.208**	-.135	-.251**	-.215**	.256**	-.136
	Sig. (2-tailed)	.003	.073	.000	.002	.000	.059
	N	198	178	198	197	197	193
AIBI18	Pearson Correlation	.333**	.372**	.300**	.386**	-.078	.373**
	Sig. (2-tailed)	.000	.000	.000	.000	.276	.000
	N	197	177	197	196	196	192
AIBI19	Pearson Correlation	.045	.082	.044	.097	-.035	.066
	Sig. (2-tailed)	.530	.279	.542	.176	.624	.362
	N	197	177	197	196	196	192
AIBI20	Pearson Correlation	.042	.067	.082	.178*	-.072	.097
	Sig. (2-tailed)	.558	.379	.256	.013	.320	.181
	N	196	176	196	195	195	191
AIBI21	Pearson Correlation	.112	.171*	.115	.153*	.130	.109
	Sig. (2-tailed)	.118	.023	.107	.032	.070	.132
	N	197	177	197	196	196	192
AIBI22	Pearson Correlation	.312**	.332**	.346**	.380**	.092	.342**
	Sig. (2-tailed)	.000	.000	.000	.000	.200	.000
	N	197	177	197	196	196	192
AIBI23	Pearson Correlation	.190**	.258**	.225**	.336**	.004	.271**
	Sig. (2-tailed)	.007	.001	.001	.000	.953	.000
	N	197	177	197	196	196	192
AIBI24	Pearson Correlation	.279**	.253**	.224**	.209**	-.018	.272**
	Sig. (2-tailed)	.000	.001	.002	.003	.805	.000
	N	197	177	197	196	196	192
AIBI25	Pearson Correlation	.352**	.298**	.334**	.294**	-.008	.318**
	Sig. (2-tailed)	.000	.000	.000	.000	.914	.000
	N	197	177	197	196	196	192
AIBI26	Pearson Correlation	.369**	.336**	.280**	.316**	.006	.405**
	Sig. (2-tailed)	.000	.000	.000	.000	.933	.000
	N	196	176	196	195	195	191
AIBI27	Pearson Correlation	-.017	.053	-.063	-.015	.252**	.041
	Sig. (2-tailed)	.817	.480	.376	.839	.000	.573
	N	197	177	197	196	196	192
AIBI28	Pearson Correlation	.395**	.388**	.412**	.490**	-.093	.380**
	Sig. (2-tailed)	.000	.000	.000	.000	.196	.000
	N	197	177	197	196	196	192
AIBI29	Pearson Correlation	-.027	-.064	.019	-.043	-.058	-.024
	Sig. (2-tailed)	.707	.397	.796	.552	.418	.744
	N	198	178	198	197	197	193
AIBI30	Pearson Correlation	.256**	.351**	.307**	.404**	-.058	.310**
	Sig. (2-tailed)	.000	.000	.000	.000	.418	.000
	N	198	178	198	197	197	193

		AIBI11	AIBI12	AIBI13	AIBI14	AIBI15	AIBI16
AIBI31	Pearson Correlation	-.093	-.137	-.157*	-.129	.027	-.157*
	Sig. (2-tailed)	.192	.068	.027	.071	.708	.030
	N	198	178	198	197	197	193
AIBI32	Pearson Correlation	-.132	-.099	-.250**	-.136	.069	-.055
	Sig. (2-tailed)	.065	.189	.000	.057	.339	.446
	N	197	177	197	196	196	192
AIBI33	Pearson Correlation	-.121	-.091	-.206**	-.146*	-.012	-.055
	Sig. (2-tailed)	.091	.231	.004	.042	.867	.449
	N	196	176	196	195	195	192

		AIBI17	AIBI18	AIBI19	AIBI20	AIBI21	AIBI22
AGE	Pearson Correlation	.041	-.105	-.065	-.150*	-.074	.065
	Sig. (2-tailed)	.577	.150	.375	.039	.307	.370
	N	191	190	190	189	190	190
gender	Pearson Correlation	-.126	.106	-.082	-.093	-.059	.026
	Sig. (2-tailed)	.077	.140	.255	.196	.407	.718
	N	197	196	196	195	196	196
AIBI1	Pearson Correlation	.173*	-.189**	.038	.032	.011	-.088
	Sig. (2-tailed)	.015	.008	.598	.657	.883	.220
	N	198	197	197	196	197	197
AIBI2	Pearson Correlation	.070	.192**	.248**	.260**	.240**	.217**
	Sig. (2-tailed)	.330	.007	.000	.000	.001	.002
	N	197	196	196	195	196	196
AIBI3	Pearson Correlation	-.180*	.242**	.117	.136	.150*	.356**
	Sig. (2-tailed)	.011	.001	.100	.057	.035	.000
	N	198	197	197	196	197	197
AIBI4	Pearson Correlation	-.234**	.243**	.086	.146*	.182*	.412**
	Sig. (2-tailed)	.001	.001	.229	.042	.010	.000
	N	198	197	197	196	197	197
AIBI5	Pearson Correlation	.248**	-.158*	.045	-.030	.113	-.055
	Sig. (2-tailed)	.000	.027	.527	.675	.115	.440
	N	198	197	197	196	197	197
AIBI6	Pearson Correlation	-.112	.349**	.188**	.181*	.222**	.466**
	Sig. (2-tailed)	.118	.000	.008	.011	.002	.000
	N	198	197	197	196	197	197
AIBI7	Pearson Correlation	-.037	.304**	.232**	.212**	.260**	.400**
	Sig. (2-tailed)	.608	.000	.001	.003	.000	.000
	N	198	197	197	196	197	197
AIBI8	Pearson Correlation	.253**	-.198**	.045	-.029	.034	-.152*
	Sig. (2-tailed)	.000	.005	.530	.684	.636	.033
	N	198	197	197	196	197	197
AIBI9	Pearson Correlation	-.267**	.382**	.193**	.185**	.192**	.508**
	Sig. (2-tailed)	.000	.000	.006	.010	.007	.000
	N	198	197	197	196	197	197
AIBI10	Pearson Correlation	.039	-.015	.070	.018	.062	.053
	Sig. (2-tailed)	.586	.831	.328	.798	.390	.457
	N	198	197	197	196	197	197
AIBI11	Pearson Correlation	-.208**	.333**	.045	.042	.112	.312**
	Sig. (2-tailed)	.003	.000	.530	.558	.118	.000
	N	198	197	197	196	197	197
AIBI12	Pearson Correlation	-.135	.372**	.082	.067	.171*	.332**
	Sig. (2-tailed)	.073	.000	.279	.379	.023	.000
	N	178	177	177	176	177	177
AIBI13	Pearson Correlation	-.251**	.300**	.044	.082	.115	.346**
	Sig. (2-tailed)	.000	.000	.542	.256	.107	.000
	N	198	197	197	196	197	197
AIBI14	Pearson Correlation	-.215**	.386**	.097	.178*	.153*	.380**
	Sig. (2-tailed)	.002	.000	.176	.013	.032	.000
	N	197	196	196	195	196	196

		AIBI17	AIBI18	AIBI19	AIBI20	AIBI21	AIBI22
AIBI15	Pearson Correlation	.256**	-.078	-.035	-.072	.130	.092
	Sig. (2-tailed)	.000	.276	.624	.320	.070	.200
	N	197	196	196	195	196	196
AIBI16	Pearson Correlation	-.136	.373**	.066	.097	.109	.342**
	Sig. (2-tailed)	.059	.000	.362	.181	.132	.000
	N	193	192	192	191	192	192
AIBI17	Pearson Correlation	1.000	-.220**	.158*	.026	.203**	-.101
	Sig. (2-tailed)	.	.002	.027	.719	.004	.157
	N	198	197	197	196	197	197
AIBI18	Pearson Correlation	-.220**	1.000	.188**	.187**	.163*	.434**
	Sig. (2-tailed)	.002	.	.008	.009	.023	.000
	N	197	197	197	196	197	197
AIBI19	Pearson Correlation	.158*	.188**	1.000	.756**	.529**	.348**
	Sig. (2-tailed)	.027	.008	.	.000	.000	.000
	N	197	197	197	196	197	197
AIBI20	Pearson Correlation	.026	.187**	.756**	1.000	.505**	.378**
	Sig. (2-tailed)	.719	.009	.000	.	.000	.000
	N	196	196	196	196	196	196
AIBI21	Pearson Correlation	.203**	.163*	.529**	.505**	1.000	.373**
	Sig. (2-tailed)	.004	.023	.000	.000	.	.000
	N	197	197	197	196	197	197
AIBI22	Pearson Correlation	-.101	.434**	.348**	.378**	.373**	1.000
	Sig. (2-tailed)	.157	.000	.000	.000	.000	.
	N	197	197	197	196	197	197
AIBI23	Pearson Correlation	.059	.265**	.195**	.283**	.175*	.508**
	Sig. (2-tailed)	.408	.000	.006	.000	.014	.000
	N	197	197	197	196	197	197
AIBI24	Pearson Correlation	-.059	.226**	.179*	.214**	.199**	.333**
	Sig. (2-tailed)	.413	.001	.012	.003	.005	.000
	N	197	197	197	196	197	197
AIBI25	Pearson Correlation	-.062	.189**	.123	.094	.164*	.362**
	Sig. (2-tailed)	.389	.008	.085	.190	.021	.000
	N	197	197	197	196	197	197
AIBI26	Pearson Correlation	-.047	.261**	.147*	.082	.107	.403**
	Sig. (2-tailed)	.515	.000	.039	.254	.135	.000
	N	196	196	196	195	196	196
AIBI27	Pearson Correlation	.246**	-.039	-.007	.030	.112	-.024
	Sig. (2-tailed)	.001	.585	.923	.681	.118	.739
	N	197	197	197	196	197	197
AIBI28	Pearson Correlation	-.277**	.368**	.111	.170*	.140	.516**
	Sig. (2-tailed)	.000	.000	.121	.018	.051	.000
	N	197	197	197	196	197	197
AIBI29	Pearson Correlation	.123	-.053	.175*	.166*	.114	.072
	Sig. (2-tailed)	.084	.457	.014	.020	.111	.316
	N	198	197	197	196	197	197
AIBI30	Pearson Correlation	-.215**	.229**	.097	.187**	.148*	.347**
	Sig. (2-tailed)	.002	.001	.175	.009	.038	.000
	N	198	197	197	196	197	197

		AIBI17	AIBI18	AIBI19	AIBI20	AIBI21	AIBI22
AIBI31	Pearson Correlation	.393**	-.075	.199**	.081	.098	-.007
	Sig. (2-tailed)	.000	.293	.005	.257	.169	.924
	N	198	197	197	196	197	197
AIBI32	Pearson Correlation	.207**	-.183*	-.076	-.077	-.059	-.191**
	Sig. (2-tailed)	.004	.010	.290	.285	.410	.007
	N	197	196	196	195	196	196
AIBI33	Pearson Correlation	.135	-.241**	-.070	-.043	-.069	-.276**
	Sig. (2-tailed)	.059	.001	.332	.552	.338	.000
	N	196	195	195	194	195	195

		AIBI23	AIBI24	AIBI25	AIBI26	AIBI27	AIBI28
AGE	Pearson Correlation	.067	.053	.136	.026	-.047	.029
	Sig. (2-tailed)	.357	.469	.062	.723	.517	.696
	N	190	190	190	189	190	190
gender	Pearson Correlation	-.017	-.214**	-.023	.010	.074	.247**
	Sig. (2-tailed)	.814	.003	.751	.885	.304	.000
	N	196	196	196	195	196	196
AIBI1	Pearson Correlation	.003	-.010	.077	-.049	.286**	-.184**
	Sig. (2-tailed)	.970	.889	.281	.492	.000	.010
	N	197	197	197	196	197	197
AIBI2	Pearson Correlation	.116	.071	.198**	.140	.135	.228**
	Sig. (2-tailed)	.106	.322	.005	.051	.059	.001
	N	196	196	196	195	196	196
AIBI3	Pearson Correlation	.252**	.304**	.380**	.296**	-.032	.541**
	Sig. (2-tailed)	.000	.000	.000	.000	.657	.000
	N	197	197	197	196	197	197
AIBI4	Pearson Correlation	.192**	.217**	.252**	.280**	-.048	.526**
	Sig. (2-tailed)	.007	.002	.000	.000	.501	.000
	N	197	197	197	196	197	197
AIBI5	Pearson Correlation	.004	.095	.070	.029	.268**	-.080
	Sig. (2-tailed)	.958	.182	.327	.688	.000	.262
	N	197	197	197	196	197	197
AIBI6	Pearson Correlation	.314**	.281**	.398**	.383**	.007	.531**
	Sig. (2-tailed)	.000	.000	.000	.000	.921	.000
	N	197	197	197	196	197	197
AIBI7	Pearson Correlation	.175*	.251**	.231**	.317**	.080	.423**
	Sig. (2-tailed)	.014	.000	.000	.000	.262	.000
	N	197	197	197	196	197	197
AIBI8	Pearson Correlation	-.015	-.002	.008	.080	.355**	-.151*
	Sig. (2-tailed)	.838	.973	.914	.263	.000	.034
	N	197	197	197	196	197	197
AIBI9	Pearson Correlation	.279**	.319**	.390**	.384**	-.050	.679**
	Sig. (2-tailed)	.000	.000	.000	.000	.488	.000
	N	197	197	197	196	197	197
AIBI10	Pearson Correlation	.146*	.193**	.127	.125	.292**	.061
	Sig. (2-tailed)	.041	.006	.075	.082	.000	.391
	N	197	197	197	196	197	197
AIBI11	Pearson Correlation	.190**	.279**	.352**	.369**	-.017	.395**
	Sig. (2-tailed)	.007	.000	.000	.000	.817	.000
	N	197	197	197	196	197	197
AIBI12	Pearson Correlation	.258**	.253**	.298**	.336**	.053	.388**
	Sig. (2-tailed)	.001	.001	.000	.000	.480	.000
	N	177	177	177	176	177	177
AIBI13	Pearson Correlation	.225**	.224**	.334**	.280**	-.063	.412**
	Sig. (2-tailed)	.001	.002	.000	.000	.376	.000
	N	197	197	197	196	197	197
AIBI14	Pearson Correlation	.336**	.209**	.294**	.316**	-.015	.490**
	Sig. (2-tailed)	.000	.003	.000	.000	.839	.000
	N	196	196	196	195	196	196

		AIBI23	AIBI24	AIBI25	AIBI26	AIBI27	AIBI28
AIBI15	Pearson Correlation	.004	-.018	-.008	.006	.252**	-.093
	Sig. (2-tailed)	.953	.805	.914	.933	.000	.196
	N	196	196	196	195	196	196
AIBI16	Pearson Correlation	.271**	.272**	.318**	.405**	.041	.380**
	Sig. (2-tailed)	.000	.000	.000	.000	.573	.000
	N	192	192	192	191	192	192
AIBI17	Pearson Correlation	.059	-.059	-.062	-.047	.246**	-.277**
	Sig. (2-tailed)	.408	.413	.389	.515	.001	.000
	N	197	197	197	196	197	197
AIBI18	Pearson Correlation	.265**	.226**	.189**	.261**	-.039	.368**
	Sig. (2-tailed)	.000	.001	.008	.000	.585	.000
	N	197	197	197	196	197	197
AIBI19	Pearson Correlation	.195**	.179*	.123	.147*	-.007	.111
	Sig. (2-tailed)	.006	.012	.085	.039	.923	.121
	N	197	197	197	196	197	197
AIBI20	Pearson Correlation	.283**	.214**	.094	.082	.030	.170*
	Sig. (2-tailed)	.000	.003	.190	.254	.681	.018
	N	196	196	196	195	196	196
AIBI21	Pearson Correlation	.175*	.199**	.164*	.107	.112	.140
	Sig. (2-tailed)	.014	.005	.021	.135	.118	.051
	N	197	197	197	196	197	197
AIBI22	Pearson Correlation	.508**	.333**	.362**	.403**	-.024	.516**
	Sig. (2-tailed)	.000	.000	.000	.000	.739	.000
	N	197	197	197	196	197	197
AIBI23	Pearson Correlation	1.000	.278**	.305**	.324**	.130	.286**
	Sig. (2-tailed)	.	.000	.000	.000	.068	.000
	N	197	197	197	196	197	197
AIBI24	Pearson Correlation	.278**	1.000	.500**	.297**	.011	.419**
	Sig. (2-tailed)	.000	.	.000	.000	.881	.000
	N	197	197	197	196	197	197
AIBI25	Pearson Correlation	.305**	.500**	1.000	.468**	.093	.383**
	Sig. (2-tailed)	.000	.000	.	.000	.193	.000
	N	197	197	197	196	197	197
AIBI26	Pearson Correlation	.324**	.297**	.468**	1.000	.282**	.417**
	Sig. (2-tailed)	.000	.000	.000	.	.000	.000
	N	196	196	196	196	196	196
AIBI27	Pearson Correlation	.130	.011	.093	.282**	1.000	.041
	Sig. (2-tailed)	.068	.881	.193	.000	.	.568
	N	197	197	197	196	197	197
AIBI28	Pearson Correlation	.286**	.419**	.383**	.417**	.041	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.568	.
	N	197	197	197	196	197	197
AIBI29	Pearson Correlation	.074	.104	.149*	.080	.213**	-.043
	Sig. (2-tailed)	.298	.145	.036	.267	.003	.506
	N	197	197	197	196	197	197
AIBI30	Pearson Correlation	.186**	.222**	.383**	.331**	.014	.549**
	Sig. (2-tailed)	.009	.002	.000	.000	.846	.000
	N	197	197	197	196	197	197

		AIBI23	AIBI24	AIBI25	AIBI26	AIBI27	AIBI28
AIBI31	Pearson Correlation	.038	-.020	-.049	-.012	.128	-.155*
	Sig. (2-tailed)	.597	.778	.492	.868	.073	.030
	N	197	197	197	196	197	197
AIBI32	Pearson Correlation	-.070	-.183*	-.139	-.137	.227**	-.306**
	Sig. (2-tailed)	.329	.010	.051	.056	.001	.000
	N	196	196	196	195	196	196
AIBI33	Pearson Correlation	-.084	-.157*	-.157*	-.166*	.119	-.286**
	Sig. (2-tailed)	.242	.029	.028	.021	.098	.000
	N	195	195	195	194	195	195

		AIBI29	AIBI30	AIBI31	AIBI32	AIBI33
AGE	Pearson Correlation	.047	-.102	.009	-.133	-.116
	Sig. (2-tailed)	.519	.162	.896	.068	.112
	N	191	191	191	190	189
gender	Pearson Correlation	-.150*	.145*	-.095	.103	.116
	Sig. (2-tailed)	.035	.042	.186	.153	.108
	N	197	197	197	196	195
AIBI1	Pearson Correlation	.160*	-.058	.197**	.484**	.461**
	Sig. (2-tailed)	.025	.421	.005	.000	.000
	N	198	198	198	197	196
AIBI2	Pearson Correlation	.001	.127	-.054	.042	-.015
	Sig. (2-tailed)	.988	.074	.455	.562	.830
	N	197	197	197	196	195
AIBI3	Pearson Correlation	-.066	.375**	-.214**	-.258**	-.255**
	Sig. (2-tailed)	.355	.000	.002	.000	.000
	N	198	198	198	197	196
AIBI4	Pearson Correlation	-.118	.416**	-.149*	-.260**	-.188**
	Sig. (2-tailed)	.097	.000	.036	.000	.008
	N	198	198	198	197	196
AIBI5	Pearson Correlation	.222**	-.069	.239**	.324**	.280**
	Sig. (2-tailed)	.002	.334	.001	.000	.000
	N	198	198	198	197	196
AIBI6	Pearson Correlation	-.050	.292**	-.123	-.222**	-.221**
	Sig. (2-tailed)	.482	.000	.085	.002	.002
	N	198	198	198	197	196
AIBI7	Pearson Correlation	-.028	.272**	-.152*	-.179*	-.227**
	Sig. (2-tailed)	.695	.000	.032	.012	.001
	N	198	198	198	197	196
AIBI8	Pearson Correlation	.124	-.060	.177*	.461**	.472**
	Sig. (2-tailed)	.081	.403	.012	.000	.000
	N	198	198	198	197	196
AIBI9	Pearson Correlation	-.010	.433**	-.218**	-.367**	-.333**
	Sig. (2-tailed)	.885	.000	.002	.000	.000
	N	198	198	198	197	196
AIBI10	Pearson Correlation	.199**	.003	.068	.365**	.363**
	Sig. (2-tailed)	.005	.964	.340	.000	.000
	N	198	198	198	197	196
AIBI11	Pearson Correlation	-.027	.256**	-.093	-.132	-.121
	Sig. (2-tailed)	.707	.000	.192	.065	.091
	N	198	198	198	197	196
AIBI12	Pearson Correlation	-.064	.351**	-.137	-.099	-.091
	Sig. (2-tailed)	.397	.000	.068	.189	.231
	N	178	178	178	177	176
AIBI13	Pearson Correlation	.019	.307**	-.157*	-.250**	-.206**
	Sig. (2-tailed)	.796	.000	.027	.000	.004
	N	198	198	198	197	196
AIBI14	Pearson Correlation	-.043	.404**	-.129	-.136	-.146*
	Sig. (2-tailed)	.552	.000	.071	.057	.042
	N	197	197	197	196	195

		AIBI29	AIBI30	AIBI31	AIBI32	AIBI33
AIBI15	Pearson Correlation	-.058	-.058	.027	.069	-.012
	Sig. (2-tailed)	.418	.418	.708	.339	.867
	N	197	197	197	196	195
AIBI16	Pearson Correlation	-.024	.310**	-.157*	-.055	-.055
	Sig. (2-tailed)	.744	.000	.030	.446	.449
	N	193	193	193	192	192
AIBI17	Pearson Correlation	.123	-.215**	.393**	.207**	.135
	Sig. (2-tailed)	.084	.002	.000	.004	.059
	N	198	198	198	197	196
AIBI18	Pearson Correlation	-.053	.229**	-.075	-.183*	-.241**
	Sig. (2-tailed)	.457	.001	.293	.010	.001
	N	197	197	197	196	195
AIBI19	Pearson Correlation	.175*	.097	.199**	-.076	-.070
	Sig. (2-tailed)	.014	.175	.005	.290	.332
	N	197	197	197	196	195
AIBI20	Pearson Correlation	.166*	.187**	.081	-.077	-.043
	Sig. (2-tailed)	.020	.009	.257	.285	.552
	N	196	196	196	195	194
AIBI21	Pearson Correlation	.114	.148*	.098	-.059	-.069
	Sig. (2-tailed)	.111	.038	.169	.410	.338
	N	197	197	197	196	195
AIBI22	Pearson Correlation	.072	.347**	-.007	-.191**	-.276**
	Sig. (2-tailed)	.316	.000	.924	.007	.000
	N	197	197	197	196	195
AIBI23	Pearson Correlation	.074	.186**	.038	-.070	-.084
	Sig. (2-tailed)	.298	.009	.597	.329	.242
	N	197	197	197	196	195
AIBI24	Pearson Correlation	.104	.222**	-.020	-.183*	-.157*
	Sig. (2-tailed)	.145	.002	.778	.010	.029
	N	197	197	197	196	195
AIBI25	Pearson Correlation	.149*	.383**	-.049	-.139	-.157*
	Sig. (2-tailed)	.036	.000	.492	.051	.028
	N	197	197	197	196	195
AIBI26	Pearson Correlation	.080	.331**	-.012	-.137	-.166*
	Sig. (2-tailed)	.267	.000	.868	.056	.021
	N	196	196	196	195	194
AIBI27	Pearson Correlation	.213**	.014	.128	.227**	.119
	Sig. (2-tailed)	.003	.846	.073	.001	.098
	N	197	197	197	196	195
AIBI28	Pearson Correlation	-.048	.549**	-.155*	-.306**	-.286**
	Sig. (2-tailed)	.506	.000	.030	.000	.000
	N	197	197	197	196	195
AIBI29	Pearson Correlation	1.000	-.012	.221**	.073	.068
	Sig. (2-tailed)	.	.863	.002	.305	.343
	N	198	198	198	197	196
AIBI30	Pearson Correlation	-.012	1.000	-.120	-.213**	-.198**
	Sig. (2-tailed)	.863	.	.092	.003	.005
	N	198	198	198	197	196

		AIBI29	AIBI30	AIBI31	AIBI32	AIBI33
AIBI31	Pearson Correlation	.221**	-.120	1.000	.103	.080
	Sig. (2-tailed)	.002	.092	.	.149	.267
	N	198	198	198	197	196
AIBI32	Pearson Correlation	.073	-.213**	.103	1.000	.815**
	Sig. (2-tailed)	.305	.003	.149	.	.000
	N	197	197	197	197	196
AIBI33	Pearson Correlation	.068	-.198**	.080	.815**	1.000
	Sig. (2-tailed)	.343	.005	.267	.000	.
	N	196	196	196	196	196

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix C

Figures

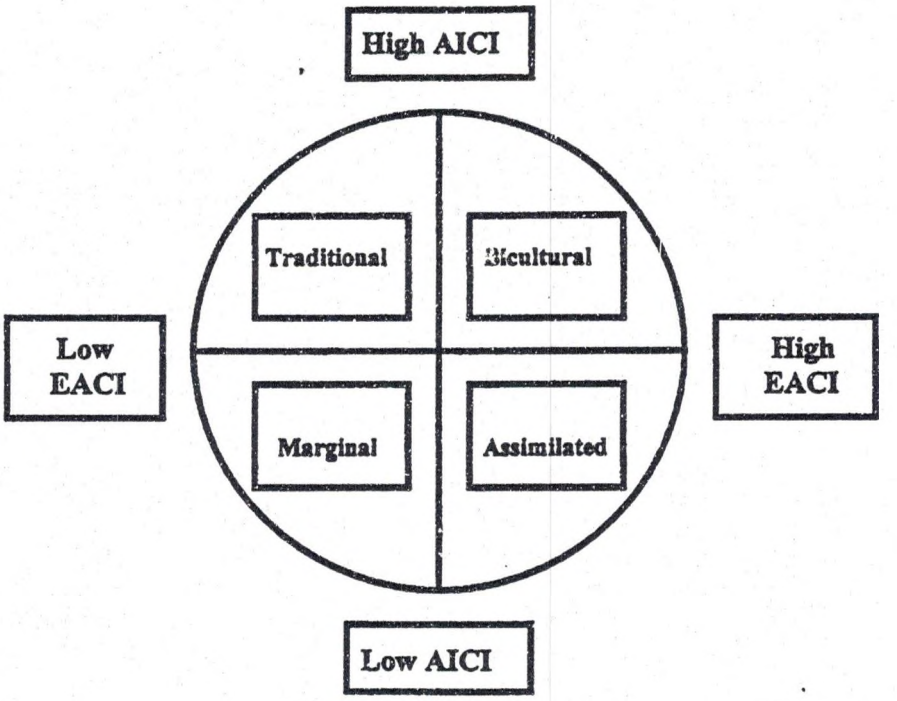

Figure 1. Orthogonal Theory of Biculturalism (Oetting & Beauvais, 1990)
AICI refers to American Indian Cultural Identification
EACI refers to European American Cultural Identification

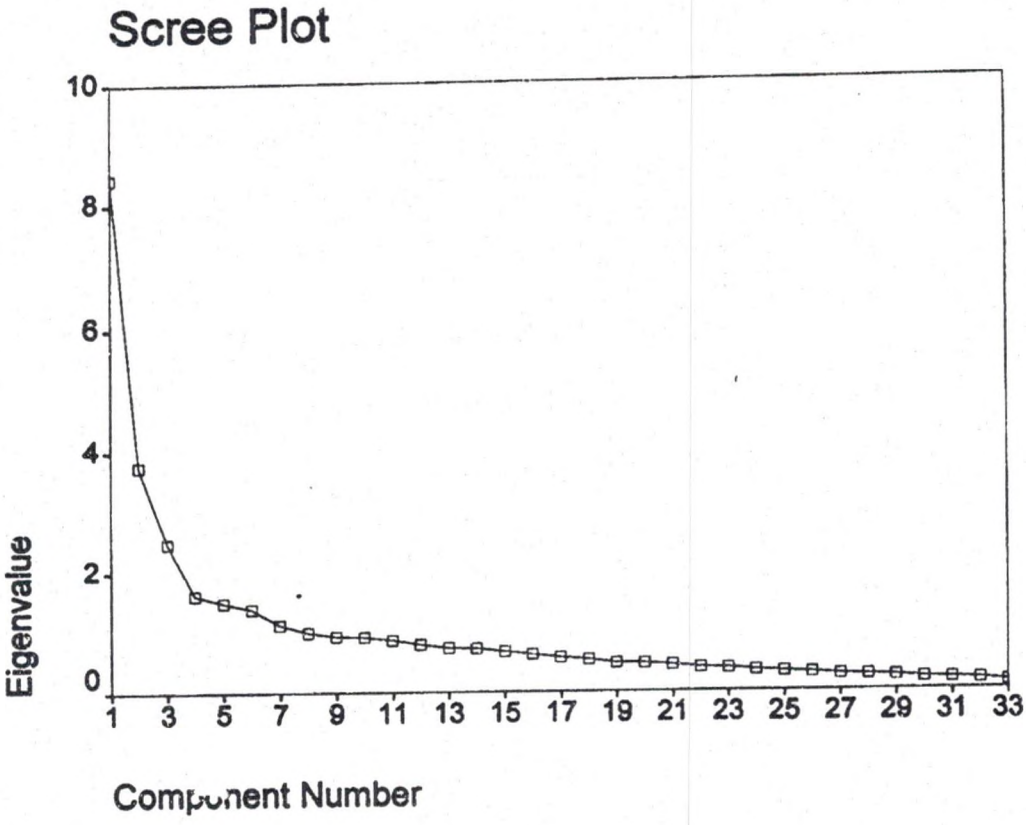

Figure 2. Scree-Breaks Chart for Initial Principle Components Factor Analysis With Open Solution: Total Score

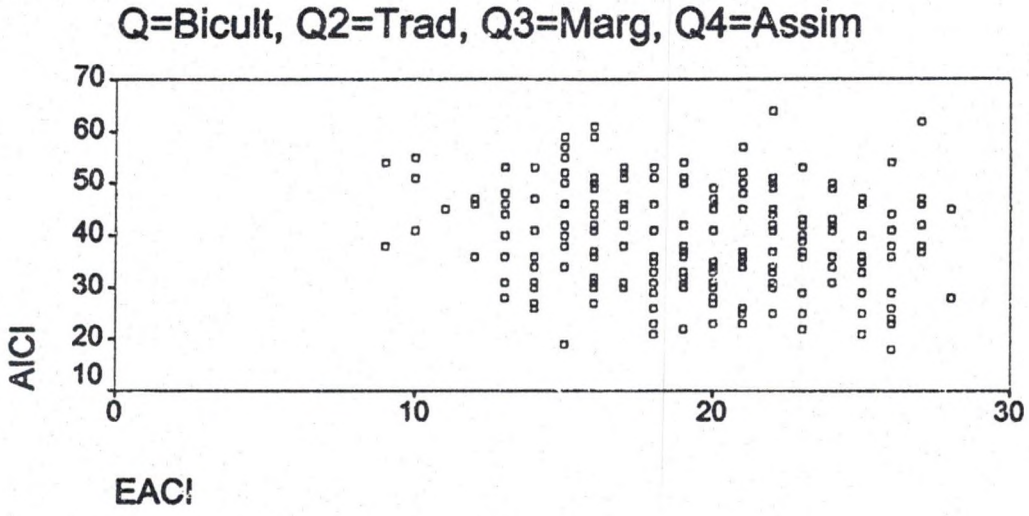

Figure 3. American Indian Biculturalism Inventory – Northern Plains Subscale Scatterplot

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

AICI refers to American Indian Cultural Identification
EACI refers to European American Cultural Identification

Appendix D

Finalized AIBI-NP

AMERICAN INDIAN BICULTURALISM INVENTORY-NORTHERN PLAINS

These questions ask you to describe your attitudes, feelings, and participation in American Indian and non-Indian culture. Some of the questions may not seem to apply to you. In these cases, please mark the answer that you feel is the closest to your own personal feeling or attitude. In the case of attitudes and feelings, your first impression is usually correct. We are interested in how much you are influenced by American Indian and non-Indian culture regardless of your ethnic background, keeping in mind that no two people have the same backgrounds.

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

How comfortable do you feel taking paper and pencil questionnaires?

1	2	3	4
No Comfort	Some	Moderate	Great Comfort

1.) How comfortable are you around non-Indian people?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

2.) How much do you understand about what goes on at a pow-wow?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

3.) How well can you tell the difference between American Indian songs?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

4.) How much do you identify with non-Indian culture?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

5.) How much do you identify with American Indian culture?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

6.) How much do you prefer to socialize with American Indians?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

7.) How much do you prefer to socialize with non-Indians?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

8.) How often do you attend American Indian gatherings or celebrations?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

9.) How often do you attend non-Indian gatherings or celebrations?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

10.) Can you speak an American Indian language?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

11.) If you can speak an American Indian language, how often do you use it?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

12.) Can you understand your American Indian language when it is spoken by others?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

13.) When at home with your family how often do you speak an American Indian language?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

14.) How comfortable do you feel speaking an American Indian language?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

15.) How often do you use American Indian "slang" in your normal everyday speech?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

16.) How often do you talk about American Indian topics and Indian culture in your daily conversation?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

17.) How often do you talk about different cultures and the topics that are important to them?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

18.) Do you wear American Indian jewelry?

1	2	3	4
Not at all	Somewhat	Moderately	Great Deal

19.) Do you collect American Indian cultural art?

1	2	3	4
Not at all	Somewhat	Moderately	Great Deal

20.) How important is it to you to know your American Indian ancestry or descent?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

21.) How important is it to you to know your non-Indian ancestry or descent?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

22.) How often do you attend American Indian religious ceremonies?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

23.) If you had a physical or mental illness how likely would it be for you to seek help from a medicine man/healer?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

24.) How likely would it be for you to date someone who is non-Indian?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

25.) How likely would it be for you to marry someone who is non-Indian?

1	2	3	4
Not at all	Somewhat	Moderately	Very Much

REFERENCES

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