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Correlates of Resilience Among American Indians in a Northwestern US State

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ABSTRACT

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Dissertation Submitted in Partial Fulfillment of
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ABSTRACT

Despite low life expectancy, high suicide and homicide rates, and excessive levels of poverty and violence, American Indians continue to survive. However, few researchers have assessed the correlates of resilience among adult American Indians. Current researchers assessing American Indian resilience have focused primarily on adolescents and preadolescents, resulting in a definition of resilience that is more often than not defined by the lack of negative youth outcomes. In this quantitative survey study, data were collected from 103 American Indians living off-reservation in a northwestern state. Gender, age, education level, degree of enculturation (using the Multigroup Ethnic Identity Measure), level of stressful life events (using the Life Events Checklist) were tested using linear regression as potential predictors of resilience (measured with the Resilience Scale) . Results suggested that higher enculturation was associated with higher resilience; other predictors were not statistically related to resilience. It was surprising that the data did not support a relationship between trauma and lowered resilience. Implications for positive social change include understanding more clearly the role of enculturation in resilience; such knowledge can be used to foster activities that value local culture and can have a positive impact on mental and physical health.

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CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction

Although American Indian adolescents suffer from low self-esteem, they are resilient. In a seminar to train volunteers to work with at-risk American Indian adolescents on the Fort Belknap reservation to prevent suicide, Small challenged the attendees to build the self-esteem of the youth by focusing on the strengths of the past and to celebrate the strengths of the present, that is, to accentuate resilience (C. Small, personal communication, February 9, 2009). Pretty Paint relayed a similar message when talking about retention in a college setting at Fort Belknap College: "The biggest problem we have with our Native students is self-esteem, you need to remind them of the resilience of the Indian peoples" (I. Pretty Paint, personal communication, January 16, 2009). Since the first comprehensive, modern studies of American Indians, lack of self-esteem has been identified as a risk factor for problem behavior (Ginsburg et al., 2008; Oetting & Beauvais, 1986). Researchers from as early as 1980 showed that the mechanism for developing self-esteem in the American Indian population was similar to that utilized in European American families (Halpin, Halpin, & Whiddon, 1980; Whitesell, Mitchell, Spicer, et al., 2009).

Such resilience factors as personal self-concepts (self-esteem) and enculturation have been mentioned in contemporary works as a buffer from peer deviance and problem behaviors such as substance abuse and delinquency (Galliher, Evans, & Weiser, 2007; Radin et al., 2006). At the same time, these factors have been mentioned as leading to academic success and positive life outcomes (Whitesell, et al., 2006; Whitesell et al., 2009). In studying resilience using an international instrument with the adult American

Indians of Blaine and Phillips counties not living on the reservation, the result supports self-esteem in the pre-adult population as well.

Resilience is a multidisciplinary concept that is not only important in psychology, but in social work, sociology, and medicine as well. One comprehensive definition is that resilience is the ability to overcome the exposure to significant life stressors without developing chronic mental disorders by adapting to the stress and the adversity (Waaktaar & Torgersen, 2010). This concept was developed from work done by the Israeli medical sociologist, Antonovsky, in the late 1960s and early 1970s. Working with Holocaust survivors, Antonovsky and Kats (1967) discovered that many who had suffered unspeakable traumas at the hands of the Nazis were medically broken, while others who suffered the same degradations and had come in contact with the same pathogens (polio virus and the tubercle bacillus) did not develop the maladies. Antonovsky, Moaz, Dowty, and Wijsenbeek (1971) attributed this to individual hardiness and self-efficacy as well as "a subsequent environment which provided opportunities to reestablish a satisfying and meaningful existence" (p. 192). Antonovsky and Sourani (1988) further revised the subsequent environment as a family sense of coherence, a concept that rings true when looking at family-oriented minorities in the United States.

Researchers from other disciplines have added to the factors of resilience with subsequent research and discovered its multifaceted character. Rutter (1987) discussed the importance of a strong self-concept and confidence in one's ability to withstand the stress as factors in resilience. In the same year, Mrazek and Mrazek (1987) described the resilient child as:

> (1) being in a middle to upper social class; (2) having educated parents; (3) having no family background of psychopathology; (4) having a supportive family milieu; (5) having access to good health, educational, and social welfare services; (6) having additional caretakers besides the mother; and (7) having relatives (especially grandparents) and neighbors available for emotional support. (p. 362)

IQ was hypothesized as a factor, and it was discovered that intelligence served as a buffering factor only in select circumstances, and then more for females than males (Vanderbilt-Adriance & Shaw, 2008). These results were replicated in later research where it was discovered that, in males, low IQ was not a factor in resilience as much as social and emotional competence (Langenkamp, 2010). In their Kauai Longitudinal Study, Werner and Smith (1992) discovered that resilience was often built through accepting advice from elders and informed peers. Looking at culturally diverse families, Johnson (1995) discovered that the extended family unit served as a haven with unconditional warmth and safety. A similar conclusion was arrived at by Allen, Blieszner and Roberto (2011). Williams (2009) found that a sense of humor played an important role in coping effectiveness and social connectedness. Block and Block (1980) found that "flexible invocation of the available repertoire of problem-solving strategies" (p. 48) led to resilience. Thus, resilience is a multidimensional function and may have different contributing factors from one individual to the next, from one circumstance to the next.

Background of the Study

Besides the racial and ethnic divide between American Indians and Alaska Natives (AI/AN) and the rest of the people in the United States, statistically this group is one of the most disadvantaged in the country. AI/AN have the highest poverty rates of any racial or ethnic group in the United States at 26%, twice the national rate (Jones, Anderson, Lowry, & Conner, 2011). Mortality rates due to injury are twice as high

among AI/AN as for the entire population; the Billings Indian Health Service (IHS) area that serves Montana has a rate four times that of the national average (Injury Mortality, 2003). Rates of suicide in IHS served areas are two and a half times higher than the national average (Alcohol and suicide, 2009). Diabetes rates in IHS served areas are two or three times higher than that for other U.S. adults – an estimated 30% of AI/AN over the age of 55 have diabetes (O'Connell, Yi, Wilson, Manson, & Acton, 2010). However, not all the information is negative, although the stereotypes and misunderstandings have prevailed from first contact.

While there have been misperceptions on both sides, the European identification of the indigenous people of the Americas as heathens—because of their lack of Christian beliefs—and as savages—because of their adamant defense of their homelands—has followed them from Washington's concept of them in a 1783 speech (Washington, 1783/2000) to modern depictions (Fleming, 2006; Williams, 2006). The medical and mental health communities have added to this denigration by focusing on the negative aspects of their lives with their medical model (Gilder, Lau, Corey, & Ehlers, 2008). This model identifies problems in select populations that they might be dealt with more effectively (Gilder et al., 2008). Because of the lack of information about this group in the general population, in this case, the problem has become the identity of the people in Indian Country (Kvigne et al., 2008). Indian Country is a historical/legal term that has been around since before the Revolutionary War. The term refers to the lands controlled by American Indians. The modern context refers to reservation lands where American Indian sovereignty is in place (Pisarello, 2010; Sullivan, 2010).

Between January and August 2008, the database PsycINFO listed 78 articles and books dealing with American Indians. Of those 78 articles, 49 dealt with negative aspects of American Indians (child abuse, domestic violence, tobacco usage, drug usage, alcohol usage, gambling, suicide, marijuana usage, etc.), and one dealt with a positive theme. During the same time period, Medline listed 33 articles dealing with American Indians. Of those 33 articles, 16 dealt with negative aspects of life in Indian Country. These negative aspects of life included chronic liver disease, sexually transmitted diseases, poverty, smoking, drug usage, incarceration, alcohol usage, gambling, and suicide, and none had totally positive themes. However, resilience as a positive characteristic may be part of the fabric of this population.

Research on the resilience of American Indians is not new, though most of the research has only been generated over the past decade. Much of the research done with American Indians and resilience has focused on adolescents and their ability to stay away from alcohol and drugs (Graham, 2001; Kulis, Reeves, Dustman, & O'Neill, 2011; LaFromboise, Hoyt, Oliver, & Whitbeck, 2006; Long & Nelson, 1999; Stone, Whitbeck, Chen, Johnson, & Olson, 2006; Waller, Okamoto, Miles, & Hurdle, 2003). Whitbeck, Chen, Hoyt, and Adams (2004) looked at factors dealing with alcohol usage with an adult population. While this is an important issue, it does not speak to the strength of all ages of American Indians to survive in an often hostile environment.

Different techniques and mechanisms have been used to measure resilience in American Indian populations. Interviews have been used in qualitative studies. Montgomery, Miville, Winterowd, Jefferies, and Baysden (2000) used interviews to determine resilience among American Indian college students at Oklahoma State

University. Waller et al. (2003) used interviews to examine resilience factors protecting American Indian middle school students from drugs and alcohol. While interviewing is an excellent method for accumulating information, the small number of individuals that can be interviewed leaves much to be desired; Montgomery's sample was 14 college students, and Waller's sample was 32 middle school students.

Self-disclosure surveys have often been used to determine resilience. Whitbeck et al. (2004) used the concept of enculturation to determine resilience in 452 American Indian parents/caregivers. Whitbeck's model determined enculturation using three factors: participation in traditional activities, identification with American Indian culture, and traditional spirituality as measured by Oetting and Beauvais's (1990-1991) American Indian Cultural Identification Scale. LaFromboise et al. (2006) also used the American Indian Cultural Identification Scale but used it to determine the enculturation factor in a multidimensional measure of resilience. Besides enculturation, these researchers used self-esteem, maternal warmth, community warmth, absence of problem behavior, school involvement, current grades, academic plans, and attitude towards school (all determined through survey questions) to ascertain resilience among 212 middle school students. The Ethnic, Culture, Religion/Spirituality Scale has been used to determine American Indian resilience in a relational rather than a linear fashion among American Indian and non-Native primary caregivers (Long & Nelson, 1999). Graham (2001) used several surveys and tests to determine resilience in 59 American Indian students: Self-Perception Profile for Adolescents, Social Skills Rating System, California Achievement Tests, Life Events Questionnaire, Multi-Group Ethnic Identity Measure, Spiritual Well Being Scale, and

Purpose in Life Test. Surveys have been successfully used by various researchers to measure American Indian resilience.

Problem Statement

The problem that this research addresses is the dearth of social science research on resilience of American Indians. I will contribute to the body of resilience research by bringing forth evidence of resilience in a population American Indians from the end of adolescence to elder status. Much of the resilience research on American Indians defined resilience as the ability to withstand the pressure to use drugs and drink alcohol (Evans, 1997; Kulis et al., 2011; Lafromboise et al., 2006; Ramirez, 2006; Waller et al., 2003). More broad-ranging identification of American Indian resilience is important because of the need to dispel the stereotypes of misperceptions created by prejudice and ignorance. This affirmation of mental strength and support of enculturation or keeping or learning one's own culture (Miller, Yang, Hui, Choi, & Lim, 2011) instead of acculturation or adopting the majority culture (Yoon, Lee, & Goh, 2008), can strengthen American Indian communities and reaffirm their focus on the strength of the past and thus create a healthy future. American Indian resilience will be assessed using an established measurement of resilience.

Research Questions and Hypotheses

The following research questions are addressed in this study.

1. Will gender of the study participants influence resilience scores as measured using the Resilience Scale (RS) by Wagnild and Young (1993)?

H_0 [1]: There is no relationship between the gender of participants in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

H_A [1]: There is a relationship between the gender of the participants in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

2. Are there differences in resilience levels among people of different ages?

H_0[2]: There is no relationship between the age of participants in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

H_A [2]: There is a relationship between the age of a participant in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

3. Does attainment of more education influence resilience levels of the study participants?

H_0[3]: There is no relationship between the educational level of a participant in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

H_A^3: There is a relationship between the educational level of the participant in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

4. Will individuals with a strong ethnic identity as measured by the Ethnic Identity subscale of the Multi-Group Ethnic Identity Measurement (MEIM) developed by Phinney (1992) have a higher resilience score?

H_0^4: There is no relationship between scores on the Ethnic Identity subscale of the MEIM and the RS for participants in a sample of American Indians from Blaine and Phillips counties in Montana.

H_A^4: There is a significant relationship between scores on the Ethnic Identity subscale of the MEIM and the RS for participants in a sample of American Indians from Blaine and Phillips counties in Montana.

5. Will individuals with a greater number of traumas in their lives, as demonstrated on the Life Event Checklist developed by Werner and Smith (1992), have lower resilience scores?

H_0^5: There is no relationship between the number of traumas participants in a sample of American Indians from Blaine and Phillips counties in Montana record on the Life Event Checklist and score on the RS.

H_A^5: There is a relationship between the number of traumas participants in a sample of American Indians from Blaine and Phillips counties in Montana record on the Life Event Checklist and score on the RS.

Purpose of the Study

The purpose of this study was to measure the resilience of a sample of adolescent and adult American Indians from Blaine and Phillips counties in Montana. The specific objectives were as follows:

1. Determine whether gender is a factor in resilience scores in this population.

2. Determine whether resilience scores increase or decrease with age in this population.

3. Determine whether an increased level of formal education leads to higher or lower resilience scores in this population.

4. Determine whether enculturation, as measured by the MEIM, increases or decreases resilience scores in this population.

5. Determine whether an increased number of stressful life events, as indicated on the Life Event Checklist, increases or decreases resilience scores in this population.

Theoretical Framework

Resilience

Resilience is a multifaceted personal strength that allows the individual to withstand stressful life events. In the case of the American Indian, resilience represents the individual's and the society's strength to withstand the destruction of suicide (McLaren & Challis, 2009; Yoder, Whitbeck, Hoyt, & LaFromboise, 2006); the depredations of poverty (Browne, Mokuau, & Braun, 2009; Thornton & Sanchez, 2010); the ravages of drugs and alcohol (LaFromboise, et al., 2006; Wong et al., 2006); the degradations of physical (Hauser & Allen, 2006; Powers, Ressler, & Bradley, 2009), psychological (Franklin, Boyd-Franklin, & Kelly, 2006; Iwaniec, Larkin, & Higgins,

2006), and sexual abuse (Duran et al., 2009; Edmond, Auslander, Elze, & Bowland, 2006; Segal, 2009), and neglect (Daniel, 2006; Evans-Campbell, 2008a); the devastation of discrimination (Galliher, Jones, & Dahl, 2011; LaFromboise et al., 2006); and the cultural havoc that has been wrought by historical trauma (Evans-Campbell, 2008b; Morgan & Freeman, 2009), that is, survival despite the American Indian holocaust.

Researchers have indicated that resilience is developed from three basic sources: within the individual (Grafton, Gillespie, & Henderson, 2010), the fostering of an insulating family structure (Ungar, 2010), and the protection of a resilient cultural structure (Abarbanel, 2009; Didowsky, Ungar, & Liebenberg, 2010). Resilience is one of the main pillars of positive psychology (Cheavens, Feldman, Woodward, & Snyder, 2006; Ingram & Snyder, 2006; Hart, & Sasso, 2011; Reivich, Seligman, & McBride, 2011; Smith, Tooley, Christopher, & Kay, 2010; Wong, 2006; Wong, 2011).

The concept of resilience evolved from the work of Antonovsky (1979) and other theorists. Research has shown that coping skills are developed from stressful events through self-esteem, structure and control, and personal bonds and relationships (Rutter, 1987). It has also been shown that resilience is a verifiable personality trait in work with children. Strong family bonds, higher socioeconomic status, and higher intelligence have been seen as factors (Langenkamp, 2010). Later work by Masten, Best, and Garmezy (1990) tied resilience to positive relationships with competent adults, good problem solving skills, being personable, and having self-efficacy. However, the most accurate demonstration of resilience came from the work by Werner and Smith (1992) who followed 505 at-risk children from infancy into adulthood and found that one-third of them developed into well-functioning, successful adults despite the extreme

disadvantages they faced. The factors that led to resilience were in three clusters: at least average intelligence and personable disposition, affectional ties to a parent or parent substitute that allowed them autonomy and initiative, and an external support system that gave them a sense of coherence.

Resilience is Measurable

Werner and Smith (1982/1998; 1992) were able to determine resilience from demographic histories and interviews from clinicians, public health personnel and social workers, a questionnaire, and the Life Event Checklist. By accumulating this information, they were able to select those participants who were, and those who were not, resilient. However, this study focused only on subjects who were high-risk children at birth, and a relatively small percentage proved to be resilient (Werner & Smith, 1992). As would be shown with subsequent research, the level of resilience in a random population is much higher (Ahmed et al., 2010; Bonanno, Galea, Bucciarelli, & Vlahov, 2006; Larm, Hodgins, Tengstrom, & Larsson, 2010; Taylor et al., 2010). The strength of the Werner and Smith research is that it identified the personal factors needed to survive in a negative environment.

Other researchers attempting to develop resilience psychometrics have correlated their scales with other mental health instruments. Jew (1991) developed her Resiliency Scale using ninth grade students and correlating it with each child's clinician and academic counselors, Rotter's Locus of Control, Self-Perception Profile for Adolescents, and the Normative Adaptive Behavior Checklist. Wagnild and Young (1993) developed their scale by interviewing elderly female adults. From previous philosophical and psychological writings and research on resilience and the interviews, they were able to

piece the RS together. Connor and Davidson (2003) developed the Connor-Davidson Resilience Scale to be used in clinical situations with posttraumatic stress disorder (PTSD) sufferers. Used in a test-retest format, the psychometricians developed their instrument using participants from the general population as well as clinical samples. Data analysis was used to determine the validity of the instrument by comparing the normal population against the various clinical samples. While all three resilience scales are well regarded (Ahern, Kiehl, Sole, & Byers, 2006; Araki, 2000), the RS is the most widely used of the instruments in a non-clinical setting (Waaktaar & Torgersen, 2010; Wagnild, 2009: Wagnild & Collins, 2009).

Gender as a Factor in Resilience

Results from the Kauai Longitudinal study, Werner and Smith (1992) showed that more female than male participants were identified as resilient. They found that there were 17% more resilient females in their study than males. Werner (1989) identified the ability to weather similar stressful life events with fewer health problems and increased sources of support as the reason for better outcomes from the study's resilient women than from the study's resilient men. Langenkamp (2010) identified female resilient strength as engendered by their being more adept in social situations than males and thereby more adaptive. Rae-Grant, Thomas, Offord, and Boyle (1988), analyzing case studies of 3,294 adolescents, discovered that friendships buffered both males and females from delinquency and mental disorders, but that these friendships provided more resilience for females than males. It was also found that males were vulnerable to a greater extent to impaired self-esteem and increased depressive symptoms in the elementary years than were females (Kim & Cicchetti, 2006). A study from Sweden

found that there was a significant decrease of resilience for boys during adolescence, while females' resilience increased over the same period (Chuang, Lamb, & Huang, 2006). Thornton, Collins, and Daugherty (2006) found that being female was a strong factor in the development of resilience among American Indians of Nevada. Thus the research seems to point toward a greater resilience in females than in males.

Age as a Factor in Resilience

Much of the research done on resilience was driven by the need to determine how select children and adolescents were able to overcome their environment while so many around them were being drawn into the maw of a negative lifestyle. Only the RS has been used with significant populations across several generations.

Age has been shown to be a factor in developing resilience. Studies support a positive relationship between age and resilience. In three studies that used the RS in which the respondents' mean ages ranged from 18-20, the average score was 135.6 (Black & Ford-Gilboe, 2004; Hunter & Chandler, 1999; Rew, Taylor-Seehafer, Thomas, & Yockey, 2001). In three other studies used the RS in which the respondents' mean ages ranged from 28-33, the average score was 143 (Heilemann, Lee, & Kury, 2003; Humphreys, 2003; Monteith & Ford-Gilboe, 2002). In yet another three studies using the RS, in which the respondents' mean ages ranged from 71-95, the average score was 148.3 (Nygren et al., 2005; Wagnild, 2003; Wagnild & Young, 1993). Looking at these nine samples of age-graded studies using the RS, resilience levels increase with age.

Education as a Factor of Resilience

In the Kauai Longitudinal Study, Werner and Smith (1992) identified several factors as protective and thus leading to resilience. One such factor was education. The researchers found that scholastic aptitude and finishing high school provided a buffer against stressful life events. Joining the military and taking advantage of the academic and vocational educational opportunities afforded stronger opportunities for a resilient life as well. Thus, intelligence and academic achievement tended to be buffering factors against stressful life events (Werner & Smith, 1992). Garmezy, Masten, and Tellegen (1984) saw similar findings when looking at disruptive high school students. They found that a higher IQ led to greater feelings of achievement and competence. Further research supported the two previously mentioned studies with college-educated subjects. Researchers discovered that while college-educated subjects suffered more and greater daily stressors than their high-school-educated cohorts, they tended to be less reactive to them (Morales, 2008). This was also the conclusion of von Stumm, McIntyre, Batty, Clark, and Deary (2010). For subsequent researchers, academic achievement has become a source of resilience (Morales, 2010; Sameroff & Rosenblum, 2006). Looking at American Indian middle school students, school achievement, and resilience, LaFromboise et al. (2006) were able to draw a correlation between resilience and academic achievement.

However, not all researchers have gauged education as such a positive factor in the development of resilience. Luthar (1991) found that when the stress was great, the more intelligent students lost the advantages afforded them by their IQ and achievement, and reacted more like the students who were less intelligent and who had enjoyed less

achievement. Later research found similar results with a population of American Indians. Thornton and his colleagues found that under stressful situations, achievement levels of the students did not influence resilient responses (Thornton et al., 2006).

While intelligence and academic success have proven to be factors in resilience with more mainstream populations, American Indian populations are not always as advantageously situated as others in terms of academics. With the dearth of economic opportunities in Indian Country and the academic opportunities that accompany them, it is easily seen that LaFromboise's research in more advantageously placed northern Nebraska might have antithetical results compared with Thornton's research in more isolated Nevada.

Enculturation as a Factor in Resilience

While early resilience research focused basically on general populations, in the past decade researchers have also focused on minority populations in negative environmental situations in order to discover whether enculturation was a factor in resilience. Seminal work by Oetting and Beauvais (1990-1991) found that strong cultural identification among Mexican American and American Indian adolescents led to stronger family ties, higher self-esteem, and more positive school adjustment. Subsequent work in the social work field showed that enculturation acted as a protective mechanism among American Indian females, decreasing depression, providing better coping mechanisms for stress, and enhancing self-esteem (LaFromboise, Albright, & Harris, 2010). Work by sociologists from the University of Nebraska revealed that when American Indian adult caregivers of preadolescent children had strong traditional and cultural ties, they were

more likely to abstain from alcohol use. This study was conducted on four Midwestern reservations and five Canadian reserves (Stone et al., 2006).

Research has identified culture as a factor in higher resilience. Research shows that adhering to one's own culture leads to higher resilience with individuals of African, Asian, Latino, as well as American Indian descent (Kallampally, Oakes, Lyons, Greer, & Gillespie, 2007; Kulis et al., 2011; Morgan & Gonzales, 2009; Phinney & Alipuria, 1990; West-Olatunji, Shure, Garrett, Conwill, & Rivera, 2008). Looking at the indigenous populations of the Americas, Quiroa (2011) found that not only were the Maya-K'iche' of Totonicapan able to maintain their culture in the face of Spanish assimilation in the 16th century, but the people of the area have maintained their culture and language in the Guatemala highlands to this day. On the other hand, the Maya-K'iche' of Utatlan allied themselves with the Spanish and were swallowed into the Spanish/Christian sphere long ago. Visiting the two cities today, there is little beyond the Spanish culture in Utatlan while the people of Tetonicapan not only speak Maya-K'iche', but maintain the dress and social structure of the Maya as well (personal trip on a Fulbright-Hayes scholarship, 2003). Research looking at Hispanic students determined that enculturation led to resilience, which manifested itself in stronger school bonding and less problem behavior (Campa, 2010). Graham (2001), working with American Indian boarding school students, found that those who showed higher levels of enculturation were more likely to be identified as resilient by school administrators and teachers. Other research demonstrates the strength of enculturation in supporting resilience in American Indians as well, thus showing that enculturation is a factor in resilience when measuring resilience in minority populations (LaFromboise et al., 2006; Stone, et al., 2006).

Degree of Stressful Life Events as Factors in Resilience

Werner and Smith (1992) determined that they could predict which subjects would have difficulty coping later in life by the severity of stressful life events they suffered as infants and toddlers. With stressful life events in childhood, the ability to predict problems and resilience increased to an 87.5% accuracy level for predicting problems and a 95.5% accuracy for men developing resilience. Researchers working with Vietnam combat veterans found that they could predict PTSD by severity of prewar trauma, level of war-zone violence, postwar stressors, and degree of social support. They found that the greater degree of stress pre- and post-war, the greater the probability that PTSD would develop for both male and female combat veterans and resilience would not develop (McKeever, McWhirter, & Huff, 2006). These results were replicated in an Army study of Army Reserve and National Guard forces that served in the Persian Gulf War (Vogt & Tanner, 2007). Dykes, Slade, & Haywood (2011) demonstrated that women under other life stressors who sought an abortion were less likely to show resilience than women who were previously coping with their lives and sought an abortion.

Severity of stressful life events has been shown to temper the development of resilience. Munsey (2009) discovered that the more severe the stressful life event, the less likely the individual was to demonstrate hardiness and adjustment. Researchers have shown that the severity of wartime experiences among World War II prisoners of war increased the possibility of PTSD symptoms 40-50 years later (Hart et al., 2008; Kang, Bullman, & Taylor, 2006; Rintamaki, Weaver, Elbaum, Klama, & Miskevics, 2009). Researchers have demonstrated that the severity of stressful life events is a factor in developing resilience after sexual abuse among adolescent females as well (Edmond et

al., 2006). From this body of research, it can be seen that stressful life events reduce the possibility of resilience.

Operational Definitions

Age: Age is the accumulation of years of life. In this study, age will be determined through demographic disclosure by the participant by indicating the year of their birth (Lundman, Strandberg, Eisemann, Gustafson, & Brulin, 2007).

American Indians: For the purposes of this study, American Indians will be defined as anyone who identifies himself/herself as American Indian and is an enrolled member or a descendent of an American Indian tribe or group. A descendent is an individual with an accumulated degree of Indian blood quantum to qualify as an American Indian, but not enough blood quantum in one specific tribe to be enrolled (Villazor, 2008).

Education: Education refers to the number of years of schooling amassed by the individual. In this study, education will be determined through demographic disclosure by the participant. The participant will disclose their total number of years of education and the highest level of education achieved. Education groupings will include: did not finish high school; high school diploma or GED; some college or vocational school; Bachelor's degree; Post Bachelor's work (Hobfall et al., 2008).

Enculturation: The learning and understanding of traditions and practices of one's own home culture (Drywater-Whitekiller, 2006; Enculturation, 2007). In this study, enculturation will be determined by the score on the Ethnic Identity subscale of the MEIM (Phinney, 1992).

Gender: Gender indicates whether the subject is biologically a male or a female. Gender does not indicate sexual orientation. In this study, gender will be determined through demographic disclosure by the participant (Thornton et al., 2006).

Indian Country: A historical/legal term that has been around since before the Revolutionary War. The term refers to the lands controlled by American Indians. The modern context refers to reservation lands where American Indian sovereignty is in place (Pisarello, 2010; Sullivan, 2010).

Resilience: Resilience is the ability to overcome the exposure to significant life stressors without developing chronic mental disorders by adapting to the stress and the adversity (Waaktaar & Torgersen, 2010). In this study, resilience will be determined from the score on the RS.

Stressful Life Events: Are events that are commonly considered stressful (Sutin, Costa, Wethington, & Eaton, 2010). In this study, stressful life events will be determined by the total number of items indicated on the Life Event Checklist (Werner & Smith, 1992).

Assumptions, Limitations, Scope and Delimitations of the Study

The sample was drawn from the total population of American Indians living off the Fort Belknap Reservation in Blaine and Phillips counties in Montana who were 18 years or older and did not suffer from a mental illness. According to statistics from the state of Montana, the number of American Indians over the age of 18 included in the population eligible to participate in this study was an estimated 1,541 people in Blaine County and 193 people in Phillips County for a total of 1,734 people (Montana Department of Public Health and Human Services, Blaine County Health Profile, 2006;

Montana Department of Public Health and Human Services, Phillips County Health Profile 2006; U.S. Census Bureau, Blaine County, MT, 2010; U.S. Census Bureau, Phillips County, MT, 2010). Since permission was not granted by the Fort Belknap Tribal Council to conduct this research on the reservation, only American Indians living in Blaine and Phillips counties who did not live on the reservation were contacted. 1,435 adults live on the reservation. The population for this research was 299 possible participants.

Another disqualifying factor was mental illness. An estimated 29.9% of American Indians living in Montana suffer from some form of mental illness (Zimmerman & Oreskovich, 2010). This left a potential population of 191. The number of surveys collected for this research was 105. With a confidence level of 95% and 105 participants in a potential population of 191, the confidence interval was 6.43. The results of this survey reflect only the feelings of the Native people of the area surrounding the Fort Belknap Reservation. The results cannot be generalized to other American Indians in the United States, or even to other Native people in Montana.

As with any self-disclosure instrument, the researcher must assume that all responses are accurate and that all participants are eligible to participate according to the parameters set forth. Inaccurate results or individuals who participated but are not eligible, someone suffering from a mental illness or have not reached their 18th birthday for example, are potential error factors in the study. To lessen the effect of unrepresentative results, univariate outliers were investigated and discarded (Dang & Serfling, 2010; Fan et al., 2006; Thompson, 2006).

Other researchers studying the resilience of American Indians have used other instruments to measure this strength (Graham, 2001; Kulis et al., 2011; LaFromboise et al., 2006; Long & Nelson, 1999; Montgomery et al., 2000; Waller et al., 2003). The RS was used in this study in order to compare the American Indians of Blaine and Phillips counties with members of the majority culture and other minorities. While it is understood that some might view this as culturally insensitive, it is hoped to impart with these results that the American Indians of Blaine and Phillips counties in Montana have resilient strengths that are equal to or greater than other groups measured by the RS.

The enculturation survey did not include speaking one's language separate from the majority culture language as criteria for strong enculturation. Language has been a contentious subject on the Fort Belknap reservation; it has been a difficult cultural aspect to maintain during the years of forced assimilation through Christianization, boarding schools, and other internal and external pressures to engender acculturation into the majority society (Flannery, 1946; Goddard, 1974; Salzmann, 1969; Taylor, 1983). While it is acknowledged that strengthening indigenous languages can strengthen select aboriginal cultures (Greef & Holtzkamp, 2007; Powers, 2009; Yamamoto, Brenzinger, & Villalion, 2008), it must also be acknowledged that American Indian cultures have been successfully maintained where language skills have weakened (T. Brockie, personal communication, February 10, 2009). Information from the 2000 census indicated that less than 10% of American Indians in the United States speak their Native language well and a full 72% do not speak their Native language at all (Ogunwole, 2006).

These statistics show a marked increase from the results of the 1990 census where a full 84% had no knowledge of their Native language while only 16% had any degree of

knowledge (Tucker & Espino, 2006). Some tribes have had fair success maintaining their language (over 68% of Navajo, 60% of Pueblo, and 39% of Apache surveyed spoke their language to some extent), while other groups have been less successful (fewer than 10% of Cherokee, Choctaw, Chippewa, Creek, and Iroquois have any knowledge of their Native language; Ogunwole, 2006). Other research has yielded similar results. A study in California found that 87% of the American Indian adolescent respondents had no knowledge of their Native language (Hahm et al., 2008), while a similar population found only 2% fluent speakers (Venner et al., 2006). Since enculturation is alive and well among many American Indian groups where Native language has not been readily maintained, it is perceived that including language usage as a criterion for enculturation is unnecessary.

Significance of the Study

The current study is expected to contribute to the body of resilience research on American Indians by bringing forth evidence of resilience in a population that spans young adulthood to elder status. One of the weaknesses in current research is that most of it is based on a focused population age range. The vast majority has been done on adolescents in high school (Bullerdick, 2000; Collins, 1995; Evans, 1997; Graham, 2001; Klassen, 1996; Ramirez, 2006; Saiduddin, 2003; Samuels, 1997), while some of the larger studies targeted even younger middle school students (LaFromboise et al., 2006; Waller et al., 2003; Whitbeck et al., 2001). This is the first research that looks at an entire adult population from the point of view of identifying the entire group as resilient.

Current researchers have tended to focus on resilience in the context of a negative outcome. Connor and Davidson (2003) developed their resilience scale to measure

recovery after clinical treatments. Their standardizing population included a community sample, primary care outpatients, general psychiatric outpatients, subjects suffering from generalized anxiety disorder, and two trials of subjects suffering from PTSD. While the focus of the Connor-Davidson Resilience Scale is different from the RS, this trend toward identifying resilience with the absence of pathology may skew the results away from positive impressions to a lack of negative ones.

Much of the resilience research on American Indians defines resilience as the ability to withstand the pressure to use drugs and drink alcohol. Waller et al. (2003) focused on risk and protective factors from drugs and alcohol of American Indian middle school students in the Southwest. LaFromboise et al. (2006) identified resilience as prosocial behavior and an absence of problem behavior (identified as alcohol or drug use and disruptive behavior) in a group of middle school students in the Midwest. While drugs and alcohol are severe problems in Indian Country, they should not be the sole identity of Indian Country. Often when there is pathology, the sufferers become identified with the problem. This may be a case where a whole population becomes saddled with a pathologic descriptor.

On October 11, 2006, Holzman traveled to Blaine County from North Carolina to offer presentations on smoking cessation. When asked about the statistics on American Indians, he quoted to his audience the statistics on not only tobacco usage, but also alcohol and drug usage among the Northern Plains Indians. Dr. Holzman had never been to Montana nor had he met a Native from this area; yet he identified the area Natives by the statistics he knew. When asked, he had no other information about local American Indians (G. Holzman personal communication, October 11, 2006).

The instruments used in this research have been widely used. The positive results in this research go a long way to correct some of the ongoing misperceptions on the reservation, including outsider's perceptions of the people of the reservation as drunk and dysfunctional, and thus perhaps helping to raise the self-esteem of the population. Because this is a global resilience measure, rather than one of the less widely accepted measurements as have been used in previous resilience research with American Indians, these results could change the tenor of perceptions beyond the reservations. These results could generate new, more positive feelings about the outcomes of medical and mental health treatments with American Indians. Political, social, and economic perceptions could be forced to adjust as well, increasing the positive outcomes from these entities.

Summary

In this chapter, I explored the resilience levels and factors leading to resilience of the American Indian people of Blaine and Phillips counties in Montana. This study was based on existing research dealing with resilience and it used instruments developed by other researchers dealing with enculturation and resilience. In this chapter, issues that are relevant to resilience and factors that lead to resilience were introduced. The conceptual and empirical background of the proposed study, its purpose, the hypotheses to be tested, and its potential significance were described.

Chapter 2 reviews the theoretical and empirical literature relative to resilience. Factors that lead to resilience are explored, and explanations will be presented as to why some were included and others excluded. Resilience studies dealing with American Indians will be reviewed. Historical information about the Nakoda and A'Ahniinin people will be presented to introduce the majority of the subjects of the research.

Chapter 3 describes the methodology employed to conduct the current study. It will detail the study design, including descriptions of the sample, sampling procedures, data gathering and analysis, and the research instruments that were used.

Chapter 4 will present the factual results of the current study as well as descriptive and inferential statistical analyses.

Chapter 5 concludes the study with a discussion and summary of the data results, their integration with the existing literature, interpretations, and implications for future study.

CHAPTER 2: REVIEW OF LITERATURE

Introduction

This chapter will present and review the relevant literature that will establish a theoretical premise for this research. The basis of the review is to explore the factors that previous research has established in the formation of resilience and the scientific backgrounds of these conclusions. The section begins with a review of resilience as a factor in personality in the general population and among American Indians. Gender as a factor in resilience research, including that among American Indians, are explored. Age, education and academic achievement, enculturation, and stressful life events as a factor in resilience research are examined. In addition, the anthropology of the Americas and that of Western civilization, as well as a history of the people who inhabit Fort Belknap Reservation, is investigated.

Literature for the current study was obtained through extensive online computer database searches such as Academic Search Premier, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Health Source: Nursing/Academic Edition, MEDLINE, Mental Measurements Yearbook, PsycARTICLES, PsychINFO, SocINDEX, and ERIC (Educational Resources Information Center). Keywords used in these searches included: American Indian, Native American, resilience, trauma, enculturation, acculturation, culture, cross-sectional study, female and male, and educational level

Resilience

Resilience is a multidimensional concept that encompasses hardiness and perseverance in the face of adversity (Lundman et al., 2010). Although researchers have tried to discover how to engender this attribute in populations, research seems to show that resilience is as much a product of the environment as it is a product of innate capabilities (Sun & Stewart, 2007); in fact, positive social and family dynamic situations were identified by Mrazek and Mrazek (1987) as protective factors against stress. These researchers cited a longitudinal study of Werner and Smith in Hawaii. The Kauai Longitudinal Study examined at-risk infants beginning in 1954 and found that resilience occurred across classes and despite the educational level or pathology of their parents (Werner & Smith, 1982/1998).

The following researchers looked at other disadvantaged populations and found similar results to the Kauai study. Medical sociologist Antonovsky found similar outcomes after developing a medical model dealing with stress and positive coping techniques in researching Nazi concentration camp survivors (1979). Garmezy et al. (1984) disclosed in their 10-year school study that IQ had a higher impact on achievement/competence than socioeconomic factors. The researchers also discovered that competence was more prevalent in females and that competence increased with age. Future researchers would cite both gender and maturity as components of resilience. Werner (1989) identified three protective factors in the Kauai Longitudinal Study: (a) sociability with at least average intelligence and an internal locus of control, (b) ties to a family that provide emotional support during times of stress, and (c) external support systems such as school, church, or work.

From these seminal works, other researchers began identifying factors that led to resilience. Kobasa (1979) surveyed 161 highly stressed businessmen to determine hardiness factors and discovered that they included: "stronger commitment to self, vigorousness towards the environment, a sense of meaningfulness, and an internal locus of control" (p. 9). Johnson (1995) looked back at 10 years of accumulating mechanisms of resilience in 15 non-European American families. By using qualitative means, Johnson identified the extended family system as a strong factor in immigrant, African American, Hispanic, and American Indian families. Factors that created the extended family system's "sacred ark" of resilience included: envisioning the family as a separate haven, embracing the extended family as a source of fundamental values, seeing the family as a source of spiritual support, recognizing the extended family as a covenant with the wisdom of elders, utilizing the extended family as a source of safety and a refuge from the outside world, having the extended family take a role in socialization and act as a sounding board for the communication of emotions, using native language as a separating and thus restoring mechanism, engaging the family to act as a buffer against racism, and appointing the family to set the standard for the degree and level of acculturation and assimilation that will take place in the dominant culture. Later researchers attempted similar research to Johnson's in South Africa by using different interviewing and measuring techniques (Greef & Holtzkamp, 2007). Sixty-eight two-parent, European American families with children were surveyed and disclosed the following resilience factors: safety and security provided by the family, values and culture supported by the family, environmental knowledge, intrafamilial emotional and practical support, and the individual factors of optimism, humor, and the ability to support oneself. Thus these

researchers identified self-awareness, a sense of meaningfulness, and the family as a haven as factors in resilience.

There are factors that can decrease the probability of resilience as well. Garmezy and Masten (1991) estimated that about 80% of children in adverse circumstances would demonstrate resilience, especially if they had had adequate care in the first 2 years of life. But as risk factors and traumas accumulate, and the child ages, resilience becomes less and less likely. Later research found that the accumulated traumas through constant danger of children living in war zones forced individuals to cope. The children's ability to be resilient was limited by the numbers and types of dangers confronted. As stress-absorption reached capacity and reservoirs of resilience became depleted, coping became more and more strained until survival was all that could be hoped for. The researcher found that many of his subjects showed positive responses when confronted by positive influences but pathogenic outcomes when confronted by negative influences (Hasanovic, 2011). Research conducted in Chicago found that children living in extremely dangerous and low income areas of the city averaged one grade level behind for their age group. The majority of the 15-year-olds in the study scored in the clinical range on antisocial behavior patterns and comorbid psychopathologies (Sheidow et al., 2008). It was also discovered that increased exposure to trauma elicited an increased response by the sympathetic nervous system which resulted in symptoms similar to (and often diagnosed as) ADHD, which included hyper arousal and hyperactivity due to anxiety, increased startle response, profound sleep disturbances, increased muscle tone, and affect regulation problems. Thus, a negative environment can deplete resilience by leading to

compounded traumas that the individual might suffer (Daviss, Diler, & Birmaher, 2009; Diamond et al., 2006).

Research by Bonanno (2008) revealed that extreme traumatic events most often result in resilience rather than debilitation. Looking at such universally accepted traumas as the death of a spouse or the loss of a child, the researchers discovered that in 57% of the instances, the individual responded with a stable low depression or resilient pattern of behavior. Bonanno et al. (2006) found similar results when looking at the World Trade Center survivors, where 65% of their sample displayed resilient behavior 6 months after they survived the attack. The contravening variable in these studies may be the adulthood of the Bonanno (2008) research and the youth of the Garmezy and Masten (1991), Hasanovic (2011), Sheidow et al., (2008), Daviss et al. (2009) and Diamond et al. (2006) research.

Resilience and American Indians

There has been a dearth of research on American Indian resilience and what there is, is often contradictory. Research on American Indian resilience did not begin in earnest until the mid 1990s when much of the research dealt with adolescents and educational problems. Collins (1995) studied resilience using Jew's Resiliency Scale as the measurement instrument. Collins surveyed 109 American Indian high school students from Nevada using the Resiliency Scale as a predictor of academic success. Collins discovered that of the four resiliency subscales identified (Active Optimism, Passive Optimism, Active Belief in Others, and Passive Belief in Others), only Passive Optimism correlated with academic achievement.

Klassen (1996) attempted to add to Collins' work with a more rarified population. The researcher interviewed eight Chippewa Indian adolescents visiting Harvard University in a program geared toward enhancing leadership and educational skills among American Indian youth. Klassen used the interviews along with participant observations and document analysis of select materials available, including school records, to determine resilience. The researcher concluded that biculturalism, positive tribal identity, and a supportive extended family structure engendered resilience in the eight high school students. Klassen defined resilience as a positive outcome fostered by a resilient perspective after a trauma, the ability to maintain supportive relationships, using insight to cope with pathological circumstances, and self-reliance.

Evans (1997) was the first modern researcher to tie resilience to negative outcomes. Evans interviewed 26 American Indian high school students, elders, and mentors from the Great Basin area of Utah to determine strategies that the youth used to maintain resilience during difficult times. Evans discovered that cultural and spiritual support, as well as a strong sense of self, assisted the students in resisting or recovering from the dangers of alcohol and drug abuse.

Samuels (1997) researched the resilience of 61 adolescents from the Northern Plains. The researcher looked at re-interview information from the Flower of Two Soils Study on select adolescents, caregivers, and teachers. The study measured life stressors, environmental and personal protective factors, and resilience. Stress was measured by life events described in the survey and family stress factors. Protective and compensatory factors were determined through a rubric of attributes that included: having a good relationship with at least one parent, multiple caregivers (extended family), positive peer

relations, humor, and reliance on intellectual functioning. Resilience was defined as absence of psychiatric diagnosis and behavioral competence as measured by the survey. Samuels determined that traditionalism did not play a role in resilience scores and, in fact, measured levels of traditionalism were higher among students who were diagnosed with problem behavior than those who were not.

Attempting to reverse the trend of previous research that denigrated traditionalism and supported biculturalism, Long and Nelson (1999) used the Ethnic, Culture, Religion/Spirituality (ECR) scale to measure resilience in a relational manner that they predicted would be more representative of American Indian culture than the linear world-view more typical of Western philosophy. Surveying 74 American Indian and 73 non-American Indian families in Oregon and Iowa, the researchers compared the results of the ECR with other survey indicators of family function to determine resiliency. Those indicators included: Addiction Severity Index, CAGE (acronym for Cut down, Annoyed, Guilty, and Eye-opener—an inventory that measures alcohol abuse), Rosenberg Self-Esteem Inventory, Brief Symptoms Inventory, Self-Report Family Inventory, Child Behavior Checklist, and Adult Adolescent Parenting Inventory. Results showed that the ECR scale did predict resilience in the American Indian families, though the results were stronger for families living on reservations in Oregon than on tribal lands in Iowa.

The first researcher to work with resilience in an urban American Indian population, Bullerdick (2000) compared social connectedness (family, school, friends, Indian community, and other adults) and the relationship to emotional wellbeing of urban American Indian adolescents. Bullerdick reviewed the results of the 250-item Urban Indian Health Survey of 426 American Indian adolescents from the Minneapolis area.

The survey measured health, wellbeing, values, culture, and relationships. Bullerdick found that school and family connectedness accounted for the greatest emotional wellbeing. School connectedness was found to be especially efficacious for younger females, but family connectedness became more important as the females aged. The wellbeing of young males also benefited from school, benefits that continued as they aged. With this sample, the research showed the least beneficial form of social connectedness came from their interaction with the American Indian community.

Looking at an older population, Montgomery et al. (2000) interviewed 14 American Indian college students and graduates who had attended Oklahoma State University to determine the factors in their resilience. The researchers explored evidence of personal, familial, and tribal experiences that assisted them in their college careers. It was discovered that successful students utilized various forms of encouragement including: self-talk, feedback from tribal elders, family support, and learning adjusted to ways that were consistent with how they were raised. This included mentored learning, observational learning, and direct experience.

Addressing a trend of initiating negative lifestyles at a young age, researchers studied the struggles of American Indian middle school students balancing traditional culture with academic demands. The researchers interviewed 196 fifth through eighth-graders on reservations in the Midwest factoring age, gender, family structure, parent occupation and income, maternal warmth, extracurricular activities, enculturation, and self-esteem with academic success. The researchers discovered that the older the child, the lower their academic performance. They also found that maternal warmth was positively correlated to academic success, as were extracurricular activities,

enculturation, and self-esteem. Results of the research revealed that females scored higher on enculturation measures than boys and that higher parental income equated to less enculturation (Whitbeck et al., 2001).

Graham (2001) surveyed 54 American Indian students identified by their teachers and the school administration at an American Indian boarding school as resilient (26%), non-resilient (26%), or maladaptive (48%). Students ranged in age from 13 years to 21 years with a mean age of 16.5 years. Graham gave the students several tests to determine select resilience factors. Scales included the Self-Perception Profile for Adolescents to determine self-esteem; the Social Skills Rating System to measure social competence; the California Achievement Test to indicate academic competence; the Life Events Questionnaire for Adolescents to indicate the level of problems the students had faced in their lives; the MEIM to measure the level of enculturation; and spirituality was measured using the Spiritual Well Being Scale and the Purpose of Life Test. The researcher concluded that spirituality correlated positively with academic, social, and behavioral competence. Graham also discovered that females scored higher on the spirituality tests than boys and that spirituality related to high enculturation and well-being scores.

Saiduddin (2003) attempted to add to the literature dealing with resilience and educational success by comparing the SAT Science scores of 78 Pine Ridge Reservation junior high school students with Jew's Resiliency Scale. Saiduddin used four subscales from the Resiliency Scale in the analyses (Positive Attitude, Independence, Goal, and Empathy). The researcher found that the Goal and Positive Attitude subscales of the Resiliency Scale were positively correlated with SAT Science scores. However, Positive

Attitude scores declined with each grade from the sixth grade to the eighth grade by a total of 12%. The researcher also discovered that the number of bad behavior incident reports increased from the sixth grade to the eighth grade by 38%.

Looking at extended relational dynamics and risk-factors, Waller et al. (2003) interviewed 32 American Indian middle school students in the Southwest to determine what factors of resilience allowed them to resist peer pressure to use drugs or alcohol. They discovered through data analysis and textual coding that peers and extended family were often a risk factor, as were siblings who were using drugs. However, abstinent older siblings, extended family, and peers were often able to protect them in dangerous situations. The researchers found that the parental practice of non-interference made peer, extended family, and sibling influences greater than what is seen in less collectivist and what is perceived to be more intrusive parenting styles of non-American Indian families.

Research looking at resilience factors particular to 23 rural American Indian families on a reservation in South Dakota from *Rural Families Speak* interviews determined that the risk factors identified included lack of economic essentials, lack of community resources, impact of drugs and alcohol, transportation challenges, family health concerns, blended family strains, lack of residential stability, family member dilemmas, higher education difficulties, coping with recent death, stigma and discrimination, negative childhood recall, children's behavioral problems, and pregnancy stressors. The protective factors identified included: trusted confidant, direct family contact, family pride, tribal assistance, routines and rituals, parental satisfaction and efficacy, goal-oriented adult in the family, positive outlook, cultural pride and traditions, and positive childhood recall. Of the 10 factors, trusted confidant, direct family contact,

and family pride were reported in all the families, while tribal assistance was reported in all but one of the families. Interestingly, cultural pride and traditions was rated as the lowest protective factors reported by the families with only 17 of 23 families marking this factor important. All 23 families were judged to be vastly resilient using five factors gleaned from the interviews and factor analysis (Wek-Visker, 2005).

Cutler (2006) interviewed 10 adult American Indian trauma survivors to identify the strength of their resilience and self-efficacy. Cutler chose 10 trauma survivors who embodied traditional values. The researcher discovered recurring themes in the interviews. These included a strong relationship between self-efficacy and resilience; that resilience had unique features in American Indian people; that survivors were highly attuned to the factors that allowed them to survive; that survivors had the ability to heal themselves; that American Indian society was important; that they had a willingness to move beyond their problems; that they understood that self-efficacy was teachable; and that they accepted the validity of gender differences. Cutler found that those he interviewed had the ability to identify their problem, intervene affectively, and heal themselves. The researcher also discovered that those with this ability utilized their own healing power to care for and help others.

Ramirez (2006) interviewed 14 American Indian adolescents from the San Francisco Bay area to discover the strength of their identification with their tribes and the affects of alcohol on their lives. Results suggested that as the participants grew older, they felt a stronger and stronger need to identify with their tribe. With age and maturity came the need to personally deal with the problems that alcohol brings. The researcher discovered that each of the individuals had dealt with the problem of alcohol either with

themselves or with a close relative. This forum gave the adolescents an opportunity to express their own stories; in fact, this desire for self-expression is one of the conclusions of the research - youth yearn for a voice. Despite their "fractured identity," American Indian traditions and heritage continued, and "tribal identity is a powerful positive force; and imagination fuels hope" (p. 115, Ramirez, 2006).

LaFromboise et al., (2006) conducted a study of 212 fifth- through eighth-graders on three reservations in the upper Midwest. The goal was to identify risk and protective factors in the lives of their participants. The researchers found that 61.6% of the youth lived in households that either had high levels of poverty, or high levels of parental problem behaviors. In spite of this, 60% of the youth were deemed to be resilient. The researchers discovered that those who perceived discrimination had a lower chance of fitting the criteria for resilience. They found that the percentages of resilient students declined with age; this was hypothesized to be due to the accumulative effects of discrimination, home adversity, and increased peer pressure. The strongest predictors of resilience were enculturation, maternal warmth, and community support.

Thus, most of the research on resilience of American Indians has involved adolescent populations to determine factors in academic success or the ability to withstand drugs and alcohol. Results seemed to be mixed, as traditionalism and culture are sometimes seen as positive factors and sometimes as negative factors. However research with older populations of American Indians and families show that the family structure is important to success and the extended family of the tribe is a factor in resilience.

Gender as a Factor of Resilience

Theorists and researchers have speculated that females are more resilient than males, and research seems to have supported this. Garmezy et al. (1984) found that females were more resilient than males in their 10-year longitudinal study. Werner and Smith (1982/1988) found in their longitudinal study more resilient females than males among their at-risk population. Werner and Smith (1992) also found that this trend continued as the children became older. Other researchers also discovered that resilient children became resilient adolescents who became resilient adults (Banyard & Williams, 2007; Martin, Colmar, Davey, & Marsh, 2010; Yancey, Grant, Kurosky, Kravitz-Wirtz, & Mistry, 2011).

Researchers have speculated why more females appear to be resilient than males. Rutter (1987) found that females tend to plan more when dealing with school (both academically and non-academically) and therefore have a more positive experience in school. Others have found that females continued to plan more when dealing with school issues (Rudasill & Callahan, 2010; Trask-Tate & Cunningham, 2010). Rae-Grant et al. (1988) found that as females move into middle and high school, friendships serve as protective factors for females but not for males. Looking at dysfunctional families where there were substance-abusing parents, it was discovered that female children were given more family responsibilities and therefore spent more time doing organized tasks (Lorber et al., 2007). The researchers speculated that because of this, females tended to be more compliant with adult rules that resulted in stronger verbal and reading skills when they started elementary school (Smetana et al., 2009). Werner (1995) also reported that resilient females tended to come from households where there were strong female figures

that the child could model (mother, aunt, grandmother, or older sister). Allan (2010), in an English sample, found that women who acted more independently had more school success than those who acted in more traditional feminine roles. Researchers in Germany (Zimmermann, Zimmermann, & Constant, 2007) found that while first generation female immigrants had more trouble than succeeding female family members, they did not have as much trouble as males in the first or succeeding generations. Males tended to have stronger ethnic identities that caused greater internalizing and externalizing problems. Svensson and Hagquist (2010) found similar results in a study from Sweden.

Research shows that some women display such acute resilience that they are able to survive sexual trauma using low depression as a coping strategy instead of dissociation, PTSD, sleep disturbances, or sexual dysfunction (Munsey, 2009). Segal (2009) looked at three groups of women (those who had suffered no childhood sexual abuse, those who had suffered high levels of childhood sexual abuse, and those who had suffered low levels of sexual abuse). In the two groups that had suffered sexual abuse, the researchers found that 8% had a high level of protective factors while 13% had a low level of protective factors. The 8% of the women who were resilient were doing better in their lives than any of the other women in the study despite the level of sexual abuse they had suffered. Except for these 8%, the other women who had suffered some degree of childhood sexual abuse had higher adult suffering. Research looking at women who had been hospitalized due to sexual abuse as children showed resilience across multiple domains as adults. Lower resilience was only demonstrated by those who had experienced additional traumas since the hospitalization (Banyard & Williams, 2007).

However, not all research has consistently found such positive results. Research looking at a population of maltreated children found that females in the study tended to display higher levels of internalized problems (Breno & Galupo, 2007). Research from Canada showed that when females in early school years were conflicted and maintained low self-control, it caused anxiety (Tramonte & Williams, 2010). Similar problems have been found by other researchers. Cotto et al. (2010) found that females were more likely to use drugs to self-medicate than males. Widom, Marmorstein, and White (2006) found similar results among females who were abused and neglected as children, although they found that the females with lower abuse and increased neglect were more susceptible to drug use. Kim and Cicchetti (2009), looking at children in low income families who were and were not maltreated, discovered that while increased self-esteem decreased depression in males, it did not in females.

Although most researchers have found that there are more resilient females than males, males do have select factors that may make them more likely to be resilient. Werner (1995) discovered that males reared in households with structure and discipline and in which there were strong, positive male role models (father, grandfather, or older brother) who encouraged emotional expression tended to be more resilient (Werner, 1995). Boomsma et al. (2008) found that being first-born was a protective factor for males that led to resilience. Researchers have discovered that for males, self-efficacy is the attribute that is the most likely to lead to resilience. Researchers have found that, while there were several factors that led to female resilience and academic achievement (empathy, setting goals, and aspirations), for males self-efficacy was the important factor (Sacker & Schoon, 2007; Trask-Tate & Cunningham, 2010). Trask-Tate and

Cunningham (2010) discovered that high self-efficacy predicted school achievement despite the risk factors involved. In fact, they discovered that resilience in men was related to confidence in science ability. As they age, males tend to respond to different stressors than women. Women tend to respond to home hassles and chronic stressors, while men tended to respond to work hassles and chronic stressors (Moller-Leimkuhler & Yucel, 2010).

Grusec, Dix, and Mills (1982) presented mothers of 7- to 9-year-old males and females scenarios of poor child behavior that would potentially require discipline. In the mothers' responses, both males and females were punished for antisocial behavior. However, the mothers tended to demand prosocial behavior from their daughters but not their sons. This lack of training in prosocial behavior may make boys act inappropriately and may lead to more social rejection. Later research discovered that one factor leading to lower resilience among at-risk males is that not only were conflicting parents more likely to quarrel in front of their sons, but in case of a break up in the family, the males were more likely to be sent away than females. The researcher also discovered that males tended to react to dysfunctionality with disruptive behavior, and when this occurred, the males tended to be punished with withdrawal of love by their parents (Rutter, 1987). Later research discovered that while both males and females react with increased anti-social behavior when new siblings come into the household, first-born males in particular and males in general show more withdrawal and disruptive behavior (Kolak & Volling, 2011). Werner (1989) found that this sensitivity to family dysfunction continues into adulthood. She found that the adult males in her study displayed more stress after the break-up of a long-term relationship.

The results of resilience and gender tend to be contradictory depending on the criteria used. However, most researchers have found that both females and males demonstrate resilience.

Gender as a resilience factor among American Indians

Bullerdick (2000) surveyed 426 urban American Indians in Minneapolis and found that the females in her sample were more resilient over the age ranges. Graham (2001) surveyed 54 high school boarding school students from the Midwest and found that the females in her survey reported greater enculturation and school achievement, which she equated to resilience.

However other researchers have not found such a strong divergence between male and female resilience. Montgomery et al. (2000) who examined 14 graduates from Oklahoma State University found no difference between male and female resilience levels. Whitbeck et al. (2001) researched 196 American Indian middle school students on a reservation in the Midwest. The researchers found no significant difference between the resilience levels of males and females. Waller et al. (2003) conducted research with 32 urban American Indian students in the Southwest to determine protective factors against alcohol usage. They found that gender was not a protective factor in preventing alcohol consumption. LaFromboise et al. (2006) measured prosocial behavior and school achievement in 212 American Indian middle school students in the Midwest and also found that gender was not a factor in resiliency.

Bowker (1993) compiled the interviews of 991 American Indian women living on reservations throughout the West. Bowker found that despite the abject poverty within which her interviewees lived, the family was still the most important source of resilience.

Less educated parents and other caregivers also pushed the children to succeed in school, which was not always easy due to the influences of poverty as well as the evidence that completing school did not always ensure a better future for students. The researcher discovered that speaking the Native language fluently was a protective factor from school dropout. Individuals who identified strongly with either their own culture or the European American culture remained in school. However, if the females were bicultural, with no preference between cultures, or consciously attempted to straddle both cultures, they were more likely to do poorly in school and drop out. Bowker found that racism and discrimination created high levels of frustration.

Other research supports female American Indians as more resilient than males. Cummins, Ireland, Resnick, and Blum (1999) analyzed data from 13,454 adolescents who reported data to the National American Indian Adolescent Health Surveys. They found that adolescent females' emotional health was supported by family caring, pride in one's body, the desire to go to school, and low levels of worries and concerns. Denny, Holtzman, and Cobb (2003) administered the Minnesota Multiphasic Personality Inventory-2 to 301 male and 428 female American Indians from the Southwest and the Plains. The researchers found that the males in the study suffered from more severe pathology than the females. American Indian women were found to be pessimistic, needed reassurance, had low energy, and had feelings of resentment and anger.

Several studies indicate that American Indian women are no more resilient than American Indian men. Other researchers have found that male and female American Indians have similar problems when it comes to alcohol and drug abuse. One study found that while American Indian females from the Southwest had lower rates of drug and

alcohol use than the males from their region, and both the males and females from the Northern Plains region, the females from the Northern Plains had drug and alcohol use rates that were comparable to males from both areas (Whitesell et al., 2006). Looking at two different surveys of Midwestern American Indian drug and alcohol usage, Beauvais and his colleagues found that both male and female American Indians used drugs and alcohol at comparable rates (Beauvais, Chavez, Oetting, Deffenbacher, & Cornell, 1996; Beauvais, Oetting, Wolf, & Edwards, 1989).

Denny et al. (2003) found that an equal number of males and females reported their health as "fair" to "poor" (23.8%). This result was 9% higher than the national average for all people in the United States (14.6%). In the same survey, the researchers found that male and female American Indians had similar obesity rates (23.9%). This was 5% higher than the national average.

While male and female American Indians associate body pride to emotional health; when females maintained a negative body image, they were more likely to be depressed, have eating problems, and have negative acceptance from their peers. Female American Indians tended to react emotionally to worries and concerns while male American Indians did not. Though the evidence for greater male American Indian resilience is thin, there are factors that might lead researchers to believe that males are more resilient. For example, male American Indians respond to parental expectations more than female American Indians. Physical and sexual abuse was associated with poorer emotional health in American Indian females but not in males. However, American Indian males who identified as gay tended to have poorer emotional health than females and heterosexual males (Adams & Phillips, 2009).

Age as a Factor in Resilience

Most research of resilience measures resilience over a fairly short age range and does not break down the resilience scores by age (see Table 1). Schumacher, Leppert, Gunzelmann, Strauss, and Brahler (2005) in Germany mapped resilience levels using the RS. Individuals in the study ranged from ages 14 to 95. The researchers discovered that the RS actually declined for women across the lifespan and stayed the same for men. Lundman et al. (2007) in Sweden discovered that resilience scores did increase with age from adolescence until adulthood but then plateaued through adulthood until old age when it increased again (in males, but not in females). Female subjects increased their RS score from their reproductive years into middle age but then plateaued and stayed constant through old age.

Table 1

Research using the RS as a Measurement

Author	Date	Age Range	Age Mean	Population	*N*
Wagnild & Young	1993	53-95	71.1	Older Adults in Northwest	810
Aroian, Schappler-Morris, Neary, Spitzer, & Tran	1997	No Data	44.3	USSR Immigrants to Israel	450
Garity	1997	No Data	61.5	Alzheimer family caregivers	76
Hunter & Chandler	1999	14-17	No Data	9^{th}, 10^{th}, 11^{th} graders	51
Araki	2000	No Data	19.06	Young Adults in Japan	172

Table 1
(continued)

Author	Date	Age Range	Age Mean	Population	*N*
Christopher	2000	No Data	31	Irish Immigrants in Boston	100
Neill & Dias	2001	No Data	21	Outward Bound participants in Australia	49
Rew, Taylor-Seehafer, Thomas, & Yockey	2001	15-22	18.66	Homeless youth in Texas	59
Heilemann, Frutos, Lee, & Kury	2002	21-40	No Data	Women Mexican and of Mexican descent	315
Johnson	2002	68-90	77.37	Residents in Independent Senior Housing	41
Lindenberg et al.	2002	14-24	19	Mexican-American and Central American low-income women	50
Miller & Chandler	2002	50-65	No Data	USSR Immigrants in Chicago	200
Monteith & Ford-Gilboe	2002	27-44	33.1	Mothers with Toddlers in Canada	67
Heilemann, Lee, & Kury	2003	21-40	28	Women of Mexican descent who Preferred Spanish	147

Table 1 (continued)

Author	Date	Age Range	Age Mean	Population	*N*
Humphreys	2003	19-60	34	Women from a Battered Women's Shelter	50
Marnocha	2003	55-81	65.8	Women waiting for Husbands Heart Surgery	96
Robinson	2003	22-58	33.8	Graduate Students	148
Wagnild	2003	No Data	73.4	Low Income	43
		No Data	69.5	Elderly	176
		No Data	74.9	High Income	161
		No Data	69.1	Elderly	232
		No Data	74.9	Low Income Elderly	172
				High Income Elderly	
				Low Income Elderly	
Black & Ford-Gilboe	2004	18-23	20	Single mothers in Ontario, Canada	41
Heilemann, Frutos, Lee, & Kury +	2004	21-40	No Data	Pregnant or Recently Delivered Women of Mexican Descent	129
Howell	2004	20-53	32.5	Non-Traditional Female Students	54
Nygren, Randstrom Lejonklou, & Lundman,	200	18-85	65	Subjects from Sweden	142

Table 1 (continued)

Author	Date	Age Range	Age Mean	Population	*N*
Schachman, Lee, & Lederman	200	18-28	No Data	Pregnant Women from a Military Installation	91
Broyles	200	39-95	65.4	Individuals Living in a Tennessee City	497
Leppert, Gunzelmann, Schumacher, Strauss, & Brahler	200	>60	69.6	Elderly individuals in Berlin	599
Nygren et al.	200	>85	No Data	Very Old Living in Sweden	125
Pesce et al.	200	12-19	15.4	Brazilian Students	977
Schumacher, Leppert, Gunzelmann, Strauss, & Brahler	200	14-95	48.3	Participants in Berlin	2,004
Parker	200	65-94	71.	Elderly African-American in Assisted Facilities	182
Rohrig, Schleussner, Brix, & Strauss	200	No Data No Data	57.8 62.2	Females in Cancer therapy Males in Cancer therapy	144 68

Table 1 (continued)

Author	Date	Age Range	Age Mean	Population	*N*
Moorhouse & Caltabiano	2007	16-58	31.73	Unemployed Job Seekers	77
Pinquart	2009	14-17	16.7	German adolescents	1228
Protzky, Wagnild, De Bacquer, & Audenaert	2010	17-65+	No Data	Dutch speaking people in the Netherlands and Flanders	3265

Table 2

Cross-sectional Research Using the RS as a Measurement

Author	N	Age Range	Gender	RS Mean
Schumacher et al.	201	14-30	Female	134.10
	562	30-60	Female	133.50
	321	>60	Female	129.58
	175	14-30	Male	136.56
	494	30-60	Male	134.46
	278	>60	Male	136.00
Lundman et al.	72	<30	Female	135
	170	30-39	Female	137
	261	40-49	Female	141
	238	50-59	Female	141
	161	60-69	Female	144
	122	70-79	Female	145
	147	80-89	Female	144
	77	>90	Female	144
	20	<30	Male	142
	34	30-39	Male	140
	53	40-49	Male	140
	41	50-59	Male	135
	99	60-69	Male	145
	102	70-79	Male	140
	80	80-89	Male	144
	42	>90	Male	149

There may be a problem with comparing adolescent resilience research with that of adults. Bonanno et al. (2007) has speculated that resilience is seen differently in adults and children and adolescents. Childhood and adolescent resilience tends to be defined according to the environment the individual lives in while adult resilience is viewed in reference to specific traumatic events. Compared to childhood, adolescence seems to be a time of low resilience and poor outcomes. Werner and Smith (1992) found that the number of people suffering from mental illnesses increased from age 10 to age 18. They further discovered that of the individuals suffering from mental illness at eighteen, more than half had recovered by the age of thirty. Later research discovered the same anomaly, while adolescents who used drugs were more likely to use drugs at age forty than their non-using peers, a significant number of adolescent drug users did not use drugs as they reached their fourth decade (Widom et al., 2006). Other researchers have found this trend in resilience factors. A study that tracked 8 to 17 year old participants found that there was a significant decrease in self-regard and self-confidence from elementary school to the end of high school for female participants.

There was a change of character of young women during puberty – the change from child to a reproductive adult can be devastating and may lead to personality changes, mental illness, or even life-threatening behavior (Glaser et al., 2010). Boys have a similar outcome to females (Klump, Perkins, Burt, McGue, & Iacono, 2007; Oldehinkel, Verhulst, & Ormel, 2011). Rae-Grant et al. (1989) found that parental problems were not predictors of behavioral and emotional disorders in prepubescent boys, but did become a factor as the individuals entered puberty. A similar outcome occurred with friendships and peer pressure. Friendship was not a factor in pre-pubescent

emotional and behavioral disorders until the individual became an adolescent and, at that point, friendship and peer pressure suddenly became a factor.

In contrast to children and adolescents with emotional and behavioral problems, Werner and Smith (1992) discovered that resilient children tend to become resilient adolescents who in turn become resilient adults. Once again, however, they found more resilient females in their resilient sample than males. Research of the survivors of the World Trade Center disaster showed that resilience levels were similar for survivors from age 18-64 years. Over 65 years, the researchers found that resilience levels were significantly higher (Bonanno et al., 2006). The higher resilience levels may be due to less daily stress, less intense daily stress, and fewer negative effects from the stress they had in their earlier years (Stawski, Slwinski, Almeida, & Smyth, 2008).

Age and resilience among American Indian

Research with American Indians has shown similar results to the studies with the general population. Whitbeck et al. (2001) found that from the fifth to the eighth grade resilience declines with this population in a similar manner to the general population. Just as was discovered by Rae-Grant et al. (1987), more recent research discovered that peer pressure is an especially powerful factor in alcohol and drug use among American Indian adolescents (Yu & Stiffman, 2007). Research has found that the American Indian children who were the most vulnerable to peer pressure were the individuals who suffered from low self-worth. These children were also the ones most likely to have early drinking problems (Radin et al., 2006).

The United States Department of Health and Human Services (USDHHS) reported that suicide is the second leading cause of death among American Indian

adolescents, second only to motor vehicle and other accidents. American Indian adolescents have the highest suicide rate of any race in the United States, and death by reckless living (automobile and other accidents) is three times the national average (Curie, 2006). One explanation for this comes from research done in Canada on their First Nation Reserves and in the United States on select reservations. Walls and Whitbeck (2011) found that First Nation adolescents, along with their American Indian counterparts, reported reaching adulthood sooner than European Canadian and European American adolescents. Other researchers have found a similar trend (Belsky, Steinberg, Houts, & Halpern-Felsher, 2010; Jaszyna-Gasior et al., 2009)

The age trends with American Indians and resilience mirror that of the general population. However, no research has been done in the past that encompasses all adult age groups. This research expands on the knowledge of resilience and American Indians and seeks to discover the trend across all adult age groups.

Education/Academic Achievement as a Factor of Resilience

Academic success or failure hinges on a multitude of factors. Factors that will be discussed include parental involvement, support of the desire for academic achievement, socioeconomic status (SES), and peer pressure.

Garmezy et al. (1984) first identified intelligence and academic achievement as factors in stress resistance. The authors discovered that the more engaged high risk students were with academics, the less likely they were to succumb to the risk factors. Oetting and Beauvais (1987) identified education as one of the factors protecting students from drug and alcohol use. Further research showed that academic achievement was a factor in combating stress and protecting the student from disruptive-aggressive behavior

(Langenkamp, 2010). Other research demonstrated that school achievement and high IQ were correlated to ego resiliency (Kwok, Hughes, & Luo, 2007). Trampush, Miller, Newcorn and Halperin (2009) showed that children with average and above-average IQs who had suffered maltreatment in childhood were more likely to stay in school into adolescence than those with low IQs. These researchers found that high-functioning in elementary school made it more likely that the individual would be high-functioning in high school. Thus, intelligence and academic achievement have been shown to serve as protective factors.

Good cognitive skills can act as protective factors against disruptive behavior but cannot assure resilience in every circumstance. In a longitudinal study from Scotland, von Stumm et al. (2010) found that individuals with good cognitive skills were more likely to display academic achievement and rule-abiding behavior. Subsequent research has found that high IQ and academic achievement does not always equate to an ability to deal with all of life's stressors. Breslau, Breslau, Miller and Raykov (2011) found that resilience in one domain of life did not always mean that the individual would show resilience in all domains of life. However, previous research had shown that educational resilience often spills over into other domains such as art, sports and music. Although greater general ability did not always predict immediate academic success, it did predict that the individual was more likely to go back to school sooner after dropping out (Sacker & Schoon, 2007). Flouri, Tzavidis, and Kallis (2010) found that individuals with high ability were more likely to be able to handle stressors and do well in school, especially females. And, while college-educated individuals had more complex lives with greater stressors, they handled the stresses more positively (Moller-Leimkuhler & Yucel, 2010).

Therefore under the right circumstances, good cognitive skills can serve as a protective factor.

High IQ and academic achievement were found to be greater protective factors for females than males. Langenkamp (2010) found that while high IQ served as a protective factor for females, it was found to be a risk factor for males. Wasonga (2002) found that while high IQ, empathy, goals, and aspirations were positive predictors of academic achievement for females, self-efficacy was the only predictor of academic achievement for males. Wasonga also found that males were more sensitive to negative attention and rebukes. This reliance on self-efficacy may explain why Rudasill and Callahan (2010) found that male students maintain more unrealistic attitudes toward their own ability in elementary school, while females maintain more realistic goals. Sacker and Schoon (2007) found that while the self-efficacy and confidence in their own physical abilities might be unrealistic, males maintained these unrealistic goals into adulthood. However, academic achievement was still a greater predictor of resilience for women than it was for men.

One study showed that parental involvement and their aspirations for their children were the greatest predictors of academic competence in the children (Zahn, 2006). Further research into children's responses in school found that children tended to react to their teachers the way they reacted to their parents, and those children who were close to their mothers tended to be close to their teachers as well (Hardy, Carlo, & Roesch, 2010). Previous research showed that maternal IQ was found to be a predictor of academic success and greater resilience. From parental research and academic achievement, it was found that academic achievement rarely occurs without parental

support (Chen, Schwartz, Radcliffe, & Rogan, 2006). Engle and Tinto (2008) found that when a child is in a family where neither parent attended college, it is necessary for them to find outside support to promote academic achievement. So whether it is a parent or a parental substitute, positive interaction can lead to resilience.

Researchers have found that SES can be a mitigating factor in academic achievement. Morales (2010) found that low SES was a predictor of poor academic achievement and that some who were successful academically in these situations were more resilient. Morales also found that schools with high academic standards compelled socially disadvantaged students to achieve higher academic accomplishment. Other research found that maltreated children from low SES environments were academically successful if they were able to form a connection with a teacher (Hardy et al., 2010). Other researchers found that there academic acumen is often a saving factor for maltreated females who tended to find a refuge in schools and church. Once again, high IQ and academic achievement were factors with females from low SES but not for males (Crooks, Scott, Ellis, & Wolfe, 2011). But it was found that academic IQ was not as much a factor for males as was emotional IQ (Vanderbilt-Adriance & Shaw, 2008). Further research found that SES directly affected academic achievement and IQ. The researchers discovered that children from lower SES tended to have a lower academic IQ and thus lower academic achievement (Leonard & Box, 2009).

Peer pressure can be a mitigating factor in academic achievement. Boehnke (2008) found that peer pressure was a predictor of poor academic achievement and that peer pressure tended to negate whatever other positive factors were involved. However, the researchers also discovered that the majority of children do not succumb to peer

pressure. Steca, Alessandri, Vecchio, and Caprara (2007) found that students who use peer pressure to lead tended to be more flexible, adaptive, willing to approach new situations, and resilient. Morales (2010) also found that positive peer pressure could dictate academic achievement, if the peer pressure is in academics, community service, athletics, civic engagement, or religion.

However, not all researchers have found a strong correlation between resilience and high IQ and academic achievement. Langenkamp (2010) found that competence in school sometimes precluded positive engagement with peers and other classroom activities when the individual was under a great deal of stress. This sometimes resulted in negative outcomes due to isolation and lack of peer support. Luthar (1991) found that under high levels of stress, the high academic achievers lost any advantage they had from their organizational skills and competence. She also found that intelligent children tended to be more sensitive to their environments, making them more susceptible to stress.

Education/Academic Achievement as a resilience factor among American Indians

When looking at American Indians and education, the information is often bleak. American Indians have been behind everyone else in the United States educationally for hundreds of years initially because of the lack of formal education and then because of the debilitating boarding schools (Penland, 2010). Even as the boarding schools were being phased out, American Indians were far behind the national norms. Researchers have found that the deficits that American Indians suffered through elementary school only increased as the students entered secondary school (DeJong & Hall, 2006). While all students in the United States dropped out at a rate of 23%, American Indians dropped out at a rate of 50% (Swaim, Beauvais, Chavez, & Oetting, 1997). Later researchers found

some improvement but still deficits. Research in 1995 found a high correlation between strong cultural identity and knowledge of tribal language and dropping out of school (James, Chavez, Beauvais, Edwards, & Oetting, 1995). Educational levels are still low on reservations. Duran et al. (2009) found a correlation between low education and American Indians suffering from anxiety, substance abuse, and multiple disorders. Whitesell et al. (2006) found positive correlations between drug abuse and higher education and drug abuse and living with a partner. These correlations have never been seen with any other group.

Dropout rates continue to be a problem in Indian Country. A study from the Northwest in 1995 found that while the entire region had dropout rates of 17%, in the areas with large American Indian populations, the rates averaged 34% (Riles, 1995). In the Southwest, Vadas (1995) discovered that the dropout rate for Navajo students was 31%. Of the 69% who graduated from high school only 16% eventually attended college, and of those 16%, 75% never made it through their freshman year. Recent research shows that high school completion rates in Indian country are still much lower than with other ethnic groups in the area and other parts of the country. In the twelve states that have the largest proportion of Natives, less than 50% of potential Native graduates actually graduate each year (Faircloth & Tippeconnic, 2010). Part of the dropout problem may be due to family involvement. Davis-Kean and Sexton (2009) discovered that in European American families when the father is involved with the child's education it increases the students' possibility of success. Research from Finland disclosed similar results as the father's belief in the child's success carried excess weight with the participant children (Magi, Lerkkanen, Poikkeus, Rasku-Puttonen, & Nurmi, 2011). But in American Indian

families when the father is involved with education the opposite occurs, the student is less likely to be successful (Hossain & Anziano, 2008). Unfortunately, American Indians may be suffering fallout from the forced boarding school education of 100 years. Marker (2009) reported that even today students in the educational system may not trust the system because of stories that they have heard from their parents and grandparents.

The following researchers are showing that American Indians and their families are embracing education more and more into the 21st Century. While Vadas (1995) reported twice the dropout rate for the Navajo in the Southwest, contemporary statistics show that dropout rates among American Indians are half what they were in 1995 (Lente-Jojola, Jacobs, & Gebhardt, 2011). Vadas (1995) found that even less-educated parents were pushing their children to finish their schoolwork and that pressure from families was especially efficacious in getting females to complete school. Researchers in Indian Country have used connectedness with education and strong educational goals as a correlate with resilience (Cheadle & Whitbeck, 2011; Cummins et al., 1999; Montgomery et al., 2000; Strand & Peacock, 2002; Whitbeck et al., 2001). Montgomery et al. (2000) reported that American Indian learning styles tend to be different. Their learning styles tend to include observational learning, direct experience, and mentoring. Montgomery and her colleagues also discovered that family support was very important, especially when the individual was pursuing higher education. Whitbeck et al. (2001) refuted James and his research dealing with dropping out correlating positively to enculturation and speaking one's own language. The researchers found that strong enculturation was a factor in school achievement and resilience. Strand and Peacock (2002) found similar results to the Whitbeck study in their research done in the northern United States and

Canada. The researchers found that students tended to stay in school when they were well grounded and connected to their tribal culture. Hayward, Das, and Janzen (2007) found that American Indian children who have strong reading skills, good problem-solving skills, and the ability to communicate do better in school.

The differences in these conflicting studies may have to do with the sites of the research and the times that the researches were done. American Indians have suffered for generations with forced, oppressive education that has had little positive information about them and their cultures (Yellow Horse Brave Heart, 1998). The latest studies tend to point to a more positive outcome for American Indian students and better feelings toward the educational systems (Hayward et al., 2007; Riles, 1995; Strand & Peacock, 2002; Whitbeck et al., 2001). However, it cannot be expected that research among American Indians in one part of the country will equate to research in another part of the country with a differing group. Each tribal grouping in the United States represents a separate entity with different educational experiences and responses to those experiences as well as unique responses to educational research and resilience.

Enculturation as a Factor of Resilience

Researchers looking at immigrants and minority groups have discovered that maintaining one's birth culture has more positive outcomes than attempting to adopt an alien or majority culture. Research by Bals, Turi, Skre, and Kvernmo (2011) among the Sami in Norway showed that the individuals who maintained their own collectivist culture had fewer emotional and behavioral problems as compared to the individuals who rejected their own culture for the Western nuclear style family structure. Marsiglia, Kulis, Perez, and Bermudez-Parsai (2011) working with Mexican immigrant mothers in Arizona

found similar results. Marsiglia and his colleagues discovered that maintaining a strong indigenous culture reduced the risk of feelings of hopelessness and depression despite the dearth of mental health services available to the population.

This positive identification with one's culture does not always dictate that educational outcomes will be positive. Fryer (2006), looking at involuntary minorities (described as African Americans, American Indians, Pacific Islanders, Alaska Natives, select Hispanic groups) found that often to buy into the educational system was considered by members of these groups to be acting White. The researcher found that these individuals often maintained self-imposed cultural and linguistic boundaries that they used to mark their own identity. Fryer discovered that educational reluctance began in elementary school and became more pronounced in junior high and high school. While this behavior was pronounced in African American children, the researcher found that it was even more acute among American Indian children. Fuller-Rowell and Doan (2009) found similar results among involuntary minorities. The results were especially pronounced among African American and American Indian adolescents. Similar results were found among the Hmong. (Moua & Lamborn, 2010).

Research indicates that African American parents provide the most extensive ethnic socialization of all the groups represented in one review (that included Japanese Americans, African Americans, Chinese immigrants, Asian Americans, Mexican immigrants, American Indians, and Mexican Americans), often discussing ways to deal with prejudice and discrimination (Rodriguez, Umana-Taylor, Smith, & Johnson, 2009). Other researchers found that by teaching their children to mistrust authority and to use self-reliance and resourcefulness, African American parents were insulating them from

prejudice and discrimination. The result was what the parents and the researchers deemed resilience (Hall & Bowie, 2007). Research showed that strong racial identity allows African Americans to overcome social obstacles that leads to resilience (Stevenson & Arrington, 2009). Researchers have shown that strong Afro-cultural identity was more acceptable to African American peers, providing the individuals with positive social feedback that can lead to resilience (Brown, Linver, Evans, & DeGennaro, 2009). The groups with the least socialization in the Rodriguez et al. study were Chinese immigrants and American Indians.

However, there is some degree of disagreement as to what type of cultural identity leads to academic success among minorities. Goff, Martin, and Thomas (2007) contend that for academic success, the shrewd African American student will *act White* while dealing with the European American academic institution and then *act Black* while in the African American community. Some researchers have found that biculturalism leads to cognitive flexibility, adaptiveness, and self-esteem, which they felt, was a sign of resilience (Clark, Coleman, & Lindwall, 2006). Others have found that maintaining biculturalism was associated with higher measures of academic achievement among Mexican Americans (Taxis, 2006). Using the MEIM, the researchers found that students of Mexican descent who were other-group oriented (willing to interact with other groups other than your own) tended to have a more positive attitude toward education and a higher GPA. However the researchers did not find a correlation between strong ethnic identity and a positive attitude toward education and school (Garza, 2007). Kim and Omizo (2006) found that enculturation (identifying with one's own culture) and acculturation (surviving in the dominant culture) were not mutually exclusive. An

increase in acculturation did not mean a decrease in enculturation. Enculturation can have positive effects on the wellbeing of the individual. These positive effects can lead to resilience. However, strong identification with one's culture does not dictate academic desire or academic success.

Enculturation as a resilience factor among American Indians

Oetting and Beauvais (1990/1991) were the first to identify enculturation as a factor of resilience in American Indian students. The researchers discovered that strong cultural identification correlated to strong family caring, self-esteem, and school adjustment. Subsequent research demonstrated this resilience from strong cultural adherence when they looked for eating disorders in a group of American Indian women in the Southern Plains. The researchers found that while anorexia and bulimia nervosa were rare, overeating problems were more common than in the general population. They discovered that the stronger the enculturation of the women tested, the less likely they were to be obese. The more acculturated the women, the more likely they were to be obese (Dorton & Winterowd, 2008). Stone et al. (2006) found that enculturation in American Indian groups strengthened resilience in individuals and families, which in turn served as a means of community survival. The cycle of life and survival continue. LaFromboise et al. (2006) found that the strongest predictor of resilience was enculturation. The researchers discovered that traditional, resilient youth were able to avert high-risk family circumstances by avoiding being overwhelmed by the family situation, being compassionate but detached, being understanding, and seeking outside support. However, LaFromboise and her colleagues discovered that resilience declined from childhood to adolescence, despite the level of cultural identity.

Whitbeck (2006) speculated "there is a 'hunger' among American Indian adults and adolescents for their cultural heritage" (p. 185). The source of this cultural heritage appears to be from the social structure that most American Indian communities maintain. American Indian communities tend to be communalist in nature, where people are judged by their contributions to the group rather than their individual success. This communal mindset affords the strongest unit in the community as the extended family and gives the children in the community status approaching that of an adult (Mohatt, Fok, Burket, Henry, & Allen, 2011). Discipline of children tended to be less severe than in more individualistic societies (Calabrese, 2008).

Researchers over the years have discovered that the teaching of enculturation tended to come from immediate family members or grandparents. LaFromboise et al. (2006) found that maternal warmth led to increased school achievement and a stronger likelihood of resilience. Petrie and Holloway (2006) found that the mother's level of traditionalism directly equated to their children's academic and socioemotional competence in school. Strand and Peacock (2002) reiterated these results in their research. The researchers found that the strongest reason for children to stay in school was their connection to tribal culture. This, of course, led to a strong connection to parents, their communities, teachers and the school itself. In circumstances when the parents are unable or unwilling to teach their children proper cultural identity, it becomes the responsibility of the grandparents to achieve this necessity (Drywater-Whitekiller, 2006). Byers (2010) found that in Oklahoma, grandparents were the major source of enculturation in American Indian families. The researchers found that grandparents felt a great responsibility to pass on the American Indian religion and culture and were mildly

antagonistic toward their own children when they did not work to preserve their tribal culture.

Researchers have found that cultural identity can protect American Indians from serious deviance (Oetting & Beauvais, 1990/1991). Recent research indicates that non-traditional American Indians participate in more risky behavior including drug and alcohol use than their traditional cohorts (Allen et al., 2008; Baldwin, Brown, Wayment, Nez, & Brelsford, 2011; Kulis et al., 2011; Mmari, Blum, & Teufel-Shone, 2010; Yu & Stiffman, 2007). The cultural protective component was the main factor in alcohol cessation identified by Stone et al. (2006) in their work with adults who had stopped drinking alcohol on 9 reservations and reserves in the United States and Canada. The researchers identified traditional spirituality and cultural identity as having a strong positive effect on alcohol cessation.

Part of enculturation must compare the American Indian culture in contrast to the dominant European American culture. Drywater-Whitekiller (2006) felt that American Indian youth must be taught to live in both worlds (practice biculturalism), but seek wisdom from their Native culture. Strong and Peacock (2002) see biculturalism only possible if the adolescents feel comfortable in their strong Native culture; only after they know themselves can they feel comfortable in the non-Native world. In fact, Radin et al. (2006) suggest teaching American Indian youth bicultural competence to preclude delinquency and substance abuse. The researchers also suggest that teaching bicultural competency skills can be used in treatment of American Indian youth for substance abuse and delinquency.

There are pressures outside the community that are destructive to American Indian cultural identity. Carter and Forsyth (2010), conducting research on discrimination with African Americans, American Indians, and European Americans, discovered that while American Indians and African Americans had similar discrimination scores, they were significantly higher than those of European Americans. Cheadle and Whitbeck (2011) reported that perceived prejudice and discrimination made American Indian youth lose their sense of cultural identity. LaFromboise et al. (2006) found that discrimination had a negative correlation to resilience, which she speculated led to poor mental health. Whitbeck, Walls, Johnson, Morrisseau, & McDougall (2009) discovered that perceiving discrimination creates depressive symptoms in American Indians. While traditional practices serve as protective factors, those with weak cultural ties were more likely to be depressed. Discrimination compounded with other stressful life events such as: frequent moving, changing schools, having relatives who are victims of crime, frequent death on the reservation, the probability of serious illness or injury, the likelihood of being laid-off, the possibility of being on government assistance, and the necessity of taking financial responsibility of a relative, takes their toll on American Indian physical and mental health (Whitbeck et al., 2006).

From the research, it appears that enculturation is a strong factor in the resilience of American Indians. Unfortunately, in areas where discrimination is common, in much of Indian Country, cultural identity and thus resilience might be compromised. Prejudice and discrimination could prove to be contravening factors in this study.

Stressful Life Events as a Factor of Resilience

Researchers have identified increased stressful life events as affecting resilience. In the Kauai Longitudinal Study, Werner and Smith found that while all the participants in the study suffered significant stressful life events, the resilient individuals suffered fewer than their less resilient cohorts (Werner & Smith, 1992). Researchers looking at third through fifth graders, found that as stressful life events increased, so did the number of teacher-rated and parent-rated problems. The increased stressful life events also precipitated a decrease in grade point average despite the level of social support or problem-solving ability of the children (Storr, Schaeffer, Petras, Ialongo, & Breslau, 2009). Research of Gulf War veterans found that the greater the stressful life events the individual had suffered, both while on active duty and outside of the military purview, the lower the hardiness level of the veteran (Vogt & Tanner, 2007). Subsequent research working with the Veterans Administration conducted a follow up study by surveying Gulf War veterans for severe war time trauma (killing, witnessing the death of fellow soldiers, exposure to imminent death) and found that the greater the exposure to trauma the more severe the symptoms of PTSD (Maguen et al., 2011). Work with other groups of adults has demonstrated similar results. Research by deRoon-Cassini, Mancini, Rusch, and Bonanno (2010) demonstrated that the greater the stress, the greater the likelihood of depression and the lower the level of hardiness noted. Hjemdal, Friborg, Stiles, Rosenvinge, and Martinussen (2006) in Norway, discovered that individuals high in resilience did not suffer mental illnesses with stressful life events, but as the stressful life events became more serious, resilience levels declined and mental illness was a greater probability.

Stress early in life and the level of stress suffered can dictate how the individual will be affected by their life events. Renshaw (2011) looking at veterans from the Iraq and Afghanistan Wars discovered that the closer to the battlefield his participants were, the greater the stress that the individual suffered. The more stress they suffered, the more likely they were to have mental health problems. But researchers have also found a connection between early life stress and exacerbated reactions to stress later in life. McKeever et al. (2006) working with Vietnam War veterans discovered that the greater the prewar stress, the more severe the symptoms of post-military PTSD. Marmar (2010) testified before the Congressional House Committee for Veterans Affairs that Vietnam Veterans who had suffered traumas prewar were more prone to combat PTSD, in fact, an early prewar history of trauma was a more important factor in the development of PTSD than level of combat.

According to research, the most severe stress that minorities can suffer is racism. Utsey, Giesbrecht, Hook, and Stanard (2008) discovered that the stress of racism caused greater negative psychological distress than stressful life events. However, according to the work by Phinney and Chavira, (1995) the most common response to the racist incidents experienced by minority groups they researched was to ignore the negative incident. Unfortunately, research by Triffleman and Pole (2010) found that cultures that teach passive acceptance or avoidance of stressful incidents tended to suffer PTSD more readily. The best way to confront racism is to acknowledge it and deal with it.

Research seems to indicate that as stressful life events increase, the probability of resilience decreases. Traumas and stressors early in life can lead to a life of vulnerability.

One very important stressor for minorities is racism that all too often permeates their lives.

Stressful life events as a resilience factor among American Indians

Curie (2006) discovered that AI/AN have the highest suicide rate of any race in the United States. It is the second leading cause of death among adolescents (after accidents) – 19% of AI/AN high school students admit to seriously contemplating suicide every year. Violence and trauma seem to be a way of life among many American Indians. In studies looking at traumatic incidents experienced among different American Indian populations around the country, statistics were very similar. Research by Whitesell, Beals, Mitchell, Manson, and Turner (2009) of 1,885 adolescent Northern Plains American Indian adults disclosed that 92.7% of the individuals reported having experienced or witnessed at least one traumatic incident before they reached adulthood. Evans-Campbell, Lindhorst, Huang, and Walters (2006) found similar results when they surveyed 112 AI/AN women in New York City. The researchers found that 65% of the women had experienced some type of interpersonal violence of which 28% had experienced childhood physical abuse, and 48% had been raped. Manson et al. (2005) surveyed 3,084 adolescent and adult American Indian tribal members in two different locations, the Southwest and the Northern Plains. The researchers took their statistics and compared them to two national surveys, one in the United States and one from Australia. They discovered that while the exposure rates of trauma for American Indian men were comparable to the two national surveys (62.4% for American Indians, 60.7% from the U.S. national survey, and 64.6% for the Australian national survey), the exposure rate for American Indian females was very much higher than the surveys for women in the two

national surveys (69.8% for American Indians, 51.2% from the U.S national survey, and 49.5% for the Australian national survey).

Increased stressful life events can cause serious problems among American Indians. Boyd-Ball, Manson, Noonan, and Beals (2006) reported that as the number of traumatic events increased, so did the probability of the individual developing an alcohol use disorder. Nalls, Mullis, and Mullis (2009) found similar results when looking at marijuana usage. They found that marijuana usage increased with the accumulation of stressful life events (increased crime and drug use in the neighborhood and school environment). The trauma in Indian Country may account for the rates of alcohol and drug use on the reservations: drug use is twice as high as the national average while binge drinking is at 13.8% for American Indians compared to a national average of 10.3% (Tenkku, Morris, Salas, & Xaverius, 2009). Yabiku, Rayle, Okamoto, Marsiglia, and Kulis (2007) reported that external factors stacked the deck against American Indian adolescents, poverty, poor educational opportunities, stressful family environments, and excessive peer pressure from friends and family who use drugs and alcohol.

Other problems on the reservation lead to increased stressful life events. Dropout rates on some reservations approach 50%. Among all American Indians, the dropout rate is second only to Mexican Americans. Dropouts demonstrate a high level of problem behavior across all races (Plotts & Sable, 2008). American Indian adolescents participate in reckless living. Motor vehicle and other accidents are the leading cause of death among American Indians at rates that approach three times the national average (Gross, Axberg, & Mathieson, 2007). The lives of American Indian youth are ones of constant disruption and flux compared to the national averages: they are twice as likely to have

moved in the last year; they are three times more likely to have changed schools; they are 25 times more likely to have a relative who is the victim of a crime; they are six times more likely to have been robbed or burglarized; they are twice as likely to have a close friend die; they are twice as likely to have a serious injury or illness (Whitbeck, 2006). To exacerbate all the negatives that American Indians suffer, discrimination and historical trauma are always lurking in the backs of their minds (LaFromboise et al., 2006).

Despite all the stressful life events that American Indians confront, they have learned to cope with their environment. In research done on the Hopi reservation in Arizona, Robin, Chester, and Rasmussen (1998) discovered that despite the astronomical levels of alcohol usage (88.5% for men and 57.1% for women), trauma was very common, but it did not cause the depression and anxiety that it might normally cause in other populations. Rates of PTSD, depression and anxiety were within national norms despite all the negative environmental factors. The researchers speculated that this lack of pathology might be because of the mutual abuse that commonly occurred in the population between couples. Because of this, the women did not tend to see themselves as victims. Similar results were found in the Jones et al. (1997) study mentioned above. Though 61% of the population had witnessed or experienced a traumatic incident, only 3% suffered from diagnosable PTSD. While there was an increase in behavioral disorders and substance abuse in the population surveyed, there was no drop in academic performance. If this seems to go against national norms, there are other aspects of American Indian environmental averages that prove to be the antithesis of national averages. Manson et al. (2005) report that where more education in the general population equates to more stress but less traumatic incidents, among American Indians

more education is related to more trauma, and greater poverty is actually related to less trauma.

American Indians: Tribal History and Psychological Functioning

From first contact, Western civilizations have viewed the indigenous peoples of the Americas from a point of misperception and misinformation. As the heirs to the grandeurs of Ancient Greece and Rome and the modern metropolises, the Western explorers saw themselves as the apex of civilization and others as poor or incomplete examples. Even when faced with evidence to the contrary, they chose to maintain their Eurocentric and xenophobic theories. The terms *heathen* and *savage* were not sobriquets that were intended to identify the indigenous peoples accurately, but to show the invaders surety in their own superiority. Throughout the history of the accumulation of information about the indigenous peoples of the Americas, advances in knowledge have been dammed by misperceptions, misinformation, and entrenched ideas.

Despite what they encountered, Europeans failed to accept the indigenous Americans for what they were. The people of the Americas were certainly not bereft of spirituality or a sense of who they were. Most groups maintained (and still maintain) creation stories that identified them as unique among the teeming groups that inhabited most of the arable regions of the Americas. Many tribes refer to themselves as *the people*, a statement of separateness from everyone else. The forced assimilation and virtual genocide of the indigenous people and cultures of the Americas has left an indelible traumatic impact on these people. Only by maintaining a *bunker mentality* about their various cultures have they been able to survive intact. When you look at the historic and anthropologic evidence of the Americas, it is not difficult to see why the inaccurate

labeling of indigenous Americans has been so traumatic, why the loss of their culture has been so devastating. But this was just the beginning of the historical trauma that would include genocide, concentration camps (reservations), and forced assimilation. Part of the resilience of the American Indian today has been attained despite the Western blindness to a rich past and the attempted destruction of many diverse cultures.

The history of European expansion and the American Indian interaction is one of conflict and misunderstanding. While the conflict sometimes involved bloody combat with vicious degradations on both sides, more often it was mere contact and the resulting devastation on the microbial level that proved the great equalizer in the interaction. The misunderstanding began and continues with the continual blanket treatment of all American Indians as a cohesive race. At the time of first European contact, thousands of different tribes comprised of untold millions of people inhabited the Americas. The Aztec Empire alone has been estimated at over 25 million people, and conservative estimates of the rest of the Americas range well over 100 million people (Dull, 2007). Many anthropologists and archeologists still support the Bering land bridge theory dated around the advent of the Clovis point 13,000 years ago (Bradley & Stanford, 2006; Perego et al., 2010). However, archaeologists have found evidence of first habitation of the Americas as far back as 50,000-60,000 years at the Topper site in South Carolina, which matches the estimations of the first human Diasporas out of Africa (Smallwood, 2010; Toner, 2006; Waters, Forman, Stafford, & Foss, 2009). Other ancient human campsites have been found in Meadowcroft Rockshelter in Pennsylvania (Guthrie, 2006), Cactus Hill in Virginia (Meltzer, 2009), and Monte Verde in Chile (Dillahay et al. 2008), all dated long before the first Clovis points were constructed (Prasciunas, 2011).

When comparing the civilizations of the Europeans and the indigenous Americans, the common assumption is that the superior civilization was able to overcome the hunter/gatherer, weaker civilization (Capurso, 2010). But actually, the sophistication and accomplishments of the indigenous American civilization often mirrored and sometimes even surpassed that of Western Civilization. For example, Western Civilization began in the Fertile Crescent in Mesopotamia approximately 5,500 years ago (Faure & Kitchner, 2009), at the same time a group of hunter-gatherers in northeast Louisiana was building the eleven Ouachita mounds, the tallest 25 feet high (Gibson, 2007; Ortmann, 2010). The Egyptian Empire started approximately 5,000 years ago and the first Egyptian pyramid, the step pyramid at Saqqara, was completed about 350 years later, a repository for the first Egyptian mummies (Lawler 2006; Warner, 2009). But Egyptian mummies are not the oldest known mummies. 2,400 years before Saqqara, the Chinchorro, a fishing civilization along the Chilean coast, mummified their first individual. The Chinchorro felt that the dead acted as intermediaries with their gods and, therefore, worshipped the dead as sub-deities. This form of worship would be practiced in that area and in the Andean empires until the invasion of the Spanish in the 16th century (Arriaza et al., 2010). At the same time the Egyptians were getting their start, the first Andean empire was taking hold along the Peruvian coast. The Norte Chico of Aspero and Caral were building an intricate trade with surrounding groups and constructing intricate stepped pyramids as high as 70 feet with 240-feet sides (Haas & Creamer, 2006).

Over the next 500 years, the Egyptians would bury hundreds of pharaohs in pyramids and less impressive structures, the most noteworthy, the Great pyramids and the sphinx of Giza. The Great Pyramid of Khufu in Giza is the tallest pyramid in the world

and took 23 years and tens of thousands of laborers to accomplish (Brier, 2007). The Norte Chico were never able to accomplish such a singularly prodigious structure, however, the cities of their empire were extensive and the irrigation system that they established would feed the area into the modern era (Haas & Creamer, 2006).

While the Minoan and Mycenaean cultures were starting in the Aegean area, maize was developed in Mesoamerica securing a ready food source for the Ancestral Puebloans (formerly referred to as the Anasazi) in the American Southwest, the Olmecs in Mesoamerica, the Chavin in the Andes, and the Mound Builders in the Midwest. Over the next 3,000 years until the birth of Christ, trade routes were established that linked the two continents and provided exotic trade goods for the Adena and Hopewell Mound Builders of the Midwest and parrot feathers for the Ancestral Puebloans in the Southwest (Washburn, Washburn, & Shipkova, 2011).

Many consider the Olmec the earliest civilization of North America. Archaeological dating of Olmec sites in the northern Yucatan have varied, but the earliest dates approach 3,500 years ago (Sharer, 2007). While the Olmec remain enigmatic, the first pictographic writing occurred here, writing that would still be used when the Spanish invaded the continents 3,000 years later (Mora-Marin, 2009). The Olmec are also known for their fine pottery and their massive carved heads that dot the area (Tiesler, 2010). There is evidence of extensive interaction between the Olmec and their neighbors. The Olmec were the first group in Mesoamerica to build on maize as a staple crop (Kolb, 2010; Seinfeld, von Nagy, & Pohl, 2009). They were contemporaries of the Ancestral Puebloans in the Southwest and the Chavin in Peru (Arnold, 2009). As the Olmec, Chavin, and Ancestral Puebloans were getting their start in the Western Hemisphere, the

first Chinese farming and writing was taking place in the Shang Dynasty, and the ancient Greeks were self-destructing with the Trojan War and the Doric Invasions (Stochokas, 2011).

The Ancestral Puebloans started to build their culture 3,500 years ago. In time the Ancestral Puebloans would occupy some of the least hospitable lands in the Southwest and wring such an opulent life from the area through irrigation and extended planning that they would be able to expand over 30,000 square miles and build 400 miles of roads, some as wide as 30 feet. The culture remained intact for 2,700 years. In the 10th century, the Ancestral Puebloans built Pueblo Bonito in Chaco Canyon. The structure was five stories high and contained approximately 800 rooms. No building in the United States would surpass it until 1870 (Cameron & Duff, 2008).

The Chavin started building their civilization in the Andes 150 years before the Trojan War, 3,400 years ago. The Chavin are considered the Andes first extensive civilization, mostly because of their writing and expansive building. Distinctive pottery designs and intricate metallurgy sets the Chavin apart from past groups in the area and rivals the work coming from the Aegean (Cesareo et al., 2011). Chavin architecture demonstrates the beginning of techniques and styles that have withstood not only time but also frequent earthquakes and the encroachment of vegetation. This permanent style of building would be copied by subsequent Andean civilizations and would reach its apex with the high Inca architecture so prevalent in the buildings in Cuzco and Machu Picchu (Contreras, 2010).

The Mound Builders were still described as hunter-gatherers at this time, yet they were able to bring enough manpower and resources together to create some truly

fascinating sites. The group at Poverty Point in Northeastern Louisiana began their work 3,700 years ago in an area buried in fine loess with no stones available within 20 feet of the surface. They imported stones to the area from as far as 1,400 miles away: copper from Northern Minnesota and the Ontario region of Canada; gray northern flint from beds in southern Indiana; Galena and Crescent Hills chert from northern Illinois; novaculite, hematite, magnetite, and quartz crystal from southern Missouri and northern Kentucky; citronelle gravel from Arkansas; Catahoula sandstone from southwestern Louisiana; soapstone from eastern Alabama; and pickwick chert from Tennessee (Gibson, 2006). While Poverty Point is the major site, these individuals inhabited seven areas up and down the Mississippi River. This group was able to survive on the bounty of the area for 1,700 years while creating extensive earthen structures, thick-walled pottery, and intricate ritual or decorative objects. Earth-mother figurines abound, as do fat-bellied snowy owls and birds with spread wings, similar to the U.S. military eagle. In fact, the major mound at the Poverty Point site is in the shape of a bird with its wings spread (Kidder, Roe, & Schilling, 2010; Sherwood & Kidder, 2011).

One of the possible trading partners with the Poverty Point Mound Builders was the newly agrarian Adena of the Ohio River Valley. Starting approximately 3,000 years ago, the Adena built multiple burial and ritual mounds and made the switch from hunter-gatherers to agriculture. There is evidence that the Adena focused on a more settled lifestyle, creating heavy but fragile pottery for the storage of goosefoot, sumpweed, and maygrass grains. Their ritual burial and mound building was quite intricate (Hays, 2010). Grave Creek Mound in Moundsville, West Virginia is 69 feet tall and has a circumference of 295 feet. The Miamisburg Mound in Miamisburg, Ohio has almost

identical dimensions but was built 600 years later. Effigies, gorgets, statues, and pottery found in some of the burial mounds show intricate craftsmanship. All this building and craftsmanship occurred around the time of the founding of Rome 2,500 years ago (Clay, 2009; Lepper, 2008).

While neither the Adena nor their successors, the Hopewell, would ever match the empire building of the Romans, the successors of the Olmecs and Chavin would match the Romans in military might and building prowess. Maize would make Mesoamerica the breadbasket of the area and allow the Maya to expand throughout the region, building some of the most prodigious structures known to man (Lentz & Hockaday, 2009). In South America, the Moche and eventually the Inca would match the Romans with their military might and their extensive building (Millaire, 2010). The road system that the Inca constructed through the Andes would have no equivalent in Europe, or any other part of the world for that matter, until the modern era (Caudra, Karkee, & Tokashi, 2008; Dean, 2007).

However, the Mound Builders of North America were not done. Mound building moved down the Ohio River to the Mississippi and the size of the mounds became enormous. Around modern St. Louis, the Cahokia complex was built. Monks Mound at Cahokia covers 15 acres and is over 100 feet tall. Cahokia is the largest man made mound in the United States. The Cahokian complex also brags the second and fourth largest mounds in the United States. The area was developed between 1000 and 1300 A.D. At its zenith, the area supported 30,000 inhabitants making it larger than any city in Europe at the time (Benson, Panketat, & Cook, 2009; Reed, 2009).

The Mississippians were not the only prodigious builders. The Maya in Mesoamerica carved an empire from the Central American jungles and proceeded to build some of the most formidable structures in human history. While power jockeyed between one city-state and the other, the building that took place by the politically elite approached, and in many ways surpassed, anything that had ever taken place in Africa and Eurasia. The second and third largest pyramids ever built were constructed in Mesoamerica. The 200-feet-tall, 700-feet-sided Pyramid of the Sun in Teotihuacan built over 200 years around 100-300 A.D. is the third largest pyramid in the world (Cowgill, 2008) while the Cholula pyramid is either the second largest pyramid at a height of 181 feet and sides of 1,200 feet, or the largest as the entire pyramid covers 26 acres (Stanton, Brown, & Pagliaro, 2008). But the Mayan world is not just these pyramids; urban centers like Tikal and Chichen Itza identify the Mayan civilizations as superior builders (Fargher, Heredia Espinoza, & Blanton, 2011). Mysteriously, by the time the Spanish landed in the Americas, the Mayan urban centers and empire had been abandoned though the Mayan people survive, intact to this day (Lucero, 2007).

The major civilizations that the Spanish faced as they marched their way across two continents were the Inca in Peru, the remnants of the Mississippians in the North American Southeast, and the Aztecs in Mesoamerica. The Spanish would let nothing stop them, and microscopic, pathogenic allies aided this attitude. Wherever the Spanish marched, their microbial footprint preceded them. Both Cortes in Mexico and Pizarro in the Andes were preceded in their invasions by waves of smallpox that devastated the empires and decimated the leadership. It has been estimated that as many as 90% of all the indigenous people in the Americas died from diseases after their first contact with

Europeans (Moreno Okuno, & Ventosa-Santaularia, 2010). Chronicles of first contact along the route of DeSoto's expedition include stories of the miles and miles of fields and rich villages along the entire trek. When de Luna revisited the area 20 years later, he found the area overgrown and depopulated (Childs & McNutt, 2009). Around the turn of the 17th century, both England and France sought to settle in the Cape Cod region to exploit the magnificent fishing in the Grand Banks area. Both Verrazzano and Champlain plied the area looking for a likely (and empty) area to establish a colony. The entire area was full to overflowing with indigenous people and both explorers abandoned the idea. By 1620 when the Pilgrims landed in Massachusetts, the indigenous populations were gone and all that was left were empty fields and cemeteries (Marr & Cathey, 2010). In fact, robbing the American Indian graves during that first winter was the only way the colonists were able to survive (Philbrick, 2006).

Besides the use of microbial allies, Europeans also pitted one group of American Indians against another and used select tribes as mercenaries against the dominating indigenous civilizations. This strategy was used by the conquistadores and enabled them to overthrow both the Aztecs and Inca (Ford, 2007). Later the French would use the same techniques against the British during the French and Indian War (Starbuck, 2008). The British would use the same technique against the American revolutionaries and would set an antagonistic precedent between the indigenous populations and the fledgling government – an antagonistic president that may survive to this day (DeJong, 2007; Ganter, 2007; Taylor, 2010).

Unfortunately, nothing could save the indigenous populations. Europeans attempted to deal with the separate tribes as if they were children who could be

manipulated. The Europeans generalized the behavior of one group on all the groups. They rarely distinguished between the various tribal groupings, referring to them all as "savages" and "heathens" (Washington, 1783/2000). Treaty after treaty would be made and then broken. Europeans wanted land and they were loath to be stopped. Even when the government agreed with the local tribes as in the case when the Supreme Court agreed that the Southeastern tribes, the *five civilized tribes*, should not be made to leave their homelands, President Andrew Jackson ignored the court and allowed their removal nonetheless (Jackson, 1829/2000). The policy of annihilation or removal would be followed through to the end of the Indian Wars in 1890. With the inconsistent policies of previous presidents, Jackson decided to distance himself from the Indian issue by establishing the Commissioner of Indian Affairs in 1832. In his first report to Congress, Elbert Herring stated that:

> On the whole, it may be matter of serious doubt whether, even with the fostering care and assured protection of the United States, the preservation and perpetuity of the Indian race are at all attainable, under the form of government and rude civil regulations subsisting among them. (Herring, 1832/2000, p. 63)

Such confusion as is represented in Commissioner Herring's initial report would affect the treatment of American Indians until the end of the Indian Wars. Fluctuating between annihilation and assimilation, sometimes the Indians' worst enemies would be those who claimed the desire to preserve them. In a report from the Doolittle Commission to determine why the number of American Indians was declining all across the country: "In our Indian system, beyond all doubt, there are evils, growing out of the nature of the case itself, which can never be remedied until the Indian race is civilized or shall entirely disappear" (Doolittle, 1867/2000, p. 104).

In 1872, it became the policy of the federal government to assign each reservation to Christian missionaries to accelerate the assimilation process (Walker, 1872/2000). By the 1880s, the groups in favor of preserving American Indians met at Lake Mahonk in upstate New York to influence the federal government. At the 1884 conference they resolved that tribes, themselves, were the greatest hindrance in bringing American Indians into Christian civilization. They also supported the destruction of the reservations, the individual allotment of lands to each adult, the education of Indian children, and the promotion of American citizenship (Lake Mahonk Conference, 1884/2000). From the Lake Mahonk resolutions, the federal government expanded the boarding school movement to include almost all tribes in the west. This policy resulted in most American Indian youth being taken off their own reservations to be educated at regional boarding schools. A stated purpose was to *break* the children from their families so that they might be absorbed into the European American population (Meriam, 1928/2000). The loss of family would prove devastating to generations of American Indians. Even though most of the boarding school alumni would return to their reservations, the dearth of parenting that they had experienced gave these children few skills when it came time to nurture their own young. Strict discipline reflected the corporal punishment they suffered at the hands of the boarding school staff. Boarding schools tended to be overcrowded, understaffed, with novice or unqualified teachers. Physical and sexual abuse was not uncommon. Students were issued uniforms to replace their tribal outfits. Their hair was cut short. They were punished for speaking their own languages or performing any traditional rituals (Mooradian, Cross, & Stutzky, 2006; Robbins, Colmant, Dorton, Schultz, & Ciali, 2006; Smith, 2006).

In 1887 the Dawes Act was passed. The Dawes Act was also known as the General Allotment Act and allowed for the distribution of Indian lands to individual American Indian families. Any excess land on the reservation was sold at auction and a portion of the proceeds was given to the tribe. The stated purpose of the act was to accelerate the assimilation of the Indian people into mainstream society by making them farmers and herdsmen (Dawes, 1887/2000). Unfortunately, while much of Indian lands proved to be excellent grazing lands for buffalo, deer, and antelope, it was poor farmland or grazing land for domesticated livestock. However, the act was successful at breaking up tribal organization and pitting one tribal member against another. Land-hungry European Americans bought land wherever they could find it, and tribal continuity was destroyed. Reservation areas were fragmented, and states that had held large swaths of tribal areas suddenly lost all their reservations. Nebraska, Kansas, and Oklahoma were opened up for settlement and today only contain miniscule fragments of the tribal lands they once held (White, Godfrey, & Iron Moccasin, 2006). Said Dawes of his plan to "civilize" the American Indian people, he encouraged them to become farmers, stop their tribal ways, and to drink whiskey and at the same time anticipated that they would sell their land (Black, 2007). The Friends of the Indians had succeeded in influencing the treatment of the American Indian and the result had been a bastardization of assimilation.

It would take the federal government decades to break up all the reservations across the west. Focusing primarily on the southern tribes (where the land was more ardently sought by European American settlers), the federal government delayed the dissolution of the reservations in the north well into the 20th century. For example, allotment was not attempted on the Fort Belknap Reservation until 1921 and not finished

until 1923 (Rodnick, 1975). But with fragmentation of culture, the assimilation that was hoped for was not always accomplished. The academically poor vocational education at the boarding schools could not change the marginal quality of the reservations' lands, and local employment was often scarce. Torn between two cultures, American Indians often suffered from identity crises that sometimes led to at least part of Senator Dawes hopes – they drank whiskey.

The Dawes Act allowed for the citizenship of the American Indians who fulfilled the requirements of allotment and civilization (Dawes, 1887/2000). The citizenship portion of the Dawes Act was amended in 1901 to include those people living in the Indian Territory (Oklahoma) who had initially been excluded from the General Allotment Act due to the areas territorial status (Citizenship for Indians in Indian Territory: March 3, 1901, 1901/2000). In 1906, the Burke Act was passed establishing citizenship based on the successful completion of the allotment and civilization of the individual American Indians; the Dawes Act gave them citizenship as soon as allotment was completed (Burke, 1906/2000).

In 1924, those who had not yet become citizens were made citizens (Indian Citizenship Act: June 2, 1924, 1924/2000). In 1928 a devastating report on the conditions of the American Indians in U.S. society was written by Lewis Meriam of the Brookings Institution, which stated that the federal government had not lived up to the treaties that had been signed with the individual American Indian tribes. The Meriam Report suggested that the plan of the General Allotment Act had been misguided and that the desires of the individual American Indians had not been taken into consideration when dismantling the western tribes. The report suggested that allotment stop and an attempt be

made to educate tribes to become autonomous (Meriam, 1928/2000). In 1934 the Wheeler-Howard Act was passed stopping the policy of allotment and forced assimilation. The Dawes Act and the Burke Act were dismantled and forced assimilation ceased (Wheeler-Howard Act: June 18, 1934, 1934/2000). In the same year the Johnson-O'Malley Act was passed tasking the federal government to provide medical care and education for the American Indians on the reservations (Johnson-O'Malley Act: April 16, 1934, 1934/2000).

Throughout World War II the reservations in Indian Country lost a steady stream of men; most left for the military, but others were enticed away to work in war industries. After the war ended, many of the surviving Native soldiers stayed in urban areas to work. Of the workers in urban industry, some abandoned the tribal security of their reservations for the financial security of a steady paycheck. In the 1950s, the Commission of Indian Affairs made it official policy to endeavor to relocate the reservation population to urban areas where there was more work available. The Commission even allocated money to finance the moves. A quote from the Commissioner of Indian Affairs Report of 1954:

> During the 1954 fiscal year, 2,163 Indians were directly assisted to relocate under the Bureau's relocation program. This included 1,649 persons in over 400 family groups, and 514 unattached men and women. In addition over 300 Indians left reservations without assistance to join relatives and friends who had been assisted to relocate…Of the 2,163 Indians assisted to relocate, financial assistance, to cover all or part of the costs of transportation to the place of relocation and short-term temporary subsistence, were provided to 1,637 Indians, in addition to relocation services. (Emmons, 1954/2000, p. 237)

The relocation program was so successful, that while in 1950 only 13.4% of American Indians in the United States lived in urban areas, by 1970 44% of American Indians lived in urban areas. The numbers would continue to rise; by 1990 the percentage of American Indians living in urban areas had risen to 63% (Wall, 2010).

Over the next 3 decades, commissions and government reports kept the Federal Government apprised of the status of American Indians in the fabric of the general population. In 1968, Title II of the Civil Rights Act of 1968 established the civil rights of Indians (Civil Rights Act of 1968: April 11, 1968; 1968/2000). But there were other things happening on the reservations that would bring the federal government again to negotiate between the tribes and the states.

Throughout the 1960s, the various states started identifying child abuse as a problem in the United States that needed attention. Initially, to protect the children, the strategy was to remove the child from the home and place them in the protective foster care system (Curran & Pfeiffer, 2008). While this proved efficacious in urban environments with the entire population, when this was practiced on the reservations, the children were often taken away and raised by non-Natives. Surveys conducted in Indian Country between 1969 and 1974 indicated that 25-35% of all the children on the reservation were fostered away from their families. Of those fostered out, 80-85% were to non-Native families in the community. It was estimated that 68% of American Indian children lived in schools administered by the Bureau of Indian Affairs (Basic, 2007; Fletcher, Singel & Fort, 2009). By 1978 the egregious practice of fostering children off the reservation was brought to the attention of the federal government. On November 8, 1978, Congress passed the Indian Child Welfare Act stipulating that whenever possible a child would be raised in his/her own culture (Indian Child Welfare Act: November 8, 1978, 1978/2000).

Much has changed in the 21st century, though most historians still overlook the pre-Columbian accomplishments of the indigenous peoples of the Americas.

Employment has hardly improved on the reservation, though more and more tribes have opened casinos on or near their reservations to provide work and capital for their tribal members. About 51% of American Indians have profits from one or more casinos on which to live (Schaap, 2010). Still, the median earnings for American Indians are more than $8,000 below the median earnings of all other wage earners in the United States ($28,900 compared to $37,100). Over 25% of American Indians live below the official poverty level as compared to 12.4% of the population in general. 33% of American Indians are under the age of 18, compared to 26% of the population in general. While females head 11.8% of households nationwide, in Indian Country the figure is 21%. One out of three American Indians lives on reservations or tribal lands (Ogunwole, 2006). Of the ten counties in the United States with the highest unemployment rates, three of them include reservations on the Northern Plains (Castor et al., 2006). Poverty continues to stalk the reservations of Indian Country.

Educational levels of American Indians are well below that of other groups in the United States. According to 2000 Census information, 71% of American Indians 25 years and older have a high school diploma compared with 80% of the total population. Only 11% of American Indians have a bachelor's degree compared to 24% of all the people in the United States (Ogunwole, 2006).

According to IHS, alcohol-related deaths continue to affect Indian Country. In 2006 alcohol-related deaths of American Indians was 4 times higher than the general population. Chronic liver disease and cirrhosis was 3.9 times higher among American Indians than the general population; accidental injuries including traffic accidents were 3 times higher among American Indians than the general population; homicide occurs

twice as frequently among American Indians than the general population; and suicides happened twice as frequently among American Indians than the general population (Indian Health Service Fact Sheets, 2011). The curse of Senator Dawes, that American Indians should become whiskey drinkers, has come to pass in spades.

To exacerbate the health problems that American Indians face, healthcare from IHS is inadequate. High morbidity and mortality rates exist on the reservations. For example, while the life expectancy for all the people in Montana (910,651) is 78, among American Indians (55,079) it is 60. Prenatal care is much less frequently utilized by American Indians (65%) than the population in general (83%) despite the free health care. This leads to a rate nine times higher for low birth-weight births among American Indians as the general population (Montana-Wyoming Tribal Leaders Council, 2006). Heart disease, liver disease, diabetes mellitus, and accidents are leading causes of death on the reservations. Many of these problems may be caused by increased stressors that are prevalent on the reservation (Boyd-Ball, Manson, Noonan, & Beals 2006; Lewis, Shipman, & May, 2011). In 1966 Krush, Bjork, Sindell, and Nelle ran the MMPI on a group of American Indians at Flandreau Boarding School in South Dakota. The personality test disclosed that the Native population showed higher neuroticism and psychopathy scores than a control group of Minnesota ninth-graders. The researchers speculated that the greater stressors the individuals faced caused the increased neuroticism and psychopathy.

The greater stressors referred to by Krush and his colleagues have been identified by subsequent researchers as historical trauma. Gone (2009) contended that many of the problems that we see among American Indian people, but especially on the reservations,

high drug and alcohol use, high anxiety and depression rates, distrust of the government and the educational system, are caused by an ingrained historical trauma that indigenous people suffer.

> The most salient expression of colonization was the residential schools. Beyond the apparently widespread instances of neglect, exploitation, and brutality in these schools, the long-term existential and spiritual consequences of Aboriginal cultural suppression featured prominently… much had gone wrong in the community: murdering, kidnapping, drugs, break-ins, beating people up, robbing them…the origins of these devastating problems, from the Western society, colonizationists, Europeans (p. 757).

Brave Heart and Deschenie (2006) defined historical trauma as "grief that is chronic, delayed, complicated, and disenfranchised which has an enduring quality. This grief is a result of massive cumulative trauma" (p. 24) exhibiting itself in various medical symptoms, which include substance abuse, depression, anxiety, suicide, overeating, and all the medical problems that go along with it. Cole (2006) noted that while American Indians are exposed to higher rates of traumatic events, they also must deal with historical trauma. Cole feels that this form of trauma creates shame that they are "bad, horrible, impaired, and tainted…it is deeply held and can be seen in self-denigration, negative self-image, and low self-esteem" (p. 125). This usually manifests itself in overreacting to minor incidents and high levels of depression, suicide, and substance abuse. Violence rates, suicide rates, and substance abuse rates among American Indian youth are higher than the average American adolescent and higher than any other ethnic group. Hurst and Laird (2007) see suicide, violence, and substance abuse among American Indian youth as manifestations of historical trauma.

> Not only do traumatizing events occur at an overwhelming rate in the lives of American Indian youth, but each generation is faced with the cumulative effects of unresolved intergenerational trauma, discrimination, alcoholism, and violent death, thus affecting the emotional strength of every new cohort of young Native males and females. (p. 157)

Thus, historical trauma has been identified in the lives of American Indian youth as well as their parents and grandparents. It has been identified as endemic among all Indian people whether urban or rural (Brave Heart & Dschenie 2006; Cole, 2006; Denham, 2008; Gone, 2009; Hurst & Laird, 2007).

With advances in anthropology and archaeology it does not take a stretch of the imagination to see that the civilizations in the Americas were sometimes equal to if not superior to Western civilizations in many respects when the first European arrived in the Americas. The American civilizations started at the same time as those in Eurasia, and kept pace with every advance save those of metal usage and diseases (Mallott, 2007). Now as science advances and more information is discovered, the date of American Indian arrival in the Americas has been moved further and further back (Pringle, 2011). A recent study looking at mitochondrial DNA of American Indians has identified six haplo groups that are specific to the indigenous people of the Americas. Studies show that these mitochondrial mutations first appeared from 18,000 to 20,000 years ago and do not appear anywhere in Asia where American Indians are supposed to have originated (Six DNA strains common in American Indians, 2008, March 16). As other myths about American Indians fall by the wayside through scientific research many of the old stereotypes are in jeopardy of falling as well.

For many, their idea for the indigenous peoples of the Americas is as nomadic hunter and gatherers who had only arrived several thousand years before – unsettled

immigrants, as it were, from Asia who lucked onto an empty paradise. Unable to exploit the riches before them, they muddled through in Stone Age ignorance (Capurso, 2010).

This is a misperception. Clovis points or no Clovis points, there were indigenous people in the Americas at least 18,000-20,000 years ago as dated by DNA, and it is impossible to discount the Topper site, the Meadowcroft Rockshelter, Cactus Hill, and Monte Verde where not only campsites were found, but stone tools as well. Whether the Bering land bridge was a conduit for the Siberian tribes or not should be a question that is still open to debate. Possibly this is an entrenched idea that is creating its own Dark Ages in scholarship about these people, forcing American Indians to be seen as broken people who need to be fixed by Western civilization (note the boarding schools and Christian missionaries). But American Indians are not broken people. They arrived here long before the Clovis point, and possibly have somehow always been here. The culture and the communities where American Indians live give them the power and strength to survive despite the depredations of poverty and the complacency of government. The American Indian people of Blaine and Phillips counties in Montana test resilient, showing them as an enduring people who have withstood the ravages of disease, environment, and Western Civilization.

The People of the Fort Belknap Area

Fort Belknap Reservation is the home of two major tribes of American Indians, the Gros Ventre and the Assiniboine. The Gros Ventre refer to themselves as the A'Ahniinin or the White Clay People, and they sign themselves as the Falls People. The A'Ahniinin are also referred to as the Atsina by the Blackfeet, the Pahkees by the Nez Perce, and were called the Minnetares of Fort de Prarie by Lewis and Clark. The

Assiniboine refer to themselves as the Nakoda, the local dialect of one of the three major dialects of the Souian language: Dakota, Lakota, and Nakota. Assiniboine is a name given to this group by other tribes. Assiniboine means *cooks with hot rocks* as was their custom to cook out the marrow of buffalo bones during a hunt by digging a pit, putting the cracked bones in the pit, filling the pit with water, and then adding the hot rocks. They would then skim the fat off the surface of the pit as the fat boiled out of the bones to provide added protein (Grant, 1994).

Gros Ventre is a French interpretation of the Indian sign for this group. As they referred to themselves as Falls People, the Indian sign for *falls* is a movement across and down from the stomach to show that water is falling. The French misinterpreted this sign as showing that they were the *big belly* people or the Gros Ventre (S. Chandler, personal communication, June 2, 2008). The Blackfeet turned this sign into a unkind joke and referred to the tribe as the Atsina or *fish-gut eaters* (Fowler, 1987). Both the A'Ahniinin and Nakoda tribes have been in this area from recorded history. The dominance of these two tribes in the area seems to come from their early trading with the French and then the English when the French pushed into the area from the east (Fowler, 1987; Rodnick, 1975). The A'Ahniinin speak an Algonquian language very similar to Arapaho (Ahniin) and in fact were said to have splintered from the Arapaho sometime in the 17th century. The Blackfeet also speak an Algonquian dialect, which may account for the A'Ahniinin's inclination to join the Blackfeet confederacy during parts of the 19th century (Flannery, 1975).

Both tribes were part of large, powerful, loose confederacies that dominated the Montana/Saskatchewan Frontier at this time. The Nakoda often traveled with their Cree

and Sioux allies who dominated the buffalo plains in southern Canada, western North Dakota and eastern Montana. The A'Ahniinin were part of the Blackfeet Confederacy that dominated from central Montana to the Rocky Mountain front. The A'Ahniinin were the outer buffer of defense for the confederacy with the Piegan situated in the next sphere, and the Siksika, Sarsi, and Bloods on the inner core of the confederacy. The Nakoda and A'Ahniinin were the first to obtain guns from the French and English traders and were feared by all the other tribes in the area. Mountain tribes moving down to the plains to hunt buffalo and other nomadic tribes were not allowed to pass through the Blackfeet and Cree/Sioux confederacy territories to trade for guns and ammunition (Fowler, 1987; Rodnick, 1975). This was the status quo of the area until into the 1850s. The Blackfeet Confederacy, especially the A'Ahniinin, was horse-rich because of their closer proximity to the Spanish and their horses. The Nakoda and their allies had harder times obtaining horses.

Both the Nakoda and the A'Ahniinin figured prominently in the journals of the Corps of Discovery by Lewis and Clark even though they never formally met them. One of the main purposes of the expedition was to wrest trade from the English traders in Saskatchewan. Because the Nakoda and A'Ahniinin acted as middlemen between the English traders and the tribes to the south, east, and west, they were perceived as enemies from the beginning of the expedition. As with most confrontations between the American government representatives and the American Indian tribes, the American representatives were at the mercy of the native individuals who acted as their guides and provided their information. This can be seen in many of the names of the tribes that have come to us.

For example the name Sioux is a Chippewa word that means “enemy.” Apache means *enemy* in Zuni. Comanche is a Ute word that means *enemy* as well (Grant, 1994).

Lewis and Clark’s Corps of Discovery, traveled through the area on their way to the Pacific Ocean and back again from 1803-1806. The Corps was warned away from the Cree/Nakoda alliance, as well as the warlike Blackfeet Confederacy. They were specifically warned about the confederacy’s outer buffer, the *Minnetares of Fort de Prarie* (A’Ahniinin), by their trapping and trading contacts in St. Louis, particularly by the mapmaker Soulard (Rhonda, 1984). In their first year of travel, the group barely escaped a confrontation with the Teton Sioux at the beginning of their trip. The winter brought them to the permanent camps of the Mandan, Arikara, and Hidatsa near present-day Bismark, North Dakota. The Corps spent the winter trying to convince the tribes to reject trade with the contentious Nakoda and Cree who came to trade in November. Much to the credit of the Mandan, Arikara, and Hidatsa, during the fall they opened their lodges to the nomadic traders. Nothing changed because of the ministrations of the American representatives (Rhonda, 1984).

As the Corps of Discovery headed out in the spring of 1805 along the Missouri River, they were well aware they were headed into territory that was the common hunting grounds of the feared Nakoda and eventually the A’Ahniinin. Just before they crossed the present North Dakota border into Montana, they made their first discovery of Nakoda presence. Fearing that they were about to cross the path of a Nakoda raiding party headed to the south to raid the Crow, they decreased the amount of time in camp and increased their scouts. Through most of April they remained on high alert. As they passed into present day Montana, increased evidence of Nakoda presence necessitated more rapid

movement. As the Corps of Discovery passed through present-day Fort Peck Reservation (home of the eastern Assiniboine Sioux), smoke from campfires increased, as did evidence of nomadic camps. One night an Assiniboine dog wandered into the camp (Rhonda, 1984; Lewis, Clark, & Members of the Corps of Discovery, 2001).

For the next month, the Corps found almost daily evidence of the local Indian tribes. Smoke from fires and tipi rings were frequent reminders that they were not alone on the Missouri, though they made no contact. On May 29, Clark saw one fresh campground of 126 tipi rings and Lewis found evidence of an older camp of 100 tipi rings. Hoping that they were approaching the Shoshone, Sacagawea's people, Lewis brought to her a worn moccasin for identification. She identified the artifact as an *Atsina* moccasin and the Corps jumped into their boats and camped many miles away from the A'Ahniinin campground (Lewis, Clark, & Members of the Corps of Discovery, 2001).

Finally, in August after the portage around the Great Falls, the Corps moved far enough away from the A'Ahniniin to make contact with the Shoshone. The Shoshone were reluctant to move away from the safety of the mountains after a punishing raid from *Atsina* warriors. The Shoshone had but one tipi after the raid and they slept away from the campfires in case the *Atsina* should return (Rhonda, 1984). Lewis and Clark promised the Shoshone that trading with the Americans would mean that the Shoshone would no longer have to fear the Blackfeet and *Atsina* raids. Later in the mountains with the Nez Perce, they made the same promise to their new allies (Lewis, Clark, & Members of the Corps of Discovery, 2001; Rhonda, 1984).

As they crossed the Rockies, they had still made no contact with any of the tribes they considered hostile, yet promised all the tribes they met that they would control the

aggressive Blackfeet, A'Ahniinin, Nakoda, and Sioux. On the way back in 1806, they petitioned the tribes of the Pacific side of the Rockies to send delegates to Washington to help with the negotiations between the hostile tribes and the peaceful tribes in the Palisades of the mountains. On the return trip they planned to meet with the plains buffalo hunters to propose peace. Lewis wrote about the possibility of negotiation in his journal in July as they passed out of the mountains and headed back across the buffalo plains ahead of the mountain hunters. After Lewis and Clark seperated, Lewis ran into a party of Indians that he initially identified as the A'Ahniinin. They were Piegan, though Lewis interpreted their symbols as saying they were *Minnetares of Fort de Prairie* (Lewis, Clark, and Members of the Corps of Discovery, 2001; Rhonda, 1984). The next day there was an unfortunate encounter when one or two of the warriors were killed (Lewis said two were killed, but Piegan oral tradition says that only one died). Lewis and his Corps members were so afraid of Blackfeet retaliation that they left the area in great haste for the Missouri River (Lewis, Clark, & Members of the Corps of Discovery, 2001; Rhonda, 1984).

Oral history from the A'Ahniinin and the Nakoda tell of warriors from both tribes observing the expedition on the Missouri River, but because there was a woman and child with the party, they did not think of them as a war party. With all the near-encounters that took place along the Missouri in 1805 it is hard to believe that the Corps traveled the entire Missouri without detection by either the Nakoda groups through the Fort Peck area, or the A'Ahniinin from the Breaks, through Great Falls to the Rocky Mountains (Fifer, 2005).

The Corps of Discovery did not bring an influx of settlers to the Montana area. For the next 50 years the northern buffalo plains were allowed to maintain the status quo they had enjoyed in the early 1800s. Unfortunately, smallpox visited the plains over the next 50 years reducing the power and numbers of the tribes in the area including the A'Ahniinin from as many as 600 lodges to less than 100. The A'Ahniinin were noted as hostile to trappers, though they were not hostile to the American government. They were known to attack the trading forts in Canada to retaliate against the supplying of their enemies, the Cree and Nakoda. They also had problems with trappers and their Indian allies invading their territory. In 1832 the A'Ahniinin attacked a party of fur traders and their Flathead and Nez Perce allies at Pierre's Hole on the Greene and Snake Rivers. Seven trappers were killed and the A'Ahniinin chased the American Fur Company out of the mountains (Flannery, 1975).

Throughout the 5 decades after the Corps of Discovery, alliances and wars waxed and waned for the Nakoda and the A'Ahniinin in the northern buffalo plains. Sometimes allied with the Blackfeet, sometimes the Crow, sometimes the Nakoda and Cree, sometimes the difficult Piegan, and sometimes their cousins the Arapaho, the A'Ahniinin were often in the situation where they did not know where the next attack was coming from. Smallpox, measles, and diphtheria all made their rounds through the various Indian camps creating and breaking alliances because of the weaknesses of their enemies or former allies. The A'Ahniinin warriors were known to have ranged from well up into Canada to the Mexican border, raiding with Arapaho, Kiowa, and Comanche cousins (Flannery, 1975; Fowler, 1987). The Nakoda and their Assiniboine cousins in Canada

and in the Fort Peck area maintained loose confederacies until the negotiations in 1850 and 1851 (St. Onge, 2006).

In 1851 the Nakoda signed the Treaty of Laramie ceding all the land that is now Wyoming to the federal government. In 1855 the Blackfeet and the A'Ahniinin signed a treaty allowing passage through their hunting grounds, an area that includes most of present-day Montana. In 1874 the Nakoda and A'Ahniinin limited their territory to north of the Missouri River to the Canadian border. At this time the northern herds were still intact, and food was not difficult to procure. Food was distributed at this time at Fort Peck in eastern Montana, but the A'Ahniinin refused to travel to that fort because of the Sioux that surrounded the area. The federal government agreed to distribute food at a place closer to the A'Ahniinin hunting grounds. Fort Belknap was created and a food-distribution area was established at the fort (present-day Chinook). In 1879 Fort Assiniboine was built just south of the present day town of Havre. The purpose of the fort was to secure this area from the Sioux to the east and Cheyenne to the south. Since attacks were frequent, they were also positioned to keep raiding Crow and Sioux braves away from the so-called domesticated Nakoda and A'Ahniinin (Fowler, 1987).

In 1876 Custer invaded Montana and met the Cheyenne and Sioux at the Battle of Little Bighorn just south of present-day Billings. After the American Indian victory, Sitting Bull and his Sioux fled into Canada where they were safe from any American retaliation. But Crazy Horse and his band continued to fight till the end of the year. In 1877 Chief Joseph led his Nez Perce on a circuitous route through Idaho and Montana seeking freedom in Canada. The final battle of the campaign occurred on the Fort Belknap reservation, just south of present-day Chinook. If Chief Joseph had stopped 15

miles north of the site of the last battle, he would have had access to the food stores of the Nakoda and A'Ahniinin at Fort Belknap. Chief Joseph was defeated. He did not make it into Canada and safety with Sitting Bull. The Nakoda and A'Ahniinin were safe from any invading groups (Fifer, 2005). In 1888 Fort Belknap Reservation was reduced to its present size and configuration. No longer were the Nakoda and A'Ahniinin hunters allowed to range from the Canadian border to the Missouri River. The buffalo were nearly extinct in the area and the people of the reservation were limited to the food provided by the government and the food that they could grow themselves. In 1884 a boarding school was established on Fort Belknap, and in 1886 the St. Paul's Mission school was opened in Hays in the southern part of the reservation (Flannery, 1975; Fowler, 1987; Rodnick, 1975).

The people of Fort Belknap would suffer the same cultural disconnect as other American Indians forced to assimilate by the boarding schools. All schools on reservations were forced to follow the same governmental rules concerning curriculum and discipline though often the discipline was more severe at the parochial schools. The American Indian students were not allowed to speak their own language, they were made to cut their hair, and they were made to wear uniforms. They had to learn English and vocational skills, farming for males and housekeeping for females; and punishment for any infraction was severe. Relatives were not allowed to visit, so despite the fact that they were only a few miles away, students were allowed no contact with parents or extended family (Rodnick, 1975).

> The people at the mission were mean to the children out there. Many of them got a chill in winter; there was no fire and it was always cold in the dorms. Well they would catch T.B. and some of them died. They would get sick in the summer and die. The priest, brothers and sisters were mean to the students. They didn't treat

> the kids right, they wouldn't feed us right either, but we survived. (Birdtail, 1982, p. 4)
>
> I attended the Fort Belknap Boarding School when I was 5 years old. At that time, the kids had to go to school at 5 years old. The little ones, I saw them clinging to their mothers and they were just crying. They didn't want to leave home. The police went after them to go to school. I have seen the police just pull the kids away from their mother's arms. (Tucker, 1982, p. 29)
>
> We were treated good at the Fort Belknap Boarding School… They (the Mission School) were strict and they didn't like the children from the agency school. They used to call us devils because we didn't go to the Catholic school, and we weren't converted. But after we went to the mission we to become Catholics and become Baptized. (Long Horse, 1982, p. 61)
>
> In 1907, I attended the Fort Belknap Boarding School. The first they did was cut my hair and wash my face. My face was painted red. All of us kids that were 7 years old at that time, the policeman would come and take us... We couldn't talk our language, they would punish us. (Wing, 1982, p. 79)
>
> I remember in the Lodge Pole day school, the teachers wouldn't let the Indian kids talk their languages. When she did catch somebody they would make them stand in the corner for so long. Same way down at the boarding school. No Indian boy or girl were allowed to talk their own language. (Shields, 1982, p.100)
>
> The nuns were strict up at the mission. They really were strict, we couldn't even talk our own language. They would punish us if they caught us talking our language. The Ursaline nuns were really strict. They would punish us and whip us, if they heard us talk our language. (Lamebull, 1982, p. 129)

During World War II most of the men on Fort Belknap Reservation either joined the military or worked in war industry. After the war, some of the surviving soldiers and war workers did not return to the reservation but stayed in urban areas to find work. In the 1950s, relocation started in earnest at Fort Belknap. George Birdtail Sr.'s and Frank Oehlerking's experiences were similar to many of the men coming back from the war: "In 1950 I went to Glasgow by train. They sent us to Glasgow to learn a trade, because there was no work here on Fort Belknap" (Birdtail, 1982, p. 9). "A lot of Indian soldiers were sent out on relocation to the cities. There was many of those World War II veterans

who sent on relocation after the war" (Ohlerking, 1982, p. 153). In 1957 a group of men and their families from Fort Belknap were recruited and moved to Oakland, California. They created their own community of relocated Nakoda and A'Ahniinin ex-patriots. Fifteen families lived in the community; all had been exceptional students and were of the best and the brightest from the reservation. While relocation provided many people the opportunity to advance in the business world, it also represented a "brain drain" from the reservation with which the reservation continues to struggle. Eventually most relocated families returned to Fort Belknap, to provide the driving force behind the opening of Fort Belknap College. Most still work at the college today (J.R. Strike, personal communication, April 27, 2006).

At present, 70% of the adults on the Fort Belknap Reservation are unemployed (Montana Department of Labor and Industry, 2006). Life expectancy on the reservation is 63-years for American Indians as compared to 83-years in the European American population in Blaine County (Montana Department of Public Health and Human Services, 2006a & b).

Despite the abysmal statistics dealing with poverty and the short lifespan of the people on Fort Belknap Reservation (there were eight tragedies on the reservation between March 7, 2008 and March 21, 2008: three honored elders died, two people were murdered, two people died in automobile accidents, and one accidental shooting of a child resulted in a death), they always seem to plug through. When speaking to people from the reservation, they normally display a pleasant and giving demeanor. But when you get them in even guarded conversation they disclose the pain of the 500 lost lodges of the A'Ahniinin, the American and Canadian attacks during the Riel Rebellion through

the 1870s, the traumas of the boarding schools, the pains of relocation and the paternalistic treatment of the American government. Historical trauma inhabits every A'Ahniinin and Nakoda home on and off the reservation (conversations with innumerable friends and acquaintances on and around the Fort Belknap Reservation from July, 2001 till the present time).

The people of Fort Belknap Reservation consider themselves survivors. At the beginning of every ceremony or gathering, A'Ahniinin and Nakoda drummers play the victory song. According to three knowledgeable members of the Fort Belknap community, the victory song is sung to show the resilience of the American Indian people of Fort Belknap (D. Barrows, personal communication November 18, 2003; C. Brockie, personal communication December 13, 2006; G. Stiffarm, personal communication September 19, 2002). This study was conducted to measure this resilience, to demonstrate that despite the misinterpretations and misperceptions toward the American Indian people in the United States by history and the federal government, the people of Fort Belknap are resilient. They will survive as tribal entities despite attempts to assimilate them into an alien culture and break them up, scattering them to the four winds.

The Research

This research measured the resilience of the American Indians living off the Fort Belknap Reservation in Blaine and Phillips counties in Montana by using the RS (Wagnild & Young, 1993). The research also analyzed the following factors that may have led to the resilience score: gender, age, and education as determined by demographic information provided by the participants; cultural level as measured by the

MEIM by Phinney (1992); and the number of traumas beyond the historical trauma and poverty as measured by the *Life Event Checklist* used by Werner and Smith in their Kauai Longitudinal study.

The RS has been one of the most widely utilized instruments for measuring resilience around the world. Developed by nursing researchers to measure resilience in the elderly, it has been used with populations of all ages and in many circumstances. The RS was initially developed using an elderly population in the Northwest by Wagnild and Young (1993). Wagnild (2003) would later use the RS to compare the resilience in a population of low- and high-income elderly. Other less traumatized populations that have been tested have included: a small high school population in the Northeast (Hunter & Chandler, 1999), a small population of female, nontraditional students in a South Dakota college (Howell, 2004), and a large cross-section of a fairly affluent retirement community in Tennessee (Broyles, 2005).

The first study after the instrument was introduced using the RS on an identified, traumatized population was Garity's work with the caregivers of long-term Alzheimer's sufferers in Massachusetts (Garity, 1997). Since then the RS has been used to measure from the extremely traumatized, e.g., homeless adolescents in Texas (Rew et al., 2001), women trauma-survivors in the Northeast (Friedman, 2007), and women from a battered women's shelter in San Francisco (Humphreys, 2003), to marginally traumatized caregivers, e.g., teenage single mothers in British Columbia (Black & Ford-Gilboe, 2004), mothers of toddlers in Ontario (Monteith & Ford-Gilboe, 2002), an Irish immigrant population in Boston (Christopher, 2000), and two studies of the wives of men having coronary artery bypass surgery in the Midwest (Johnson, 2002; Marnocha, 2003).

The RS has been translated into several languages to be used in other countries and with immigrant populations in the United States. Aroian et al., (1997) were the first to translate the RS into a foreign language. The researchers translated the RS into Russian and tested it with an immigrant population from the former Soviet Union in Israel. Miller and Chandler (2002) used the truncated RS to measure middle-aged women in Chicago who had immigrated to the United States from the former Soviet Union with accurate results.

Nygren et al., (2004) translated the RS into Swedish and measured the instrument against several other scales. The researchers found that the RS maintained internal consistency, reliability, stability over time, and construct validity. Nygren and colleagues later measured resilience in a special population using the RS. The researchers tested a group of individuals over 85-years-old and found optimum and comparable resilience in this rarified population (Nygren et al. 2005).

Heilemann et al., (2002) translated the RS into Spanish and tested the appropriateness of the test with women of Mexican descent whose primary language was Spanish. The researchers found that construct validity was supported with the translation (Heilemann et al. 2003). Pesce, et al., (2005) translated the RS into Portuguese comparing the instrument to scales measuring several factors of resilience and discovered that the instrument maintained construct validity and significance in correlation with the other scales. Araki (2000) translated the RS into Japanese and tested the translation against a translation of Jew's Resiliency Scale and found that both instruments maintained internal consistency and equated to the results of a fulfillment sentiment scale.

Schumacher et al. (2005) translated the RS into German and found high internal consistency and when measured against self-efficacy showed a positive correlation between the two factors. This same team, headed by Leppert tested an elderly population in Berlin and discovered comparably low results, possibly attributable to the difficulty of survival during and after World War II (Leppert, et al., 2005).

Most recently, Portzky et al. (2010) translated the RS into Dutch and found a strong correlation between resilience and age. Surveys were conducted in the Netherlands, but especially the Flanders district of Belgium where the regional dialect is Dutch. The RS translation was found to be valid and reliable.

This research used the RS to measure the resilience in an American Indian population in order to compare this group with some of the diverse peoples this scale has been employed to measure. The RS has never been used to measure resilience in an American Indian population (G. Wagnild, personal communication, 2006).

The Resilience Scale (RS)

The RS is a 26-item survey that is measured on a 1-7-point Likert-type scale where 1 represents Strongly Disagree and 7 represents Strongly Agree. For the purposes of this study the 26th item, *I am resilient*, was not scored to maintain continuity between this study and the majority of published studies.

The RS is one of the most popular resilience instruments in use today. This instrument has been used in over 34 published studies and has been translated into a number of languages including: Spanish, Portuguese, German, Swedish, Japanese, and Dutch (Araki, 2000; Heilemann, et al., 2002; Nygren et al., 2004; Pesce et al., 2005; Protzy et al., 2010; Schumacher et al., 2005). The RS was developed as a screening test

for resilience in nursing research. Over half of the published studies have been conducted for nursing and nursing education purposes. However, 26.5% of the published studies using the RS have been done in psychological research.

Subsequent research with the RS would demonstrate equally strong results. Table 3 shows the authors of all the available published research, their research disciplines, the % of women in the study, and the Cronbach's alpha of the research. The research supports strong reliability., in fact, half of the studies have had Cronbach's alphas of 0.9 or better. The average of the Cronbach's alpha for all the published studies using the RS is 0.8544, showing marked reliability. The RS has never been used with an American Indian population.

Table 3

Discipline of Researchers Using the Resilience Scale as a Measurement

Authors Date	Discipline of the Researcher	Women in the Study	RS Mean	SD	Cronbach's alpha
Wagnild & Young, 1993	Nursing	62.3 %	147.9	16.85	0.91
Aroian et al., 1997	Nursing	52.9 %	No Data	No Data	0.87
Garity, 1997	Nursing	71 %	144	No Data	No Data
Hunter & Chandler, 1999	Nursing	54.9 %	132.5	No Data	0.72
Christopher, 2000	Nursing	73 %	No Data	No Data	0.91
Neill & Dias, 2000	Kinesiology	46.3 %	No Data	No Data	0.71

Table 3 (continued)

Authors Date	Discipline of the Researcher	Women in the Study	RS Mean	SD	Cronbach's alpha
Rew et al., 2001	Nursing	36%	112	17.6	0.91
Heilemann et al., 2002	Nursing	100 %	No Data	No Data	0.90 Spanish 0.92 English
Johnson, 2002	Medical College	80.5 %	147.8 Female 138 Male	31.6 20.74	0.97
Lindenberg et al., 2002	Nursing	100 %	No Data	No Data	0.86
Miller & Chandler, 2002	Nursing	100 %	103	11.28	0.91
Monteith & Ford-Gilboe, 2002	Nursing	100 %	142.1	No Data	0.85
Heilemann et al., 2003	Nursing	100 %	135	27.07	0.93
Humphreys, 2003	Nursing	100 %	143	24.0	0.94
Marnocha, 2003	Nursing	100 %	139.4	20.73	0.94
Robinson, 2003	Education	74 %	144.08	14.73	0.89
Black & Ford-Gilboe, 2004	Nursing	100 %	146.6	14.08	0.85

Table 3 (continued)

Authors Date	Discipline of the Researcher	Women in the Study	RS Mean	SD	Cronbach's alpha
Schachman et al., 2004	Nursing	100 %	No Data	No Data	0.86
Broyles, 2005	Human Ecology	50 %	143	14.73	0.91
Leppert et al., 2005	Psychology	53.6 %	129.6 Female 136.0 Male	21.67 22.27	0.95
Nygren et al., 2005	Nursing	69 %	148	16.0	0.83
Pesce et al., 2005	Psychology	57.7 %	No Data	No Data	0.80
Schumacher et al., 2005	Psychology	53.4 %	133.8	22.54	0.95
Parker, 2006	Community Health	100%	148.77	11.1	0.82
Rohrig et al., 2006	Medicine	67.9 %	148.3	No Data	0.91
Friedman, 2007	Psychology	100 %	125.67	25.09	0.84
Moorhouse & Caltabiano, 2007	Psychology	59.7 %	No Data	No Data	0.94
Lundman et al., 2007	Nursing	72.6 %	141 Female 142 Male	17.7 17.7	0.78

Table 3(continued)

Authors Date	Discipline of the Researcher	Women in the Study	RS Mean	SD	Cronbach's alpha
Pinquart, 2009	Psychology	48.2%	133.2	12.25	0.78
Protzky et al., 2010	Psychology	61.6%	143 Female 145.25 Male	No Data	0.85

The Multigroup Ethnic Identity Measure (MEIM)

The understanding of the importance of ethnic identity came out of the civil rights movement of the 1960s and the work of Erik Erikson who researched social factors as the driving force in establishing identity. "True identity, however, depends on the support which the young individual receives from the collective sense of identity characterizing the social groups significant to him: his class, his nation, his culture" (Erikson, 1964, p. 93). Erikson felt that identity developed over time, especially during childhood and adolescence when the individual was looking for subjective feelings of sameness and continuity. As the individual moved into early adulthood, Erikson saw them fusing their internal childhood identity, with their interests, talents, and their external adult understanding of their environment and the social group to which they belong (Erikson, 1968).

Parker and Kleiner (1964) researched the phenomenon of "Negro leadership being white 'carbon copies' and feeling contempt for the Negro masses" (p. 85). The researchers surveyed a group of African Americans in Philadelphia and asked them how they selected a person's social class: education, neighborhood, income, family

background, occupation, color of their skin, membership in organizations, influence in the community, or other intangible factors. The researchers discovered that as the status position of the subject increased, the subjects maintained mindsets that were closer to the European American middle class.

Bunton and Weissbach (1974) researched the strength of African American identity in a predominately African American and integrated community. At this time integration was still evolving and there was a fear that integration would lead to amalgamation and ethnic identity would be lost. The researchers had African American preschoolers in two areas identify Black and White dolls by select catchphrases such as: best, dirty, nice skin color, Negro, Caucasian, ugly, etc. The research supported incorporating pro-ethnic material in school curriculums to buttress ethnic identity.

Miller (1976) studied the rural, predominantly Mexican American communities of the Texas border region. The researcher surveyed high school students about preferences of labeling, and correlated this preference to SES, farm labor occupation, and language use. Miller discovered that contrary to the recently published studies, Mexican American was the preferred label, especially among higher SES, non-farm laboring, female, primarily English-speaking people. The second preferred label was Chicano which predominated among lower SES, farm-laboring, males who primarily spoke Spanish. As in the Parker and Kleiner study, Miller found that only females of high SES tended to deny their ethnicity and identify with the dominant culture.

Koeller (1977) attempted to change ethnic attitudes by reading positive stories about Mexican-Americans once a week for 6 weeks to several classrooms of sixth-graders from schools in the Denver area. At this time, Colorado was suffering from racial

tension and labor problems dealing with the Hispanic population. Over the six-week period, Koeller was able to raise the positive ethnic identity scores of the male Mexican-American participants, but strangely lowered the scores of Mexican-American females. The survey scores also showed that non-Mexican-American subjects had little change of attitude from the stories.

Throughout the 1980s, researchers and social scientists moved toward accepting ethnic differences and supporting the positive ethnic identity of minorities. By reading some of the writings of the Black activists of the 70s, Malcolm X, Leroi Jones, Stokely Charmichael, and H. Rap Brown, Milliones (1980) fashioned the Developmental Inventory of Black Consciousness. The instrument was based on Cross's model of psychological nigrescence.

Parham and Helms (1981) created the Racial Identity Attitude Scale by using Cross' attitude items presented in survey form using a Likert scale. The racial identity attitudes instrument had strong validity, maintaining a reliability coefficient for the four subscales that ranged from 0.66-0.72. Parham and Helms later used this same instrument, to measure self-actualization in a group of African American students. The scale was specific to Black identity, and the authors even hypothesized at the end of the article that

> the model is no longer an accurate description of Black people's reactions to the social condition that they face…present day Blacks, struggling to find their identity, are influenced by a different set of personal, social, and environmental factors; as a consequence they have learned to adapt differently than did their predecessors. (Parham & Helms, 1985, p. 438-439)

Phinney and Tarver (1988) interviewed 24 African American and twenty-four European American eighth-graders and discovered that about a third of them were in the exploration stage of ethnic identity, with more females than males committed to the

search for ethnic identity, and more African Americans than European Americans committed to the search. Phinney (1989) studied a group of urban tenth-graders where the researcher used the new interviewing technique to identify where the students were in their ethnic identity. The researcher discovered that over half of the students were still in the exploration stage with their ethnic identity while the remaining group was equally split between ethnic identity, formation, and a state of ethnic identity moratorium. Phinney and Alipuria (1990) developed a preliminary ethnic identity questionnaire to use in a study of 196 college students from four ethnic groups: African American, European American, Asian American, and Mexican American. The results showed that the questionnaire did accurately show ethnic identity and that there was a difference between the four groups tested. African American and Hispanic students demonstrated the highest ethnic identity search scores. The Multi Ethnic Identity Measure (MEIM; Phinney, 1992) is a 14-item scale, and it has demonstrated high internal consistency reliability (for example, the Cronbach's alpha was found to be 0.81 in a high school sample and 0.90 in a college sample).

Subsequent researchers would discard some of the items, especially the six "other group orientation" items and the three familial ethnic identification questions. Though most researchers have maintained the fourteen ethnic identity questions, some have chosen to reduce the ethnic identity items from fourteen items to twelve items (Roberts, et al., 1999), and ten items (Yancey, Aneshensel, & Driscoll, 2001). Phinney reduced the MEIM to a six-item MEIM-R in 2007. Phinney and Ong (2007) suggested using the six-item MEIM-R as a starting point in ethnic identity and adding a group-specific measure. Dr. Phinney has stated: "You are welcome to use the MEIM and to modify it as

necessary. It is meant to be flexible and adaptable to different groups and situations" (J.S. Phinney, personal communication, February 26, 2007). This research used the 14-item Ethnic Identity configuration.

The MEIM has been used successfully with American Indian populations in four studies. Pittenger (1999) used the 23-item MEIM with 137 Lakota and Dakota high school students from a reservation in South Dakota. "The Cultural Identification Scale and the MEIM were found to have adequate psychometric properties as measures of ethnic identity among this population…there was a positive correlation between the MEIM and the scale measuring American Indian ethnic identification" (p. 105). The Cronbach's alpha for this instrument with this population was high at 0.82.

In Graham's (2001) resilience research with 54 American Indian students in Minnesota, she found that the MEIM correlated very well with her other instruments measuring traditional spirituality and academic competence. The researcher used the 14-item MEIM and attained a Cronbach's alpha of 0.86. Hill (2004) conducted research in an isolated region of southeastern Utah with a population of 80 Navajo high school students at two rural schools using the 20-item MEIM. The researcher found that "this study adds to past research in that it demonstrates strong American Indian cultural identity, as measured by the NCIM (Navajo Cultural Identity Measure) and MEIM" (p. 69). Tsinnijinnie Lomay (2004) used the 20-item MEIM to survey 238 college students in Arizona. The researcher was surprised that the population identified more strongly with their American Indian culture than she anticipated. While she felt that a strong score would be over a 3.0 average on the 4-point Likert scale, her subjects averaged 3.32 on the scale. Tsinnijinnie Lomay found that the Cronbach's alpha for ethnic identity was 0.80,

and for other-group orientation was 0.65. All the researchers who have used the MEIM with American Indian populations have found that it has been an accurate instrument measuring ethnic identity.

The Life Event Checklist

Checklists to measure stressful life events tend to be constructed for specific types of research and the circumstances of the study for which they are used. For example, Elhai, Gray, Docherty, Kashdan, and Kose (2007) found that of the 565 studies dealing with PTSD in adults and children that they surveyed, thirty-one different traumatic event exposure surveys were used for adults and three different surveys were used for children, with the Life Events Checklist (LEC) one of the most frequently used generic checklists (Bae, Kim, Koh, Kim, & Park, 2008). Besides being used in PTSD research, LECs have been used for research dealing with depression in children and adolescents (Drerup & Jackson, 2009), suicidality in adolescents with schizophrenia in Israel (Horesha, Nachshoni, Wolmer &Toren, 2009), and satisfaction with life among adolescents (Ho, Cheung, & Cheung, 2008). As an example of a modified stressful events checklist, van der Veek, Kraaij, and Granefski (2009) in the Netherlands modified the WHO Life Events Questionnaire for the study of the families with children with Down's syndrome to form the Negative Life Events scale for their study of depression. The researchers expanded the original questionnaire to a 107-item format to include some of the problems particular to families dealing with the difficulties of raising a child with Down's syndrome. Carlton et al. (2006) in Hawaii modified an established life events checklist (Major Life Events checklist – MLE) to fit their Asian/Pacific Islander population for the

Native Hawaiian Mental Health Research Development Program. The changes were basically to add an extended family component to the generic checklist questions.

Checklists can also be and are very often constructed from scratch to fit the population. Researchers from Canada selected items from three different checklists to use with a sample of single mothers to measure cumulative trauma and map the process of PTSD development (Samuels-Dennis, Ford-Gilboe, Wilk, Avison, & Ray, 2010). No life event checklist existed for disabled subjects. Neacsiu, Rizvi, Vitaliano, Lynch, and Linehan (2010) modified the Ways of Coping Checklist that Vitaliano had co-authored in 1985. The revised checklist added subscales to include a dysfunctional coping and dialectical behavioral therapy to use with an expanded population. Doyle, Wolchik, and Dawson-McClure (2002) needed a life events checklist for use with stepfamilies. Since none existed the researchers interviewed a sampling of step family members, and from those interviews constructed the Stepfamily Events Profile (STEP) to be used in the remainder of their research.

The Life Event Checklist was used in this study. This instrument was developed using an isolated, rural population where a fairly significant portion was indigenous Hawaiians. Looking at the list of items, they appear to be the least intrusive of all the available checklists. It was estimated that this instrument was the best fit for this select population.

Conclusion

Resilience is a measureable multidimensional personality factor that can be defined as the ability to survive adversity with little or no permanent deficit. While resilience may be innate, environmental factors are important in influencing whether resilience will be expressed or not. Early research on resilience identified several factors that have stood the test of time including: being female, level of intelligence/academic achievement, a family-like support structure, age, and level of trauma (Garmezy & Masten, 1991; Garmezy et al., 1984; Mrazek & Mrazek, 1987; Werner & Smith, 1982/1998).

Researchers have found that females are more likely to be resilient than males (Garmezy et al., 1984; Werner & Smith, 1982/1998). This may be due to the finding that females maintain closer friendships than males throughout their school years, a trend that serves as a protective factor (Rae-Grant et al., 1988). Women who display high levels of resilience have been shown to weather just about any trauma including childhood sexual abuse and adult sexual assault (Banyard & Williams, 2007; Munsey, 2009; Segal, 2009). However male and female American Indians do not show as clear a resilience bifurcation (LaFromboise et al., 2006; Montgomery et al., 2000; Waller et al., 2003).

Research seems to show that resilient children tend to become resilient adolescents who, in turn, become resilient adults, and resilience tends to increase as adults age (Bonanno et al., 2007; Glaser et al., 2010; Lundmann et al., 2007; Rae-Grant et al., 1989; Schumacher et al., 2005; Werner & Smith, 1992; Widom et al., 2006). This is true of American Indians as well.

High IQ and academic achievement can serve as protective factors for students (Flouri et al., 2010; Garmezy et al., 1984; Kwok et al., 2007; Moller-Leimkuhker & Yucel, 2010; Sacker & Schoon, 2007; von Stumm et al., 2010). Both have been shown to act as protective factors when looking at high risk populations, though some studies have shown that it can be a vulnerability factor in males. American Indians have not taken well to Western educational practices (DeJong & Kramer, 2006; Duran et al., 2009; James et al., 1995). American Indian dropout rates are twice the national average (Whitesell et al., 2006). Education among American Indians does seem to be improving. Some researchers see American Indian families embracing education more and more with time (Montgomery et al., 2000; Riles, 1995; Strand & Peacock, 2002; Whitbeck et al., 2001).

Researchers have discovered that when immigrant and minority populations maintain their birth culture, they suffer far fewer negative effects from contact with the dominant culture (Marsiglia et al., 2011; Bals et al., 2011) and when the individual's cultural identification remains positive, it leads to resilience (Brown et al., 2009; Gallo, Penedo, Espinosa de los Monteros, & Aguelles, 2009). One of the strongest predictors of resilience has been shown to be enculturation, and researchers have found a strong connection between enculturation and resilience in Indian Country (LaFromboise et al., 2006; Oetting & Beauvais, 1990/1991; Stone et al., 2006). Increased enculturation increases the probability of resilience among minority populations, but especially American Indians.

Researchers have found that an increase of stressful life events decreases the probability of resilience (deRoon-Cassini et al., 2010; Hasanovic 2011; Hjemdal et al., 2006; Maguen et al., 2011; Marmar, 2010; McKeever et al., 2006; Renshaw, 2011; Storr

et al., 2009; Vogt & Tanner, 2007; Werner & Smith, 1992). Trauma is not a stranger on reservations. American Indian adolescents lead the nation in suicidal ideation, suicide attempts, and completed suicides (Curie, 2006). By the time they reach adulthood, American Indians are more likely to have seen or been the victim of a traumatic event than the average American, especially if they are female (Evans-Campbell et al., 2006; Jones et al., 1997; Manson et al., 2005; Whitesell et al., 2009). But despite these problems found on the reservation, rarely does pathology come from it (Jones et al., 1997; Robin et al., 1998).

The contacts between Western Civilizations and the Civilizations of the Americas have rarely been amicable. For reasons of ethnocentrism and xenophobia, Western Civilizations have interpreted differences as deficits and rationalized warfare and virtual extermination as manifest necessity. Whether to trivialize the significance of the indigenous peoples or rationalize their own behavior, Western history has seen the people of the Americas as Stone Age hunter/gatherers rather than the descendents of some of the oldest and most advanced civilizations on the planet (Capurso, 2010). The misunderstanding of the indigenous peoples of the Americas has persisted from the first president of the United States referring to the American Indian populations as “heathens” and “savages” (Washington, 1783/2000) to the present day. While extermination was attempted, it was not really an option and efforts would be made to integrate the remaining American Indian populations into the American fabric. Boarding schools with their strict policies and forced social conformity were attempted and did their personal and cultural damage. The breakup of the tribal groups by dividing the reservations into

privately owned family plots further weakened the tribal structures, but through it all the cultural framework and indigenous people survived (Black, 2009).

Affirmative history does exist for American Indians. They are not and have never been the skulking savages portrayed in the American cinema. They are not the simple child-like creatures that need to be taken care of by a paternal government as portrayed in so many history books. But this is the venomous result of historical trauma – a perpetual misunderstanding that becomes common knowledge and is difficult to loose from the consciousness of an embattled population (Brave Heart & Dschenie, 2006; Cole, 2006; Denham, 2008; Gone, 2009; Hurst & Laird, 2007).

One embattled population would be the people of Fort Belknap reservation. The majority of the American Indian population on and near the reservation is A'Ahniinin and Nakoda, two disparate groups who have carved their niche in their part of the West. The people of Fort Belknap would suffer the same degradations from forced assimilation as other American Indian groups on other reservations. From World War I to the present, the reservation would send an inordinate proportion of its young men to fight in this nation's wars. But more devastating to the reservation would be the loss of people to Relocation and then the malignant practice of fostering the reservation's children to local non-Native ranchers (Basic, 2007; Fletcher et al., 2009). Health issues abound on Fort Belknap. However despite abysmal life expectancy in Blaine County for American Indians (63 years) as compared to the non-Native population (83 years; Montana Department of Health and Human Services, 2006a), the people of Fort Belknap consider themselves survivors.

The RS is a strong measurement of resilience that has been used successfully to measure resilience in at least 32 published studies. The instrument was developed from qualitative research in resilience and has always demonstrated strong reliability and internal consistency. This is the first American Indian population with which the RS has been used.

The MEIM has been used successfully to measure ethnic identity in a number of studies including four studies dealing with American Indians. The instrument was initially developed from qualitative work and shows strong reliability and internal consistency.

Werner and Smith's Life Event Checklist was developed from their research on the Kauai Longitudinal Study in which they followed a population of at-risk infants through life into adulthood. The population represented an isolated, rural sample, and in that respect is similar to the population in this study. The Life Event Checklist is a nonintrusive instrument that can measure stressful life events without trolling up deep-seated bad memories.

Chapter 3 will cover the design of the study, participant demographics, sampling method, eligibility criteria, the instrumentation used in the study, the data collection procedure, data analysis, the descriptive and inferential analyses, and the measures taken fior the ethical protection of the participants.

CHAPTER 3: DESIGN OF THE STUDY

Introduction

The focus of this research was to determine the resilience level of the American Indian people living off the Fort Belknap Reservation in Blaine and Phillips counties, Montana, and to determine if there were differences in resilience taking into consideration gender, age, education, enculturation, and increased stressful life events. This chapter describes the research design used, the method of selecting the sample, the sample size, and the eligibility criteria and characteristics. This chapter will also describe the instrumentation, materials used, procedure used to collect the study data, data analysis methods and procedures, and the measures utilized to protect the rights of the study participants.

Research Design and Approach

This research used a quantitative, between-subjects survey design measuring resilience in the selected American Indian population (Graham, 200; Salamonson & Andrew, 2006). It was conducted among the American Indian population living off the Fort Belknap Reservation in Blaine and Phillips counties in north-central Montana. A quantitative rather than a qualitative design was selected for this research in order to empirically measure the strength of resilience of this population, and to determine the strength of gender, age, educational level, level of enculturation, and degree of trauma as factors of that resilience. A quantitative sample was chosen in order to create as representative a sample as possible by including more individuals in the sampling. Qualitative designs maintain their own particular strength, but tend to be limited as to the number of participants that can be tactically and practically utilized. Quantitative

methods have been used with individual American Indian populations in the past (Bullerdick, 2000; Collins, 1995: Graham, 2001; Long & Nelson, 1999; Saiduddin, 2003). Additionally, surveys have been used successfully with American Indian populations and have, in fact, been used in resilience research (Bullerdick, 2000; Graham, 2001; LaFromboise et al., 2006; Long & Nelson, 1999; Samuels, 1997; Whitbeck et al., 2001). Samples were drawn from the adult population (18 years of age and older) of the American Indians living off the Fort Belknap Reservation in both Blaine and Phillips counties in Montana.

Participant Sample

Participants were recruited from the total adult population of American Indians living off the Fort Belknap Reservation in Blaine and Phillips counties in Montana who were 18 years or older and did not suffer from a mental illness. Data was collected between October and December 2010. The estimated number of American Indians living in Blaine County at the time of the research was 3,213 while 276 American Indians lived in Phillips County, for a total of 3,489 (Montana Department of Health and Human Services, Blaine County Health Profile, 2006; Montana Department of Health and Human Services, Phillips County Health Profile 2006; U.S. Census Bureau, Phillips County, MT, 2006; U.S. Census Bureau, Blaine County, MT, 2006). Statistics showed that 2,959 America Indians lived on the Fort Belknap Reservation (which straddles parts of both Blaine and Phillips counties), leaving a total American Indian population of 530 individuals living in the area but off the reservation. The American Indian populations in Blaine and Phillips counties are very young, with a median age in Blaine County of 23 years and in Phillips County of 36 years. Approximately 49% of the American Indian

population in these two counties was below the age of 18 (Montana Department of Labor and Industry, Research and Analysis Bureau, 2006). The total population of the adult American Indians living off the reservation in Blaine and Phillips counties in Montana was 272.

Approximately 31% of the U.S. population is being treated for a mental illness in any given year (Lawrence, Mitrou, & Zubrick, 2009). A mental health survey conducted by Whitbek, Hoyt, Johnson, and Chen (2006) on four American Indian reservations in the Northern Midwest and five Canadian First Nation Reserves found that 33.9% met the criteria for a mental illness. A national sample that included a sample of American Indian children and adolescents showed that the prevalence rates of mental illness in this sample was 30.9% (Libby et al., 2006). Current figures from a 2008 analysis of mental health in Montana showed that 29.9% of the American Indian population suffers from mental illness (Zimmerman & Oreskovich, 2010). The current figures of mental illness among American Indians in Montana are very similar to previous estimations in the United States and among American Indians. Since mental illness was a disqualifying factor in this study, the available American Indian adult population living off the Fort Belknap Reservation in Blaine and Phillips counties was 191.

Sampling Method and Size

Only American Indians living off Fort Belknap Reservation were invited to participate in the survey. Because of the small population, census sampling was used in this research. Addresses were procured from telephone directories in Blaine and Phillips counties, and the names were compared to a list of American Indians living in the area. Only individuals at addresses known to be off the Fort Belknap Reservation were invited

to participate. With a total population of 191, an alpha level of 0.05, and a high effect size of 0.07, the sample size needed was 97 (Creative Research Systems, 2007).

Eligibility Criteria

Any American Indian, who was an enrolled tribal member or a descendent of a tribe, was over the age of 18 years, did not suffer from a mental illness, and maintained an address in Blaine or Phillips counties that was not on the Fort Belknap Reservation at the time of the research was eligible to participate in this research. The Department of the Interior, Bureau of Indian Affairs, defines an American Indian as a member of a federally recognized tribe with ¼ blood quantum or the direct descendant of such a member (Department of the Interior, Bureau of Indian Affairs, 2008).

Instrumentation and Materials

The instruments and materials used in this study included the Resilience Scale (RS), the Multi-group Ethnic Identity Measure (MEIM), the Life Event Checklist, a letter of introduction and consent form, and a brief demographic information survey.

The Resilience Scale (RS)

The RS is a widely used individual survey that measures resilience. The RS is a 26-item scale using a standard Likert-type configuration from 1 to 7 with 1 denoting *strongly disagree* and 7 denoting *strongly agree.* The survey takes between 5 and 10 minutes to complete (Heillemann et al., 2002; Lundman et al., 2007). Scores on the test range from 25-175 with high resilience determined by a score above 147, mid-range resilience scoring from 121-146, and a low-range resilience scoring below 121 (Lundman et al., 2007). The instrument was standardized using 810 elderly volunteers in the Northwest portion of the United States. Over half of the published reports have had

reliability coefficients of over 0.90 and the mean for all published reports has been 0.8544 (see Table 3). In this study, the last survey question, *I am resilient*, was not used in the calculations. Question 26 was originally not included in the scale and is routinely excluded when calculating studies and comparing RS scores with previous studies (as noted in Chapter 2).

The Multi-Group Ethnic Identity Measure (MEIM)

The MEIM is a flexibly configured, widely used individual survey for the measurement of ethnic identity. The survey measures the affirmation and belonging, ethnic identity achievement, other-group orientation, familial ethnic identification, and ethnic behaviors (Phinney, 1992). The 14-item version was used in this study that included the Affirmation/ Belonging, Ethnic Identity Achievement, and Ethnic Behaviors subscales. The survey takes approximately 10-15 minutes to complete (Phinney, Cantu, & Kurtz, 1997). The MEIM was developed using a standard Likert-type configuration, from 1 to 4, with 1 denoting *strongly disagree*, and 4 denoting *strongly agree*. A higher score on the MEIM (above 3.0) indicates that the participant has a high level of enculturation.

Reliability coefficients for the 14-item Ethnic Identity Scale were 0.81 for the high school sample and 0.90 for the college sample. Separating the subscales, the 5-item Affirmation/Belonging subscale had reliability coefficients of 0.75 for the high school samples and 0.81 for the college samples; the 7-item Ethnic Identity Achievement subscale had reliability coefficients of 0.69 for the high school samples and 0.80 for the college samples; the 6-item Other-Group Orientation subscale had reliability coefficients of 0.71 for the high school sample and 0.74 for the college sample (Phinney, 1992). A

representative sampling of published studies using the MEIM as an ethnic identity measure (see Table 4) shows mean reliability coefficients of 0.83 for Ethnic Identity, 0.76 for the Affirmation/Belonging subscale, 0.71 for the Identity Achievement subscale, and 0.70 for the Other-Group Orientation subscale.

Table 4

Research using the Multi-group Ethnic Identity Measure

Author/s Date	No. of subjects and categories	MEIM Ave. Score/Item	Cronbach's Alpha
Phinney, 1992	413 High School Students	2.94	
	Affirmation/Belonging	3.32	0.8
	Ethnic Identity Achievement	2.78	.70
	Ethnic Behavior	2.71	.69
	Other-Group Orientation	3.15	.71
	136 College Students	3.04	
	Affirmation/Belonging	3.36	.90
	Ethnic Identity Achievement	2.90	.86
	Ethnic Behavior	2.67	.80
	Other-Group Orientation	3.25	.74
Phinney, Ferguson, & Tate, 1997	133 African American	3.17	0.80
	128 Latinos District 1	3.10	0.81
	91 Latinos District 2	3.00	0.81
	195 Asian Americans	3.02	0.79
Cuellar et al., 1997	High Mexican Culture	3.08	0.90
	Affirmation/Belonging	3.57	
	Ethnic Identity Achievement	2.86	
	Ethnic Behavior	2.60	
	Other-Group Orientation	3.07	
	High Bicultural	3.13	0.86
	Affirmation/Belonging	3.48	
	Ethnic Identity Achievement	2.99	
	Ethnic Behavior	2.68	
	Other-Group Orientation	3.40	
	Low Bicultural	2.80	0.80
	Affirmation/Belonging	3.14	
	Ethnic Identity Achievement	2.63	
	Ethnic Behavior	2.37	
	Other-Group Orientation	2.80	
	Assimilated to Anglo Culture	2.66	0.74
	Affirmation/Belonging	2.99	
	Ethnic Identity Achievement	2.53	
	Ethnic Behavior	2.39	
	Other-Group Orientation	3.5	

Table 4 (continued)

Author/s Date	No. of subjects and categories	MEIM Ave. Score/Item	Cronbach's Alpha
Phinney, Cantu, & Kurtz1997	372 Latinos		0.83
	Ethnic Identity	3.16	
	Other-Group Orientation	3.22	
	232 African Americans		0.83
	Ethnic Identity	3.26	
	Other-Group Orientation	3.07	
	65 Whites		0.83
	Ethnic Identity	2.74	
	Other-Group Orientation	3.53	
Reese et al., 1998	118 African American 8-12 yr	1.96	0.72
	Affirmation/Belonging	1.83	0.71
	Ethnic Identity Achievement	2.25	0.50
	Ethnic Behavior	2.16	0.30
	Re-test	2.01	0.59
	Affirmation/Belonging	1.83	0.62
	Ethnic Identity Achievement	2.11	0.16
	Ethnic Behavior	2.11	0.15
Roberts et al., 1999	Overall		0.85
	755 European Americans	2.71	0.85
	1,237 African Americans	3.07	0.82
	755 Mexican Americans	3.01	0.81
	253 Central American	3.03	0.81
	304 Vietnamese Americans	3.02	0.84
	177Chinese Americans	3.04	0.84
	188 Indian American (India)	3.27	0.89
	155 Pakistani American	3.34	0.83
	101 Pacific Islander	3.11	0.86
	342 Mixed Ancestry	2.94	0.86

Table 4 (continued)

Author/s Date	No. of subjects and categories	MEIM Ave. Score/Item	Cronbach's Alpha
Spencer et al., 2000	2184 Total Ethnic Identity (EI)	2.22	
	Affirmation/Belonging	2.40	0.85
	Ethnic Identity Achievement	2.09	0.81
	Ethnic Behavior	1.89	0.72
	496 Black EI	2.35	
	Affirmation/Belonging	2.56	
	Ethnic Identity Achievement	2.20	
	Ethnic Behavior	1.98	
	23 AI EI	2.30	
	Affirmation/Belonging	2.51	
	Ethnic Identity Achievement	2.14	
	Ethnic Behavior	2.07	
	541 Asian/Pacific Islander EI	2.35	
	Affirmation/Belonging	2.57	
	Ethnic Identity Achievement	2.20	
	Ethnic Behavior	2.15	
	62 Hispanic EI	2.26	
	Affirmation/Belonging	2.47	
	Ethnic Identity Achievement	2.12	
	Ethnic Behavior	2.04	
	690 White EI	2.01	
	Affirmation/Belonging	2.14	
	Ethnic Identity Achievement	1.92	
	Ethnic Behavior	1.63	
	372 Multiracial EI	2.23	
	Affirmation/Belonging	2.40	
Abreu et al., 2000	378Overall		0.82
	76 African American		0.76
	43 European American		0.84
	259 Latino		0.83

Table 4 (continued)

Author/s Date	No. of subjects and categories	MEIM Ave. Score/Item	Cronbach's Alpha
Yancey et al., 2001	847 Total Sample MEIM-S	2.95	0.83
	Participation	2.65	0.71
	Affirmation and Belonging	3.16	0.81
	101 African American	3.10	0.78
	Participation	2.81	0.71
	Affirmation and Belonging	3.29	0.70
	98 Asian Americans	2.99	0.79
	Participation	2.74	0.58
	Affirmation and Belonging	3.77	0.79
	477 Latinos	3.00	0.83
	Participation	2.74	0.68
	Affirmation and Belonging	3.17	0.78
	171 Whites	3.00	0.83
	Participation	2.28	0.71
	Affirmation and Belonging	2.96	0.81
Zaff et al., 2002	67 African Americans	3.15	
	45 Caucasian Americans	2.88	
	Overall		0.73
	Affirmation and Belonging		0.63
	Ethnic Identity Achievement		0.60
Lee, 2003	67 Asian American Students		
	Ethnic Identity	3.11	0.87
	Other-Group Orientation	3.20	0.76
Boyd, 2004	162 Teachers	2.82	
	Ethnic Identity Search	2.91	0.81
	Affirmation/Belonging	2.76	0.87

Table 4 (continued)

Author/s Date	No. of subjects and categories	MEIM Ave.	Cronbach's Alpha
Kvernmo, & Heyerdahl, 2004	233 Sami Nonnative Speaker	2.4	0.84
	Ethnic Identity Achievement	2.1	
	Affirmative Behavior	2.9	
	Ethnic Behavior	2.6	
	441 Sami Native Speaker	2.7	0.84
	Ethnic Identity Achievement	2.5	
	Affirmative Behavior	3.2	
	Ethnic Behavior	2.6	
	27 Kven Nonnative Speaker	2.3	0.80
	Ethnic Identity Achievement	2.3	
	Affirmative Behavior	2.8	
	Ethnic Behavior	2.5	
	316 Kven Native Speaker	2.5	0.80
	Ethnic Identity Achievement	2.1	
	Affirmative Behavior	3.0	
	Ethnic Behavior	2.7	
Lee & Yoo, 2004	323 Asian American students		
	Other-Group Orientation	3.30	0.76
Guzman et al., 2005	222 Mexican descent		
	Ethnic Identity	3.15	0.79
	Other-Group Orientation	3.48	0.65
Worrell et al., 2006	196 Zimbabwean Students		
	Ethnic Identity	2.77	0.81
	Other-Group orientation	2.89	0.54
Merritt & Harrison, 2006	96 African American Students	3.46	
	96 Euro-American Students	2.82	

Table 4 (continued)

Author/s Date	No. of subjects and categories	MEIM Ave. Score/Item	Cronbach's Alpha
Chan & Owens, 2006	301 Chinese students in NZ		
	Affirmation and Belonging	3.04	
	Ethnic Identity	3.32	
	Other-Group Orientation	3.03	
	179 Female		
	Affirmation and Belonging	3.03	
	Ethnic Identity	3.23	
	Other-Group Orientation	3.05	
	122 Male		
	Affirmation and Belonging	3.05	
	Ethnic Identity	3.31	
	Other-Group Orientation	3.01	

The Life Event Checklist

The Life Event Checklist (Werner & Smith, 1992) is a 30-item checklist that chronicles potentially stressful life events and categorizes them in two groups, *Before age 18* and *Between age 18 and today*. The checklist takes approximately 5-10 minutes to complete. Scores range from 0-60 with high trauma-levels ranging above 11, medium trauma-levels ranging between 5-11, and low trauma-levels ranging below 5 (Angarne-Lindberg & Wadsky, 2009; Fox, Bergquist, Gu, & Sinha, 2010; Gerritsen et al., 2006; Gupta & Bonanno, 2010; Horesha et al., 2009). The participant scored the checklist by counting the number of checkmarks and reporting the tally on a line provided below the demographic information survey. The participant only reported the total number of events. The researcher did not have access to the checklist itself, only the final tally on the demographic information survey.

Demographic Information Survey

In order to collect all the demographic information needed to study resilience and the series of independent variables, a demographic information survey was developed to collect the following information: Year of Birth, Gender (female and male), American Indian status (Enrolled, Descendent, or Non-Native), Total Years of Education, Highest Educational Level Attained (Did not finish HS, HS Diploma/GED, Some College, Bachelor's Degree, or Post Bachelor's), and information related to attending college which included, Current Fort Belknap College Student, Former Fort Belknap College Student, Have attended a tribal college but not Fort Belknap College. The Fort Belknap College information was used to determine the percentage of the sample that were, or had been students at the College, and represented anecdotal evidence to demonstrate the worth of tribal colleges on the reservation landscape (Appendix D).

The demographic information survey was separated from the participant's identity upon receipt. The consent form was separated from the test packet and stored separately. The researcher had no means of matching a test packet with an identifying consent form. A copy of the demographic information survey is included in Appendix A.

Data Collection Procedure

Each of the 227 potential participants was mailed the survey packet which included a letter of introduction (see Appendix B), the Consent Form, the RS with the Demographic Information survey at the bottom of the second page of the RS, a copy of the 14-Item MEIM, a copy of the Life Event Checklist Worksheet, and a stamped, self-addressed return envelope. Only one survey was returned without a signed Consent Form. Upon receipt of the survey packet, the investigator separated the Consent Form from the

rest of the Survey packet. A thank-you letter was mailed to the address provided on the Consent Form along with a $10 honorarium.

Each completed survey packet was logged onto an SPSS spreadsheet in the following manner: sequential number, age in total years, gender (1 = female, 2 = male), education in total years, degree (no degree was left empty; CNA = Certified Nursing Assistant; RN = Registered Nurse; AA = Associates degree; BA = Bachelor Degree; MS = Master's Degree; PhD = Doctorate), present or former Fort Belknap College student (0 = did not attend; 1 = current or former FBC student), total number of trauma from Demographic Information survey, RS items (score on each item), Total Resilience Scale Score, Multi-group Ethnic Identity Measure items (score on each item), Total Multi-group Ethnic Identity Measure score, Attended a Tribal College other than FBC (0 = did not attend; 1= attended tribal college other than FBC). The RS score was calculated from the survey sheet in two ways. The numbers from each item were added for a total and the number of deficits (score of the item subtracted from 7) were added and subtracted from 175, the optimum score. The two sums were compared. The total scores for the MEIM were calculated in a similar manner from the survey sheet. The scores for each item were added together, and then the deficits (score of the item subtracted from 4) were added and subtracted from 56, the optimum score. The two sums were compared. The research data were only entered by the investigator and maintained on a jump drive and on his personal computer secured at his home. No one outside of the investigator had access to the research. A letter with a synopsis of the results was mailed to each participant at the end of the research.

Data Analysis

The dependent variable was the resilience level as indicated by the score on the RS. The RS measurement provided a continuous score and is thus a ratio scale. The independent variables in this survey research included gender, age, education, enculturation, and stressful life events. Gender (male and female) is dichotomous and is therefore a nominal scale. Age was reported in total number of years, a continuous score, and therefore a ratio scale. Education was reported in two forms: total number of years and highest level of education (did not graduate from HS, HS Diploma/GED, some college, Bachelor's degree, post-Bachelor's). The total number of years of education was used in this research, a continuous score and a ratio scale. Enculturation was determined from the MEIM survey providing a continuous score and therefore a ratio scale. Stressful life events were determined from a checklist providing a continuous score and also a ratio scale.

Descriptive Analyses

The dependent variable and all independent variables were analyzed by determining the frequency distribution, median, mean, range, skewness, kurtosis, and standard deviation of the RS scores. Linear regression analysis was performed on all independent variables to determine whether the relationship between the RS scores and the independent variables were monotonic (Heiman, 2006).

Cronbach's alpha was calculated to determine internal consistency on the RS and MEIM scores. Most researchers accept Cronbach's alphas of over .70 as high (Connelly, 2011). In this research, Cronbach's alphas of .70 were considered acceptable and results over .90 were considered high (Wagnild & Young, 1993).

Inferential Analyses

The omnibus model was used to reduce Type I errors, and regression analysis determined a relationship between data sets (Ma, Hart, Janicki, & Carroll, 2011; Lohman & Billings, 2008). In this research least-square regression analysis was used to determine whether a relationship existed between resilience and age, (Research Question 2), resilience and education (Research Question 3), resilience and enculturation (Research Question 4), and resilience and trauma (Research Question 5).

Research Question 1: Will gender influence resilience scores of the study participants as determined by the RS?

$H_0 1$: There is no relationship between the gender of participants in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

$H_A 1$: There is a relationship between the gender of the participants in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

Analysis 1: $H_0 1$ was accepted or rejected using a one-way between-subjects ANOVA. Homogeneity of variance was determined using the Levene's test (Anderson, 2006; Arden & Plomin, 2006; Ginn & Moseley, 2006).

Research Question 2: Are there differences in resilience levels of people of different ages?

$H_0 2$: There is no relationship between the age of participants in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

H_A2: There is a relationship between the age of a participant in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

Analysis 2: $H_0$2 was accepted or rejected based on results of linear regression analysis (Hertzog, Sinclair, & Dunlosky, 2010).

Research Question 3: Does attainment of more education influence resilience levels of the study participants?

$H_0$3: There is no relationship between the educational level of a participant in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

H_A 3: There is a relationship between the educational level of the participant in a sample of American Indians from Blaine and Phillips counties in Montana and their score on the RS.

Analysis 3: $H_0$3 was accepted or rejected using linear regression analysis (Gow et al., 2008).

Research Question 4: Will individuals with a strong ethnic identity as measured by the Ethnic Identity subscale of the *Multi-group Ethnic Identity Measurement* (MEIM) developed by Phinney (1992) have a higher resilience score?

$H_0$4: There will be no relationship between scores on the Ethnic Identity subscale of the MEIM and the RS for participants in a sample of American Indians from Blaine and Phillips counties in Montana.

H_A4: There will be a significant relationship between scores on the Ethnic Identity subscale of the MEIM and the RS for participants in a sample of American Indians from Blaine and Phillips counties in Montana.

Analysis 4: $H_0$4 was accepted or rejected using linear regression analysis, with RS score as the dependent variable (LaFromboise et al., 2006).

Research Question 5: Will individuals with a greater number of traumas in their lives as determined by their score on the *Life Event Checklist* have a lower RS score?

H_05: There will be no relationship between the number of traumas participants in a sample of American Indians from Blaine and Phillips counties in Montana record on the Life Event Checklist and score on the RS.

H_A5: There will be a relationship between the number of traumas participants in a sample of American Indians from Blaine and Phillips counties in Montana record on the Life Event Checklist and score on the RS.

Analysis 5: $H_0$5 will be tested using linear regression analysis (Volanen, Suominen, Lahelma, Koskenvuo, & Silventoinen, 2007).

Ethical Protections

Measures were taken for the protection of the participants' rights. In accordance with the Ethical Principles of Psychologists and Code of Conduct Standard 8: Research and Publication of the American Psychological Association (American Psychological Association, 2002), all participants were treated in an ethical manner. Participation in this study was 100% voluntary. The research was completely explained to participants in the Letter of Introduction (Appendix B). All participants were treated with respect and in an ethical manner. No known harm was done to any of the participants.

The participants were instructed to sign the Consent Form, which was returned with the survey materials. Once the researcher received the survey packet, the Consent Form and survey material were separated, making it impossible to identify the participant from the results. The Consent Form was secured and used to create a participant master list. From the master list, a thank-you letter was generated (Appendix C), which was sent to the participant along with a $10 honorarium. At the end of the research, the master list was used to generate a second mailing that included a letter of appreciation and the results of the research.

The Consent Forms and raw data are being maintained in a secure area of the researcher's private residence. Once the research is finished, it will be offered to the Fort Belknap College archives as recommended by the American Psychological Association. After 5 years, the data will be destroyed.

CHAPTER 4: RESULTS

Introduction

The focus of this quantitative, between-subjects survey research was to determine the resilience level of the American Indians living off the Fort Belknap Reservation in Blaine and Phillips counties, Montana and to understand the relationships of gender, age, education, enculturation, and increased stressful life events and resilience.

Demographics of Participants

A total of 107 survey packets were collected from a potential population of 191. Of those 107 surveys returned, two were discarded because the address was determined to be on the Fort Belknap Reservation. Responses were received from 68 females (64%). Mean age of the participants was 43.5 years (SD = 18.69). The majority (57.1%) of the participants were from two age groups (18-29 year-olds – 33.3%, and individuals older than 60 years-old – 23.8%). The mean education level was high at 13.93 years (SD = 2.29). The mean number of traumatic life events per participant was high at 12.18 (SD = 7.30).

Data Analysis Procedure

Prior to analyzing the hypotheses, data screening was undertaken to ensure the variables of interest met appropriate statistical assumptions. The dependent variables were evaluated for normality, linearity, and homogeneity. Relationships between variables were determined by performing analysis of variance (ANOVA) and least-squares regression using the omnibus method. A test for univariate outliers was conducted. Univariate outliers were sought by converting observed scores to z-scores and then comparing case values to the critical value of +/-3.29, $p < .001$. Case z-scores that

exceeded this value were greater than three standard deviations from the normalized mean. Using this procedure, two outliers were found and removed. No cases exhibited missing data. Therefore, the total analysis dataset included $N = 103$ participants.

A Cronbach's alpha was calculated to determine internal consistency for the RS and the MEIM. As stated previously, a Cronbach's alpha above 0.70 is considered acceptable (Connelly, 2011; Wagnild & Young 1993). The mean Cronbach's alpha for the published studies using the RS referenced in this study was 0.85. The Cronbach's alpha for the RS in this study was moderately high at 0.89. The Cronbach's alpha of published studies using the MEIM is more difficult to calculate because of the variable configurations used and the variance in reporting Cronbach alphas on each section used. Of the seven published studies that reported Cronbach's alphas on the Ethnic Identity portion of the MEIM, the mean Cronbach alpha was 0.77. The Cronbach's alpha for the 14-item Ethnic Identity portion of the MEIM in this study was high at 0.80.

Results

Hypothesis 1

Analysis of variance (*ANOVA*) was used to address the impact of gender on personal resilience. Descriptive statistics of the dependent variable by gender appears in Table 5. The mean item score on the RS was 5.88 ($SD = 0.64$; Range = 1.64 – 1.70) for the female resilience group and 5.74 (SD = 0.86; Range = 2.36 – 7.00) for the male resilience group.

Table 5

Descriptive Statistics of the Dependent Variable by Gender

Resilience Composite	*n*	Minimum	Maximum	Mean	*SD*	Skewness	Kurtosis
Female	69	1.64	7.00	5.88	0.64	-0.86	1.32
Male	36	2.36	7.00	5.74	0.86	-0.98	1.49

Results from Levene's test revealed that variances were equal across groups, F (1, 101) = 3.50, p = .064. Results of the ANOVA test indicated no significant difference in resilience composite scores between males and females, F (1, 101) = 0.87, $p = .35$, $\eta^2 = .009$. Thus, H_0^1 was retained.

Hypothesis 2

The hypothesis regarding the relationship between age and RS scores was analyzed using least-squares regression to address the impact of age on personal resilience. Descriptive statistics for the two variables are presented in Table 6. The mean RS score was 5.84 (*SD* = 0.72). To calculate whether age is normally distributed, skewness and kurtosis were analyzed. It was determined that the age construct showed a very slight positive skewness (0.45) and some detectable kurtosis (-1.07). To test if this deviation from normality was significant, a *z*-score was calculated using the standard error of the kurtosis (std. error of the skew = .24). Results indicated that the construct was normally distributed; (skewness = .45, $z = 1.90$, $p > .05$).

Table 6

Descriptive Statistics for Criterion and Predictor Variables for Hypothesis 2

Variable	*n*	Minimum	Maximum	Mean	*SD*	Skewness	Kurtosis
Age	103	18	83	43.3	18.72	0.453	-1.07
Resilience Composite	103	3.00	7.00	5.84	0.724	-1.01	1.77

Note. Standard Error skew = .24, Standard Error Kurtosis = .47

Regression analysis showed no significant relationship between participant age and resilience, F (1, 102) = 2.38, p = .13 (two-tailed), R^2 = .02. Thus, $H_0{}^2$ was retained.

Table 7

Model Summary Indicating No Significant Relationship between Age and Resilience

Model Summary							
			Unstandarized Coefficients		Standardized Coefficients		
Model	*R*	R^2	*B*	Std. Error	*β*	t	Sig.
Omnibus Model	.152	.023					.13
Constant			5.58	0.18		31.15	.00
Resilience Composite			0.006	0.004	0.15	1.54	.13

Hypothesis 3

Hypothesis 3, regarding the relationship between educational level and RS scores, was analyzed using least-squares regression Descriptive statistics for the two variables are presented in Table 8. Education had a minimum score of 8 years and a maximum score of 20 years. The mean education score was 13.98 years (*SD* = 2.28). Results of a *z*-test indicated that Education was normally distributed (*Skewness* = .05, z = .21, $p > .05$)

Table 8

Descriptive Statistics for Criterion and Predictor Variables for Hypothesis 3

Variable	*n*	Minimum	Maximum	Mean	*SD*	Skewness	Kurtosis
Education	103	8.00	20.0	13.98	2.28	0.05	0.26
Resilience Composite	103	3.00	7.00	5.84	0.72	-1.01	1.77

Note. Standard Error skew = .238, Standard Error Kurtosis = .472

Regression analysis showed no significant relationship between participant education and resilience, F (1, 102) = 1.37, p = .24 (two-tailed, R^2 = .013. Thus, $H_0{}^3$ was retained. Table 9 provides a model summary of the regression analysis results.

Table 9

Model Summary Indicating No Significant Relationship between Education and Resilience

Model Summary							
			Unstandarized Coefficients		Standardized Coefficients		
Model	*R*	R^2	*B*	Std. Error	*β*	*t*	Sig.
Omnibus Model	.116	.013					.24
Constant			5.32	0.44		11.99	.00
Resilience Composite			0.04	0.03	0.13	1.17	.24

Hypothesis 4

Hypothesis 4, regarding the relationship between the MEIM and RS scores was analyzed using least-squares regression to address the impact of ethnic identity on personal resilience. Descriptive statistics for the two variables are presented in Table 10. The mean ethnic identity score was 2.94 (*SD* = 0.53; Range = 1.43 – 3.71). Results of a *z*-

test indicated that the construct was not normally distributed; (*skewness* = -.78, $z = 3.26$, $p < .001$).

Table 10

Descriptive Statistics for Criterion and Predictor Variables for Hypothesis 4

Variable	*n*	Minimum	Maximum	Mean	*SD*	Skewness	Kurtosis
Ethnic Identity	103	1.43	3.71	2.94	0.53	-0.78	-0.07
Resilience Composite	103	3.00	7.00	5.84	0.72	-1.01	1.77

Note. Standard Error skew = .238, Standard Error Kurtosis = .472

Regression analysis showed a significant relationship between participant ethnic identity scores and resilience scores, $F(1, 102) = 14.42$, $p < .001$ (two-tailed), $R^2 = 0.13$. Thus, H_0^4 was rejected. Approximately 12.5% (R^2) of the variance in resilience scores was explained by ethnic identity. Table 11 provides a model summary.

Table 11

Model Summary Indicating a Significant Relationship between Ethnic Identity and Resilience

Model Summary							
			Unstandarized Coefficients		Standardized Coefficients		
Model	*R*	R^2	*B*	Std. Error	*β*	*t*	Sig.
Omnibus Model	.353	.125					< .001
Constant			4.42	0.38		11.70	.00
Resilience Composite			0.48	0.13	0.35	3.80	< .001

Hypothesis 5

Hypothesis 5, regarding the relationship between trauma and RS scores, was analyzed using least-squares regression. Descriptive statistics for the two variables are presented in Table 12**.** The mean score of the trauma variable was 12.18 (*SD* = 7.30; Range = 1.00 – 31.00). A *z*-score was calculated using the standard error of the kurtosis (*std. error of the skew* = .24). Results indicated that the construct was not normally distributed; (*skewness* = .491, $z = 2.06$, $p < .05$).

Table 12

Descriptive Statistics for Criterion and Predictor Variables for Hypothesis 5

Variable	*n*	Minimum	Maximum	Mean	*SD*	Skewness	Kurtosis
Trauma	103	1.00	31.0	12.18	7.30	0.49	-0.50
Resilience Composie	103	3.00	7.00	5.84	0.72	-1.01	1.77

Note. Standard Error skew = .24, Standard Error Kurtosis = .47

Regression analysis showed no significant relationship between the number of traumas and resilience, $F(1, 102) = 1.00$, $p = .32$ (two-tailed), $R^2 = .01$. Thus, H_0^5 was retained.

Table 13

Model Summary Indicating No Significant Relationship between Trauma and Resilience

Model Summary							
			Unstandarized Coefficients		Standardized Coefficients		
Model	*R*	R^2	*B*	Std. Error	*β*	*T*	Sig.
Omnibus Model	.10	.01					.32
Constant			5.96	0.14		42.73	.00
Resilience Composite			-0.01	0.01	-0.099	-1.00	.32

Summary

Of the five variables tested in terms of their relationship to resilience, only enculturation showed a significant relationship to resilience. That relationship was positive; as the enculturation level of the participant increased, so did the resilience level. Implications of this will be discussed in Chapter 5.

CHAPTER 5:

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

For over 3 decades, resilience has been recognized as the ability to not only survive a trauma, but rebound from it. From the seminal works of Antonovsky (Antonovsky, 1979; Antonovsky, & Kats, 1967; Antonovsky et al., 1971; Antonovsky, & Sourani, 1988), working with Israeli Holocaust survivors and Werner and Smith (Werner, 1989; Werner, 1995; Werner & Smith, 1982/1998; Werner & Smith, 1992; Werner & Smith, 2001) working with at-risk infants on the island of Kauai, resilience has become a cornerstone of positive psychology. Subsequent work to determine factors that lead to resilience by Garmezy et al. (1984), Mrazek and Mrazek (1987) and Rutter (1987), have met with often-conflicting results due to factors such as class, gender, culture, age, and level of trauma being identified as those that sometimes influence the strength.

Research working with resilience in American Indians has been equally contentious with such factors as age, gender, spirituality, maternal warmth, enculturation, academic success, strong family ties, and biculturalism being identified with the strength. Such researchers as LaFromboise et al. (2006), Oetting and Beauvais (1986; 1987; 1990/1991), and Whitbeck et al. (2001) have attempted to determine why some American Indian youth remain strong while others wander down the path of school failure, drugs, and alcohol.

This research was done to determine which factors contribute to the resilience of a population of adult American Indians living in Blaine and Phillips Counties but off the

Fort Belknap Reservation. Demonstrating the strength of this population and the factors that lead to that strength can bolster the correction of negative misperceptions that have surrounded American Indians since their first contact with Europeans.

Recognizing and promoting resilience has been a goal of various disciplines for decades. Focus has especially been aimed at those individuals and groups that have been identified as being at risk (Werner & Smith 1982/1998). American Indian youth are one of these groups that have drawn the attention of the scientific community, especially with the high rates of educational failure and self-destructive behaviors (LaFromboise et al. 2006; Whitbeck et al. 2001). But, unfortunately, such focus has echoed educational and assimilational depredations of the past, and the spotlight has neither been sought nor appreciated. This research seeks to bolster the feelings of resilience in the American Indian community of Blaine and Phillips counties by demonstrating the innate strength that has allowed this population to weather past and present cultural assaults.

Researchers have attempted to identify factors of resilience in the American Indian communities that might be nurtured in order to negate the impact of unemployment, poverty, and discrimination. In much of the early work with resilience, it was determined that females tended to be more resilient than males. In many of the seminal works dealing with resilience, gender was a significant factor (Garmezy et al., 1984; Rutter, 1987; Werner & Smith, 1982/1998). With resilience research and American Indians, results have not always shown such an evident dichotomy. While two researchers found American Indian females to be more resilient than American Indian males (Bullerdick, 2000; Graham, 2001), other research found that differences between

the resilience levels of males and females was not significant (LaFromboise et al., 2006; Montgomery et al., 2000; Waller et al., 2003; Whitbeck et al., 2001).

While other resilience research has reveled in the increase of resilience with age, including Wagnild and Young's (1993) seminal work with their Resilience Scale (Broyles 2005: Johnson, 2002; Leppert et al. 2005; Nygren et al. 2005; Parker 2006; Wagnild, 2003), American Indian resilience research has focused on youth and their struggles with academics and drugs and alcohol (Bullerdick, 2000; Evans, 1997; Graham, 2001; Klassen, 1997; LaFromboise et al., 2006; Ramirez, 2006; Samuels, 1997; Waller et al., 2003; Whitbeck et al., 2001). Adult American Indian resilience research has been rare and typically limited. Wek-Visker (2005) reviewed 23 previously completedinterviews of American Indian families, Montgomery et al. (2000) interviewed 14 graduate students, and Cutler (2006) interviewed 10 adult American Indian trauma survivors. However, no research to date has gauged the increase or decrease of resilience with increased age on an adult population of American Indians.

Academic success has been used as proof of resilience (Saiduddin, 2003), as a factor in resilience (Evans 1997; Whitbeck et al. 2001), and even as the definition of resilience of preadolecents and adolescents (Collins, 1995; LaFromboise et al. 2006). But no research to date has gauged the impact of education on resilience with an adult population of American Indians.

Enculturation seems to have a powerful buffering capacity that allows an individual, but especially a minority individual, to weather life's stressors (Bals et al., 2011; Brown et al., 2009; Gallo et al., 2009; Marsiglia et al., 2011). However with the complexities of the world's societies, other researchers have found more resilient strength

in being able to balance between two worlds – biculturalism (Garza, 2007; Goff et al., 2007; Magnus et al., 1999; Taxis, 2006). Most research with American Indians has shown a positive effect of the culture on resilience (LaFromboise et al., 2006; Oetting & Beauvais, 1990/1991; Stone et al., 2006). Biculturalism does seem to have its advocates in Indian Country. Some researchers have found balancing both the dominant European American culture and the Native culture efficacious to survival (Drywater-Whitekiller, 2006; Radin et al., 2006; Strong & Peacock, 2002), but adult participants have rarely been the subjects used in this research.

Not all traumas that individuals suffer have balanced impacts on their victims. Researchers have found that the more severe the trauma, the less likely the individual will react with resilience (deRoon-Cassini et al., 2010; Storr et al., 2009; Werner & Smith, 1992). This is especially true of the horrors of combat where the more intense the combat, the more severe the post-trauma symptoms (Maguen et al., 2011; Marmar, 2010; McKeever et al., 2006; Renshaw, 2011; Vogt & Tanner, 2007). American Indians living with poverty and the problems of the nation's reservations are very likely to observe or experience traumas (Evans-Campbell et al., 2006; Jones et al., 1997; Manson et al., 2005, Whitbeck, 2006; Whitesell et al., 2009). Unfortunately, these problems very often lead to an attempt at self-medication in the form of drug and alcohol use (Boyd-Ball et al., 2006; Henry et al., 2011; Nalls et al., 2009; Yabiku et al., 2007).

This research builds on previous research with American Indians by examining the level of resilience in the population of American Indians living off the reservation in Blaine and Phillips counties in north central Montana to determine the strength of their resilience and whether age, gender, educational level, enculturation and level of trauma

are significant factors in that resilience. These factors were chosen because they have been identified as important factors universally and with the American Indian population specifically. Other factors such as spirituality and maternal warmth were not included because of the difficulty in identifying and isolating the factors, and specificity to the American Indian population. Spirituality for example could encompass ancient, traditional American Indian beliefs, traditional Christianity, modern evangelical Christian beliefs, or any of a myriad of other religious teachings. Though it has been measured before in American Indian resilience research as a specific entity (Graham, 2001; LaFromboise et al., 2006; Long & Nelson, 1999; Whitbeck, Adams, Hoyt, & Chen, 2004), it was felt that the concept was too nonspecific and unwieldy to produce significant information. Type of spirituality is also a point of contention on reservations in this area, and it was not desired to exacerbate the often-disruptive conflict between the adherents of traditional American Indian beliefs, the traditional Christian believers, and the evangelical Christian believers. Maternal warmth is a difficult concept to identify and equally difficult to measure though it was identified by other research as a factor with pre-adolescents and adolescents (LaFromboise et al., 2006; Whitbeck et al., 2001).

Interpretation of Findings

This study is the first attempt at measuring the resilience of a cross-section of an American Indian adult population. Other resilience research dealing with American Indian populations have focused on limited age groups such as junior high students (LaFromboise et al., 2006; Waller et al., 2003; Whitbeck, et al., 2001), and high school students (Bullerdick, 2000; Collins, 1995; Evans, 1997; Graham, 2001; Klassen, 1996; Ramirez, 2006; Saiduddin, 2003; Samuels, 1997). Research with American Indian adult

populations has most often been limited in scope to the interactions of the adults with a pre-adolescent or adolescent population (Evans, 1997; Wek-Visker, 2005; Whitbeck, Adams et al., 2004), or dealing with the adults as students (Long & Nelson, 1999).

Wagnild and Young's RS was used in this research. This is the first research using the RS that investigates resilience in an American Indian population. Other research with American Indians on resilience has utilized other resilience measures. Jew's Resiliency Scale was used with two adolescent American Indian populations with good result (Collins, 1995; Saiduddin, 2003). Oetting and Beauvais's *American Indian Cultural Identification Scale* was used with an adult population (Whitbeck, Chen et al., 2004) and an adolescent population (LaFromboise et al., 2006) with good results.

The RS was initially developed as a test for resilience with an elderly population (Wagnild & Young, 2003). However subsequent researchers used the RS with younger and more diverse populations than Wagnild and Young's initial research; from homeless adolescents in Texas (Rew et al., 2001) and adult women from a battered-women's shelter in California (Humphreys, 2003) to an older adult population living in a retirement city in Tennessee (Broyles, 2005) and nontraditional female students in Arizona (Howell, 2003). While the results were deemed reliable, the age diversity and the varying circumstances of the tested populations made it difficult to establish norms for the test (see Table 1, p. 45; Table 3, p. 104). According to Wagnild, "The Resilience Scale has performed as a reliable and valid tool to measure resilience and has been used with a wide range of study populations" (2009, p. 105).

One of the purposes of this research was to determine whether the American Indians of Blaine and Phillips counties living off the reservation were resilient. While the resilience score of all the participants in this study did not measure at a high level, the mean total resilience score for all participants was moderately high at 145.9. In order to make this determination, *post hoc* analysis of the results was done comparing these results to previous studies. Since this was a cross-sectional study, four similar studies were chosen: Nygren et al. (2004), Broyles (2005), Schumacher et al. (2005) and Lundman et al. (2007). Table 14 shows the descriptive statistics of this study and the four comparison studies.

A one-sample *t* test is used when it is desired to compare the mean from one sample to one published from another study or population (Azeem et al., 2009; Hans, Gillen, & Akande, 2010; Nomamiukor & Brown, 2007). One-sample *t* test was used in this study to compare means of the RS item scores determined in this study with those from four published studies (Nygren et al., 2004; Broyles, 2005; Schumacher et al., 2005; and Lundman et al., 2007).

The RS item mean difference between the current study ($M = 5.83$) and Nygren et al. (2004; $M = 5.63$) was significant, $t\ (243) = 2.31$, $p = 0.0216$. The RS item mean for the current study and Schumacher et al. (2005; $M = 5.35$) was also significant $t\ (2132) = 5.28$, $p = < 0.0001$. The RS item mean for the current study and Lundman et al. (2007; $M = 5.66$) was significant as well, $t\ (1820) = 2.33$, $p = 0.0200$. The RS item mean for the current study was not statistically different than the study by Broyles (2005; $M = 5.72$); $t\ (598) = 1.50$, $p = 0.134$.

Table 14

Descriptive Statistics of the Five Post Hoc Studies

Authors/Date	No. in Study	Age Range	Age Mean	RS item Mean	SD
Nygren et al., 2004	142	19-85	No Data	5.628	0.62
Broyles, 2005	497	39-92	65.4	5.72	0.65
Schumacher et al., 2005	2,031	14-95	48.3	5.352	0.90
Lundman et al., 2007	1,719	19-103	59	5.66	0.71
Current Study	103	18-83	43.5	5.828	0.73

Table 15

Descriptive Statistics Generated from Independent One-Sample t Tests Between the Current Study and Four Cross-sectional Studies

Author and Date	*df*	*t*	*p*	Std Error of Difference	Confidence Interval
Nygren et al., 2004	243	2.3120	0.0216	0.087	0.200
Broyles, 2005	598	1.5016	0.1337	0.072	0.108
Schumacher et al., 2005	2132	5.2799	0.0001	0.090	0.476
Lundman et al., 2007	1820	2.3288	0.0200	0.072	0.168

Mean RS score in the current study is higher than the mean RS scores in three of four comparable studies. One conclusion from this is that the American Indian participants from off the reservation in Blaine and Phillips counties demonstrate resilience at a greater level than the three comparable studies (Lundman et al., 2007; Nygren et al., 2004; Schumacher et al., 2005) but not significantly greater than the participants in the study by Broyles (2005). This American Indian population therefore tests significantly more resilient when compared to three of four cross-sectional studies.

This research compares favorably with the published results of the RS, higher mean scores being recorded in research dealing with older populations (Johnson, 2002; Nygren et al., 2005; Parker, 2006; Rohrig et al., 2006; Wagnild & Young, 1993) and research of single mothers in Ontario, Canada (Black & Ford-Gilboe, 2004). Of the other 33 published RS research, all showed lower mean RS scores for their populations including the four cross-sectional adult populations (see Table 3, pg 104).

The results of this research support both qualitative and quantitative research from the past that has found American Indian populations resilient (Bullerdick, 2000; Collins, 1995; Graham, 2001; Klassen, 1996; LaFromboise et al., 2006; Long & Nelson, 1999; Saiduddin, 2003; Samuels, 1997; Wek-Vesker, 2005). This research also supports enculturation as a strong factor in developing resilience. Though other researchers have found American Indian culture disruptive to the successful transition from adolescence to adulthood (Samuels, 1997), an anachronism for urban-dwelling American Indians (Bullerdick, 2000), or the least important factor in an American Indian family's survival (Wek-Visker, 2005), most researchers have found enculturation a powerful buffer against

outside stress (Collins, 1995; Graham, 2001; Klassen, 1996; LaFromboise et al., 2006; Long & Nelson, 1999).

This research found that enculturation as measured by Phinney's MEIM was a significant factor in the increase of resilience in this population. Participants with a high MEIM scores tended to score higher on the RS. For example, examination of the individuals who scored above the MEIM mean (41.16), the mean RS score for the 56 individuals is 150.76. For the 47 individuals who scored below the MEIM mean, the mean RS score is 134.55. Comparing the total RS scores for the two levels of MEIM scores for significance using a *t* test yields $t(101)= 6.3087$, $p = >0.0001$. The results represent a significant difference. Ethnic identity for this sample as measured by the MEIM was moderately high with a mean MEIM item score of 2.94. An item score mean above 3.0 is considered high (Merritt & Harrison, 2006). The MEIM scores were similar across age groups.

Other factors measured in this research did not show significance, i.e., the factors did not tend to affect the individuals' RS result. H_0^2, there is no relationship between the gender of a participant from Blaine and Phillips counties and their score on the RS, was supported. While females appeared to have a higher RS scores with a mean item score of 5.88, compared to the male item mean of 5.74, a *t* test to determine signifinace showed that the difference was not significant $t(101) = 8.2243$, $p = 0.0770$.

Resilience studies have most frequently found that females were significantly more resilient than males. This conclusion began with the longitudinal studies of Garmezy et al. (1984) and Werner and Smith (1982/1998). Building on this research, other researchers found similar results (Chuang et al., 2006; Kim & Cicchetti, 2006;

Langenkamp 2010; Rae-Grant et al., 1988). Initially, research with American Indians supported the mainstream conclusions (Bullerdick, 2000; Graham, 2001), however, researchers delving into American Indian resilience since have found that American Indian males and females had similar resilience levels (LaFromboise et al., 2006; Whitesell et al., 2006; Montgomery et al., 2000; Waller et al., 2003; Whitbeck et al., 2001) as have resilience studies of the general public (Cotto et al., 2010; Sacker & Schoon, 2007; Widom et al., 2006).

H_0^3, there is no relationship between the age of a participant from Blaine and Phillips counties and their score on the RS, was supported. The research disclosed that though resilience scores increased with age, age was not a significant factor in resilience development in this population as determined by regression analysis. Ages of participants ranged from 18 years to 83 years and while resilience tended to increase with age (see Table 16), each age category had individuals with high scores and individuals with low scores.

To determine if the increases in resilience scores between age groups was significant, a one-way ANOVA was conducted. Results of the ANOVA test indicated significant difference in resilience scores among age groups, $F(4,101) = 3.558$, $p = 0.009$.

Table 16

Age Demographics and RS Scores of the American Indian Population in Blaine and Phillips Counties (Montana Department of Commerce, 2007).

Age Categories	N	% Sample Population	Mean RS Score	SD
18-29-years-old	35	33.3%	141.01	7.90505
30-39-years-old	16	15.3%	138.25	13.70491
40-49-years-old	12	12.4%	143.17	15.9635
50-59-years-old	15	15.2%	149.56	16.13439
60+-years-old	24	23.8%	149.88	11.81172

The mean age of the sample (43.3) was about the same as the mean adult American Indian population in general (42.7) (Montana Department of Commerce, 2007). The mean age for females (42.8) was similar to that of males (44.9). The study showed an abundance of participants in the youngest and oldest categories. These two groups were especially represented because there are few opportunities on the reservation for an independent young adult to be able to find rental housing away from their parents. The increased number of participants 60+-years-old also may represent a more affluent population able to afford living in a closer proximity to groceries and medical care off the reservation.

Though the differences in resilience scores of the age groups were not severe enough to make age a factor in the resilience scores, the scores did increase from the youngest to the oldest categories. Despite age not being a significant factor, the pattern of increase supports the previous work by Bonanno et al. (2006) with the World Trade

Center survivors where he discovered that resilience increases with age, as did the work of Lundman et al. (2007) and Schumacher et al. (2005).

The differences in resilience scores of the age groups were severe enough to make age a factor in the resilience scores, as the scores did increase from the youngest to the oldest categories. Since this point is unclear, the factor the pattern of increase supports the previous work by Bonanno et al. (2006) with the World Trade Center survivors where he discovered that resilience increases with age, as did the work of Lundman et al. (2007) and Schumacher et al. (2005).

One of the first factors identified by researchers in resilience studies was the combination of intelligence and academic achievement (Flouri et al., 2010; Garmezy et al., 1984; Herrenkohl et al., 1994; Kwok et al., 2007; Morales, 2010; Oetting & Beauvais, 1987; Sameroff & Rosenblum, 2006; von Stumm et al., 2010; Werner & Smith, 1982/1998), but this research did not find that academic achievement was important to the establishment of resilience in this population. While this is obviously not true of all populations, Luthar (1991) did discover that students under stress tended to lose the advantage they gained from their academic achievement. Thornton et al., (2006) discovered similar results on an Indian reservation in Nevada. However many researchers dealing with an American Indian student population have used educational achievement as a proof of resilience, using educational desire or success to define resilience (Hayward et al., 2007; Cummins et al., 1999; LaFromboise et al., 2006; Montgomery et al., 2000; Saiduddin, 2003; Strand & Peacock, 2002; Whitbeck et al. 2001). While this may be ideal for a student population, with an adult population there is a different dynamic. In an environment where education does not always guarantee employment and employment is

not always based on education, education does not have the impact that it does in academia. Education proved to be insignificant in this research and therefore H_0^4 was supported, there is no relationship between the educational level of an American Indian participant from Blaine and Phillips counties in Montana and their score on the RS. As an example, nine of the 103 participants did not complete high school. The mean RS score for this group is 142.48. The mean RS score for the 16 participants who completed high school with some college but less than a Bachelor's degree is 146.07 (see Table 17). To determine if there was a significant difference between the mean RS scores of each educational category, a one-way ANOVA was conducted. Results of the ANOVA test indicated that the differences between the mean RS scores of the educational categories was not significant, $F(4, 102) = 1.476$, $p = 0.215$.

Table 17

Educational Attainment of the American Indian Population in Blaine and Phillips Counties and RS Scores (Montana Department of Commerce, 2007).

Level of Education	% of the Sample Population	Mean RS Score	*N*	SD
Didn't finish HS	8.8%	142.8	9	21.6782
HS Diploma/GED	15.2%	142.31	16	21.8776
Some College	57.3%	146.07	59	8.8652
Bachelor's Degree	14.8%	145.67	15	16.0677
Post Bachelor's	3.9%	160.75	4	11.0905

The number of years of education ranged from 8 years to 20 years with a mean number of years of education high at 13.98 years. 28 participants had degrees and 20 of

these individuals attended a tribal college either currently or at some point in their college educations. 48 participants were either current or former Fort Belknap College (the local tribal college) students. Three participants attended both Fort Belknap College and another tribal college at some point in their college careers. Seven participants attended a tribal college other than Fort Belknap College. The number of tribal college alumnus in the study demonstrates the boon of having a quality, local tribal college for the population to attend. The next closest college in the area is 43 miles from the edge of the reservation and over 80 miles from the farthest corners of the reservation.

While educational level had little impact on resilience scores, the factor that had the least impact on resilience scores was the number of traumas the individual had suffered. Therefore H_0^5 was supported; there will be no relationship between the number of traumas an American Indian participant from Blaine and Phillips counties in Montana records on the Life Event Checklist and their score on the RS. The majority of the research done with resilience has found that increased trauma leads to reduced resilience (Dykes et al., 2011; Edmond et al., 2006; Hart et al., 2008; Kang et al., 2006; Maguen et al., 2011; Marmar, 2010; McKeever et al., 2006; Munsey 2009; Renshaw, 2011; Rintamaki et al., 2009; Vogt & Tanner, 2007; Werner & Smith, 1992). However two studies from Indian Country from the 1990's found very different results. Both Jones et al. (1997) and Robin et al. (1998) discovered that large levels of trauma did not always lead to negative reactions (depression, anxiety, and PTSD). This research supports the conclusions of Jones et al. (1997) and Robin et al. (1999) that in select American Indian populations greater trauma rarely leads to negative consequences.

As was stated previously, for research purposes, a high number of traumas in a life is above 11, medium trauma-levels range between 5 and 11, and low trauma-levels range below 5 (Angarne-Lindberg & Wadsky, 2009; Fox et al., 2010; Gerritsen et al., 2006; Gupta & Bonanno, 2010; Horesha et al., 2009). The number of traumas reported in this research were as low as 1 and as high as 31. The mean number of traumas reported by the participants was high at 12.18. The number of traumas reported tended to increase with age. Surprisingly, participants who suffered below the mean number of traumas (N=58) had a mean RS score of 145.3 while those who suffered above the mean number of traumas (N=45) had a mean RS score of 146.2. A *t*-test on the RS scores showed that $t(101) = 0.8126$, $p = 0.4208$ indicating no significant difference between these two groups.

While resilience might seem to be contraindicated when confronting increased trauma, this is the third study that has reported this phenomena in an American Indian population. There seems to run in the American Indian culture a strong undercurrent of the ability to deal with any hardship. This ability to make trauma negligible might be a dynamic of the stoic "warrior" culture that permeates this population. It is a cultural imperative that comes from countless eons of carving survival out of an often-hostile environment and one that seems to continue unspoken in this population.

Implications for Social Change

When I first proposed this research to the administration on Fort Belknap, there was a fear from some leaders on the reservation that this would be one more marginal or negative study - there had been so many in the past. That is one reason this research took so long in the approval process and was never approved to be done on the Fort Belknap

Reservation. But the results are certainly not negative and hardly marginal, compared to all studies using the RS, this population scores at an optimum level. This population is resilient. There are so many factors in social change that it is difficult to speculate the potential worth of any action. But assuming that this research is published and becomes known and acknowledged to not only this population, but medical, mental health and local, state, and federal governmental entities, perceptions can change. Unfortunately, it is difficult to get beyond first impressions.

At first blush, with numbing poverty and rampant unemployment, modern American Indian reservations and their surrounding areas appear to be bleak and foreboding places full of depression and despair. But after progressing past appearances and developing a relationship with the American Indian people of the area, one is struck by the individual ability to weather crippling trauma and problems through the support of extended family and the ever-present culture. This research accentuates two realities about the American Indian people of Blaine and Phillips counties: they are resilient and can survive a prodigious amount of trauma, and their resilience is generated from their culture. This research builds on the conclusions of other research and provides empirical proof that this American Indian population is resilient. Despite the negative statistics pouring from the reservations from organizations looking for negative information, Child Protective Services (CPS), the Chemical Dependency Center (CDC), Indian Health Service (IHS), Mental Health, the Tribal Criminal Justice System, this American Indian culture has survived the depredations of the past and will likely flourish in the future as foretold by the level of resilience. It is a society that should be celebrated for strengths not accounted for by the negative statistics. If heeded, this research can go a long way in

correcting misperceptions and supporting a partnership between funding agencies and the American Indian communities to help buttress the culture through contributions to cultural events.

By identifying this population's ability to endure high levels of trauma and still maintain a high resilience rate through positive enculturation, granting agencies have a vehicle for contributing to renewed support of this strength. This research is empirical proof that, by supporting such programs as indigenous language training (the White Clay Immersion School; Umbhau, 2009), cultural support classes in primary and secondary school (Montana Indian Education For All, K-12; Fox, 2006), and college cultural studies classes (American Indian Studies classes), an entity whether governmental or charitable will be able to contribute to the strengthening of the American Indian people in the area.

By supporting the development of self-esteem through cultural events in the area, resilience can be maximized and negative outcomes can be reduced. Resilience has been described as the strength to withstand the destruction of suicide (McLaren & Challis, 2009; Yoder et al., 2006). By accentuating the resilience of this population of American Indians and supporting enculturation, rather than focusing on the negatives, it is possible to reduce the probability of suicide in this vulnerable population. Shifting the medical and mental health mindset to accentuate the strength of resilience rather than the weaknesses of drug and alcohol abuse, rampant childhood traumas, diabetes, and other sedentary health problems can shift prognosis and treatment regimens as well. With the understanding of the impact of culture on the well-being of this population, medical and mental health training can embrace cultural practices in the healing process leading to a physically and mentally healthier populace.

Recommendations for Action

This study goes beyond other resilience research on American Indians by measuring an adult population and comparing the results against other adult populations. It shows that this population has a high resilience level. The impact of this information can be profound if heeded by the individuals in the population, the tribal government, local, state, and federal authorities, and charitable organizations seeking an appropriate benefactor for their largesse. If this information is properly disseminated and heeded, then future actions will support the implementation and funding of cultural activities to bolster American Indian resilience. By supporting the American Indian culture, this deed can go a long way in tempering the impact of the historical trauma of forced assimilation and discrimination, but it will also support the continued resilience of this population.

Through publication of these results in local, statewide, and national periodicals, the results of this research will be available to individuals in the population, the community, the state, the American nation and the Indian nations. While self-esteem is created internally, it must be supported externally by the family and the culture. Special attention should be made to disseminate the research in support of suicide prevention activities in Indian Country. Promoting resilience has become a prime means of combating the denigrating ideas that eventually lead to suicide (Evreall, Altrows, & Paulson, 2006; LaFromboise, Medoff, Lee, & Harris, 2007; McGowan, 2006; Tsey et al., 2007). Through these publications, the results can also support a shift in medical and mental health treatment regimens to incorporate more culturally sensitive activities (Barnard, 2007; Coyne, 2006-7; Wolsko, Mohatt, Landon, & Burket, 2009). The strength of resilience is already there, it merely needs to be acknowledged and nurtured.

Using the empirical evidence supplied by this and previous research, tribes can petition federal funding agencies to write cultural components into their grants to insure that funding is made available to support the cultural aspects of the funding. This especially needs to be done with Justice Department grants which to-date support law enforcement and incarceration, but little prevention – accentuating cultural components will remind offending American Indians of their cultural responsibilities and can go a long way in reducing crimes on the reservation (Hamby, 2008; Springer, 2007).

This research can be used in grant applications to support funding for cultural events from charitable organizations and foundations. This will be especially efficacious for the local tribal college as the main educational purveyor of culture in the area. For example, Fort Belknap College already supports the White Clay Immersion School on campus and an American Indian studies program. With expanded funding, this college can offer enhancement classes to support the "Indian Education for All" program legislated by the state for K-12 instruction, and scholarships in support of the American Indian Studies program. Increased funding could enhance and expand their Cultural Center to include more displays of cultural artifacts.

Empirical evidence should never be seen as more or less than what it is, statistical proof bound by the parameters of the research. This research merely accumulates and reaffirms what is already known by the American Indians who participated, they are a resilient population made so by the strength of their culture. It is time that others are made aware of their strengths and their needs.

Recommendations for Further Study

While it is understandable that American Indians would be wary of research after the unethical treatment they have received at the hands of both government and private researchers, it would behoove the Tribes to become better versed in the machinations of the process. One suggestion for future study would be for the Tribal hierarchies to develop a more enlightened method of sifting through research requests so that beneficial research will not be rebuffed.

There is a school of thought among some American Indian academics that only qualitative research should be done concerning indigenous peoples (Gone & Alcantara, 2010; Guillory, 2009; House, Stiffman, & Brown, 2006; Yuan et al., 2010), however, this contextual prejudice may limit the quality of research that can be done. Unfortunately, much of the statistical information gathered on reservations by federal governmental entities provides a prodigious amount of substantiation to argue against. Quantitative research certainly has its benefits, and, when dealing with potentially positive *argumentum,* should be judged on its own merits rather than from an unyielding point of unquestioned rejection.

The results of this research contradict conclusions from other research dealing with American Indians. However many of the contradicting outcomes can be explained because of the dissimilar research parameters. Most resilience research dealing with American Indians has been done on limited age ranges, namely either junior high or high school students. This research has an expanded scope by encompassing an entire adult population. However this research too had its limitations in that the participant population

was limited to American Indians not living on the reservation. It would be suggested that in the future research be sought to include the adult population living on the reservation.

Another interesting conclusion of this research was its agreement with two previous studies dealing with American Indians, trauma, and resilience (Jones et al., 1997 Robin et al. 1999). The American Indian populations showed little effect from the increased trauma. This is a phenomenon that has never been noted in another population. Further research in this area with American Indians and other populations might be very enlightening.

Conclusion

American Indian resilience research has primarily been undertaken in context to preadolescents and adolescents in dealing with the problems they might encounter. But this research was done to determine the factors that might lead to resilience in an adult American Indian population. For several reasons this research was unique: it measured resilience in an age group rarely studied; it dealt with a population that has been on the periphery of research; and it looked at the history of trauma as a factor in resilience. The results were equally unique as it was determined that the population was resilient, but that the strongest and only significant factor in adult American Indian resilience was the strength of their culture. Resilience scores above the mean of the enculturation score were 10% higher than those below the mean or a difference between an RS score of 150, and 134. This statistically shows that resilience is directly tied to culture in this American Indian population. Equally astounding was the impact of increased trauma on resilience. While previous research has found that increased trauma led to decreased resilience, this

study found that among American Indians, increased trauma had only a miniscule effect on their resilience scores. This phenomenon seems to be a byproduct of the culture.

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APPENDIX A

DEMOGRAPHIC INFORMATION

Year of Birth: _____

Gender: Female _____ Male _____

Native Status: Enrolled _____ Descendent _____

Non-Native _____

Total Years of Education: _____

Education: Didn't finish HS ____

HS Diploma/GED___

Some College___

Bachelor's Degree ___

Post Bachelor's ___

Current Fort Belknap College Student ____

Former Fort Belknap College Student ___

Have attended a tribal college but not Fort Belknap College _____

APPENDIX B

Dear Friend,

Due to a change in research protocol, I am required to resubmit my request for participation in the following research:

I am Bruce M. Bradway. I have been teaching at Fort Belknap College for ten years and I am a Doctoral candidate at Walden University in Academic Psychology. I am doing research on the resilience of the American Indian people of Blaine and Phillips counties and I have chosen your name as a potential participant in the research. Resilience is the ability to bounce back to your former self after a set back or trauma. The research will take about thirty minutes of your time and will consist of a series of three surveys, the *Resilience Scale, the Multigroup Ethnic Identity Measure, and the Life Event Checklist.* A $10 honorarium will be sent to each qualified participant upon receipt of the completed surveys.

The three surveys seek general information about resilience, culture, and general traumas that one might have experienced in life. I feel that this research will be a good step in correcting some of the many misunderstandings about American Indians by providing positive information to challenge some of the negative stereotypes.

You are eligible for the $10 gift if you are18 years or older, an enrolled American Indian or a descendent of an enrolled American Indian, and currently not being treated for a mental illness.

The surveys and Consent form will be separated when received so that the results will not be individually identifiable. Only the researcher will have access to the results and all raw data will be destroyed upon completion of the research.

Thank you for considering becoming part of my research. With your assistance we can fight the negative stereotypes – I invite you to be part of the solution.

Bruce M. Bradway,
Doctoral Candidate. Academic Psychology
Walden University

Dear Friend,

Although I sent out requests in September, due to a change in research protocol, I am required to resend the invitation for you to participate in this research.

I am Bruce M. Bradway. I taught at Fort Belknap College for ten years and I am a Doctoral candidate at Walden University in Academic Psychology. I am doing research on the resilience of the American Indian people of Blaine and Phillips counties and I have chosen your name as a potential participant in the research. Resilience is the ability to bounce back to your former self after a set back or trauma. The research will take about thirty minutes of your time and will consist of a series of three surveys, the *Resilience Scale, the Multigroup Ethnic Identity Measure, and the Life Event Checklist.* A $10 honorarium will be sent to each qualified participant upon receipt of the completed surveys.

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You are eligible for the $10 gift if you are18 years or older, an enrolled American Indian or a descendent of an enrolled American Indian, and currently not being treated for a mental illness.

The surveys and Consent form will be separated when received so that the results will not be individually identifiable. Only the researcher will have access to the results and all raw data will be destroyed upon completion of the research. If you have any questions or concerns, please call me at 357-3744.

Thank you for considering becoming part of my research. With your assistance we can fight the negative stereotypes – I invite you to be part of the solution.

Bruce M. Bradway,
Doctoral Candidate. Academic Psychology
Walden University

APPENDIX C

Dear Friend,

Thank you very much for taking the time to share your ideas and information for my study on the Resilience of Adult and Adolescent American Indians of Blaine and Phillips counties. It is only through the generosity of the people of Fort Belknap and the afore mentioned counties that I will be able to complete this research.

When I have finished this research project, I will send you another letter to let you know what the research results have shown. I hope this information will be interesting to you.

Thank you again for your assistance.

Sincerely,

Bruce M. Bradway
Doctoral Candidate, Academic Psychology
Walden University

APPENDIX D

Tribal Colleges and This Research

When I started this research I was teaching at Fort Belknap College and would complete ten years of teaching before my tenure ended at that institution. Through the various permutations of the research, I wanted to insure my critics that this resilience research was not prejudiced with a rarified college population as so much research is. Initially I was going to use the students at the college as easily accessible participants, although this created some fear on my part of having a predominately college population representing the entire reservation. However, with subsequent changes to the protocol, this was eliminated as a concern. I decided at that point to continue the accumulation of information about Fort Belknap College and other tribal colleges as anecdotal information.

Many American Indian reservations are located on isolated lands away from urban areas. For example, Fort Belknap College is located in the eastern portion of Blaine County on the Fort Belknap Indian Reservation. Blaine County is the size of the state of Delaware and the reservation is the size of Rhode Island. The 2010 census for Blaine County was 6,485 people, 49% AI/AN. Blaine County has 1.7 people per square mile. Phillips County to the east is a thousand square miles larger than Blaine County (larger than the state of Connecticut) and contains 3,944 people, 0.9 people per square mile. Phillips County contains about 10% of the Fort Belknap Reservation.

Tribal colleges have done more to expand the scope and earning potential of American Indians than any government entitlement program (Guardia & Evans, 2008; Cavett, 2007; U.S. Department of Education, 2007). It does not take an extended tenure at this institution to comprehend the impact that providing accessible education can

afford the local population. Fort Belknap College has been able to provide a high level of education at an affordable cost. Most students utilize the Federal Pell Grant, which covers tuition and books and minor living expenses. Providing such inexpensive education means a limited faculty.

In this research I found that 47.6% of the participants either currently or at some point in their lives attended Fort Belknap College. Of the 55 individuals who had never attended Fort Belknap College, an additional 7 (12.7%) had attended a tribal college other than Fort Belknap College. Of the 30 people with degrees (28.6%), 17 attended a tribal college for part of their degree process. Of the 22 people with degrees higher than an Associate's degree, 13 used a tribal college for at least part of their education, and 12 of those attended Fort Belknap College. Of the 80 people who have some college, 57 attended either Fort Belknap or another tribal college at some point in their educational careers. This means that 21% of the participants who attended Fort Belknap College went on to finish a degree of at least a Bachelor's degree. While these educational figures are not reflective of the population on the reservation in general, it certainly demonstrates the impact of tribal colleges on this remote population. To have a college in such a remote area and have this degree of educational success is nothing short of phenomenal.

CURRICULUM VITAE

CURRICULUM VITAE

Bruce Milton Bradway
Lost Nation, Iowa

Education

Ph.D. November 2011. Academic Psychology,
Walden University, Minneapolis, Minnesota

M.S. 1982. International Relations
Troy State University, European Campus, Wiesbaden, West Germany

M.A. 1979. Psychology, Guidance, and Counseling
University of Northern Colorado, Greeley, Colorado

A.A.S 1978. Medical Laboratory Technology
Community College of the Air Force, Gunter AS, Alabama

B.A. 1971. English and Physical Education
Wabash College, Crawfordsville, Indiana

Associated Professional Teaching Experience

2011-Present **Assistant Professor of Psychology,** Ashford University, Clinton, Iowa. Specialize in general psychology courses: General Psychology, Developmental Psychology, Social Psychology, Abnormal Psychology, Cognitive Development of the Elderly, Psychopharmacology.

2010-Present **Adjunct Instructor of Political Science,** Salish-Kootenai College, Pablo, Flathead Reservation, Montana. Teach POL 100 American Government online.

2001-2010 **Head, Psychology and Human Services Department**, Fort Belknap College. The Agency, Fort Belknap Indian Reservation, Montana. Established, developed, taught, and maintained Psychology Program and curriculum for a two-year tribal college with all classes accepted for transfer to four-year institutions. Also developed, taught and maintained Human Service program and curriculum for transfer to four-year institutions in Human Services, Community Service, or Social Work. Established and maintained online instruction at this institution; one of only four institutions in the state of Montana that offer online classes.

2000.2001 **Adjunct Instructor** in Psychology, Vernon Regional Junior College, Vernon, Texas and Sheppard AFB, Texas. Taught accelerated classes in General Psychology.

1995.1997 **Adjunct Instructor** in Psychology and Social Sciences, Mississippi University for Women, Columbus, Mississippi. Taught 100 and 200 level classes in Psychology including General Psychology, Developmental Psychology, and Abnormal Psychology as well as Family related classes in the Social Sciences curriculum.

1995.1997 **Adjunct Instructor** in Psychology, East Mississippi Community College, Scooba, Mississippi and Columbus AFB, Mississippi. Taught General Psychology classes and Developmental classes.

1994.1995 **Substitute Teacher**, Department of Defense School System, Misawa AB, Japan. Substituted at all levels from Kindergarten to 12th Grade.

1991-1994 **Adjunct Instructor**, Psychology, English, and Social Sciences Departments, Langston University, Langston, Oklahoma and Tinker AFB, Oklahoma. Taught accelerated classes in Advanced Grammar, Psychological Theory, Marriage and Family, and Political Geography.

1991-1992 **5th and 6th Grade Social Studies Teacher**, Crooked Oak Middle School, Crooked Oak, Oklahoma.

1983-1984 **9th and 11th Grade English Teacher**, Platteview High School, Springfield, Nebraska.

Other Work Experience

1998-2000 **Laboratory Technician**, Vienna Pediatrics, Vienna, Virginia. Sole Laboratory Technician for seven-physician pediatrics practice. Responsible for all phlebotomy, hematology, microbiology, chemistry, urinalysis, serology, and mycology procedures. Responsibilities also included research of pharmaceuticals used in the treatment of otitis media and influenza detection.

1997-1998 **Sample Accountant,** RAND Corporation, Santa Monica, California. Responsible for keeping detailed records of baseline field study of an adolescent drug interdiction and education program in Los Angeles County, California.

1991-1994	**Ancillary Technician,** Mercy Health Chandler, Chandler, Oklahoma. Responsible for critical care nursing, as well as Laboratory and Radiology Management in a two-physician rural health clinic.
1990.1991	**Phlebotomist,** Mercy Hospital, Oklahoma City, Oklahoma.
1987.1990	**Department Head, Specimen Collection,** St. Joseph Hospital, Omaha, Nebraska. Maintained 35-person specimen collection department in the major trauma center in eastern Nebraska and western Iowa.
1985.1987	**Phlebotomist,** Children's Hospital, Omaha, Nebraska.
1985.1987	**Night Shift Phlebotomist,** Bergen Mercy Hospital, Omaha, Nebraska.
1985.1990	**Head, Boys Soccer Coach,** Plattsmouth High School, Plattsmouth, Nebraska.
1971.1983	**Laboratory Technician,** United States Air Force, Lackland AFB, Texas; Sheppard AFB, Texas; Wright-Patterson AFB, Ohio; Reese AFB, Texas; Ramstein, AFB, West Germany; Offutt AFB, Nebraska. Honorable Discharge with a rank of E-6.

Certification

1992-Present	**Medical Laboratory Technician –** 47265. ID# 03301851 MMLT. American Society of Clinical Pathologists.
2000-Present	**Certified On-Line Instructor** – Walden Institute

Awards

2004 **Fulbright-Hays Scholarship**

Curriculum Docui

Ashford University	General Psychology Child and Adolescent Development Social Psychology Cognitive Development of the Elderly Abnormal Psychology Psychopharmacology Biological Psychology

Fort Belknap College	General Psychology Child and Adolescent Development Adult Development Developmental Psychology Introduction to Psychological Research Abnormal Psychology Disorders of Children and Adolescents Theories of Personality Psychology of Learning Social Psychology Biological Psychology Family Violence Readings in Psychology Forensic Psychology Violence in Society Introduction to Sociology Introduction to Human Services Counseling Techniques Interviewing and Report Writing Professional Case Management Legal Ethics In Human Services and Related Fields Geography Health and Substance Abuse Introduction to American Government Introduction to Literature Race and Gender Pharmacology of Addiction Microeconomics Macroeconomics
Vernon Regional Junior College	General Psychology
Mississippi University For Women	General Psychology Human Growth and Development Abnormal Psychology Educational Psychology Parenting in Contemporary Society Contemporary Family
East Mississippi Community College	General Psychology Human Growth and Development

Langston University	Theories of Learning
	Theories of Personality
	Physiological Psychology
	Human Growth and Development
	Religious and Social Problems of Youth
	Advanced Grammar (Linguistics)
	Marriage and Family
	Geographical History of North American Indians
	Cognitive Psychology