University of Montana
ScholarWorks at University of Montana

Graduate Student Theses, Dissertations, & Professional Papers

Graduate School

2007

Resiliency and Risk in Native American Communities: A Culturally Informed Investigation

Annjeanette Elise Belcourt-Dittloff
The University of Montana

Follow this and additional works at: https://scholarworks.umt.edu/etd
Let us know how access to this document benefits you.

Recommended Citation
Belcourt-Dittloff, Annjeanette Elise, "Resiliency and Risk in Native American Communities: A Culturally Informed Investigation" (2007). *Graduate Student Theses, Dissertations, & Professional Papers*. 826.
https://scholarworks.umt.edu/etd/826

This Dissertation is brought to you for free and open access by the Graduate School at ScholarWorks at University of Montana. It has been accepted for inclusion in Graduate Student Theses, Dissertations, & Professional Papers by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.

RESILIENCY AND RISK IN NATIVE AMERICAN COMMUNITIES:

A CULTURALLY INFORMED INVESTIGATION

By

Annjeanette E. Belcourt-Dittloff

Master of Arts, The University of Montana, Missoula, Montana, Fall 2003
Bachelor of Arts, The University of Montana, Missoula, Montana, Fall 1996

Dissertation

presented in partial fulfillment of the requirements
for the degree of

Doctor of Philosophy in Psychology

The University of Montana
Missoula, Montana

Autumn 2006

Approved by:

Dr. David A. Strobel, Dean
Graduate School

Dr. David A. Schuldberg, Chair
Department of Psychology

© COPYRIGHT

by

Annjeanette Elise Belcourt-Dittloff

2006

All Rights Reserved

Belcourt-Dittloff, Annjeanette E. Ph.D. Autumn 2006 Psychology

Resiliency and Risk in Native American Communities: A Culturally Informed Investigation.

Chairperson: David Schuldberg, Ph.D.

This paper reviews recent research findings and empirically investigates resiliency and vulnerability factors within two Native American communities. The primary factors under consideration are related to American Indian psychosocial factors. This project is an exploratory investigation of pathology and wellness for understudied American Indians, and it examines the nature of resiliency and risk for American Indians. The factors under investigation include adversarial growth, spirituality, ethnic identity, communal identity, social support, historical trauma, stressors experienced, hope, quality of life, and general psychological status for American Indians sampled. Numerous statistically significant relationships emerged, providing empirical support for culturally embedded aspects of resiliency among American Indians. The most salient resiliency factors for Native American/American Indians, in order of statistical significance, were: social support, hope, general resilient coping abilities, traditional cultural and spiritual practices, ethnic pride/enculturation, and communal mastery.

Higher levels of protective factors were associated with higher levels of adversarial growth and lower levels of reported unpleasant affect, affective Historical Loss, and scores on psychological distress. Hope scores, Brief Resiliency Coping scores, and Communal Mastery were each found to predict significant proportions of variance in adversarial growth scores, and significant relationships were found to exist between the observed protective factors. Hope, Social Support, Communal Mastery, and Enculturation were found to moderate the relationship between the experience of stressful life events and Adversarial Growth, Psychological Distress indicators, and Quality of Life Ratings. Due to the large amount of significant results observed, exploratory factor analyses were conducted and scales based on these analyses were used in linear regression models. Enculturation, tribal spirituality and participation, as well as Communal Mastery were all found to be cultural factors that predicted significant amounts of the variance in each of the combined dependent variable estimates. Qualitative information regarding resiliency within these communities was also collected, and it provided a powerful portrayal of "*Reziliency*" or resiliency among American Indians.

Dedication

This work is dedicated to my sister Elena Kate Belcourt, our family, and to the people of our Blackfeet Nation.

Acknowledgements

This research project was made possible by the support of the Blackfeet Nation, the Blackfeet Tribal Council, the Blackfeet Community College, and the Missoula Indian Center. Special thanks to Betty Cooper, Chief Earl Old Person, Angela Johnson, Pat Smith, Julene Kennerly, Jim Peterson, and Colleen O'Brien. The research was supported by the University of Montana Graduate School, the Ford Foundation, the P.E.O Foundation for Women, and the Indians into Psychology Program (INPSYCH) at the University of Montana's Department of Psychology.

The author wishes to thank the students and faculty of the Blackfeet Community College and Blackfeet Nation, the staff at the Missoula Indian Center, Jaime Belcourt, RN, Stacy Miller, M.A., Dr. Caitlin Thompson, Dr. Ralph Wechsler, Dr. David Strobel, Dr. Nabil Haddad, Dr. Kate Shanley, and Mary Kamensky. I would also like to thank my daughters Maya Rose and Chloe Sky, my parents Gordon and Cheryl Belcourt, Jaime, Sol, Paul, Alex, Ben, Sienna, Elena, our extended family, and David Dittloff for their love and support through the years. Each of you have made my life worth fighting for, nothing but love to each of you. This work was made possible by continued support of Dr. David Schuldberg. I wish to recognize his mentorship and friendship in this journey.

Contents

List of Tables and Figures

Resiliency and Risk in Native American Communities: A culturally informed investigation.

American Indian/Alaska Native (AI/AN) populations are comprised of distinct and heterogeneous ethnocultural groups making up approximately 4.5 million people in the United States (U.S. Census Bureau, 2005). Native Americans as a group can be characterized by a very large amount of within-group diversity, representing approximately 500 different tribal groups with distinct languages, ceremonial practices, cultural norms and customs, political structures, economies, and historical backgrounds. Historical as well as contemporary events have had and continue to have many impacts upon the development of individual Native Americans as well as upon the tribal groups.

One common conceptual theme emerges in examining historical and contemporary developmental factors influencing Native American people. This theme includes a dramatic illustration of both risk and remarkable resiliency demonstrated by American Indian children, adults, and tribes. The risk dimension facing this population is in fact immense. Historical and contemporary oppression have left a definitive mark upon the contemporary state of Native America. Widespread poverty has resulted in some of the harshest living conditions facing any ethnic group in the United States. At the same time, many Native American individuals and communities have demonstrated a remarkable ability to overcome extraordinary conditions and to thrive. *Reziliency* is the term proposed to describe the important factors and processes involved in resilient coping within American Indian populations. The term is not meant to pertain solely to American Indians living within reservation communities; due in part to the fact that most American Indians do not reside within the boundaries of reservation communities. The term

Reziliency is instead intended to capture psychosocial factors that have helped American Indian individuals adapt to, overcome, or even potentially adapt in positive ways following experiences of adversity or trauma. These factors may or may not pertain to non-American Indians, and this issue is beyond the scope of this project. Throughout this paper the term *Reziliency* or Resiliency among American Indian/Native American individuals will be used to describe the psychosocial factors promoting resiliency within American Indian communities[1]. The intention of this project was not to delineate how these factors or processes are different from non-Native American populations per se, but instead to be descriptive of resiliency within Northern Plains American Indians.

American Indians and Alaska Natives have lower incomes than the general population (U.S. Census Bureau, 2000). Specifically, 25.3% of Native Americans live below the national poverty level in contrast to 12.6% for all other racial groups. Almost half of Indian children live below this federal poverty level (U.S. Census Bureau, 2005; U.S. Department of Health and Human Services, Indian Health Services, 2004). The average AI/AN household income is $19,897, compared to the average income in the United States of $30,056. The unemployment rates reflect this reality and are consistently high on many reservations. Indeed, the unemployment rates are the highest of any ethnic

[1] The terms "*Reziliency*" and "Native American or American Indian Resiliency Factors" have been used in an interchangeable manner. This decision was made to reflect the complex reality facing American Indian people and also researchers. Conducting cross cultural research with American Indian population within a scientific system developed by (and arguably for) individuals from a majority "Western" culture is a difficult task for researchers, American Indian or not. This so-called "two worlds" issue has been conceptualized as a potential problematic reality facing American Indians attempting to live within two cultural worlds and scientific methodologies. In a modest attempt to remain mindful of this issue, the author has decided to use different terms to denote the construct of *Reziliency.*

group in the United States (U.S. Bureau of Census, 2005). These rates are the highest of any major ethnic group in the United States (Brod & McQuiston, 1983).

All of the aforementioned factors have been associated with mental health problems and health problems in general (U.S. Department of Health and Human Services, Indian Health Services, 2004; U.S. Congress, 1990). Compared to all other United States racial groups, from 1996-1998, the American Indian/Alaska Native death rate due to suicide was 91% greater than other groups, to homicide 81% greater than other groups, and death rates due to alcoholism are 638% greater than other ethnic groups (U.S. Department of Health and Human Services, Indian Health Services, 2004). The rates of death due to heart disease, diabetes mellitus, accidental injuries, pneumonia, influenza, firearms, gastrointestinal disease, and cerebrovascular disease are all substantially higher for Native Americans than for any other ethnic group (U.S. Department of Health and Human Services, Indian Health Services, 2004). The infant mortality rate, often viewed as a sensitive indicator of general health of a population, has decreased recently but remains 24% greater for Native Americans compared to other groups. Consequently, the risk factors facing many American Indian individuals encompass the biopsychosocial and economic realms.

However, it is just as important to consider that the frequently overlooked protective factors descriptive of American Indian people also span the biopsychosocial and economic realms. These protective factors also encompass the realities of the spiritual, community, familial, creative, humorous, and interpersonal lives of American Indian communities.

The current project reviews and then researches psychosocial factors that may predispose American Indian people to higher rates of symptomatology, while also considering potential protective factors that have helped indigenous tribes and individuals to continue to exist and even to flourish today. An undeniable fact is that historical factors have importantly shaped the development of Native American groups and individuals, and these factors continue to influence contemporary Native American mental health. Thus, historical issues, including historical trauma and subsequent contemporary considerations, are important areas of investigation. Genocidal practices such as massacres, forced relocations, forced removal of American Indian children to boarding schools, as well as subtler forms of discrimination and oppression such as institutional racism are identified as potential factors relating to Native American risk and resiliency (Brave Heart & DeBruyn, 1998). Throughout history the dynamic resiliency of Native Americans as individuals and as a collection of distinct groups has been a largely untold or ignored aspect of American Indian reality.

This scientific project presents critical, pertinent information regarding the etiology of risk and resiliency factors, theoretical models to describe risk and resiliency among Native Americans, and finally an empirical evaluation of the theoretical models proposed in a sample of American Indian individuals from both an urban and a reservation community setting. Contemporary attempts to reveal and harness resiliency among Indian people are examined, and subsequent clinical implications and recommendations are provided. In addition, a new descriptive construct, *Reziliency* or Native American resiliency factors, is proposed as a specified descriptor for the protective processes occurring for some American Indian individuals. This unique

construct is intended to elucidate the resiliency processes and factors in the developmental trajectory of symptomatology and wellness within American Indian individuals and communities. Native American resiliency, or *Reziliency*, is proposed as a dynamic process occurring within American Indian communities. This construct is the result of a complex sequence of factors relating to contemporary individuals and communities. To begin this inquiry, this analysis first looks to the historical factors importantly shaping the current status and etiology of Native American mental health.

Native American History: Developmental antecedents of risk and resiliency.

The history of American indigenous groups is characterized by themes of contact, conflict, oppression, attempted genocide, cultural erosion, and the resultant aftermath (Brave Heart-Jordan & Debruyn, 1995; Stannard, 1992). Historical trauma, intergenerational loss, and chronic bereavement have had a myriad of significant relationships with Native American contemporary status. Holocaust studies authors, such as La Capra (1994 & 2001), have promoted the discourse upon the potential impact historical and inter-generational trauma can have upon cultures and individuals. However, examinations of Native American also provide a clear image of the strengths exhibited by American Indian peoples at both the macro (community/tribal) and micro (individual) levels of experience. Native American tribes and people have frequently demonstrated a uniquely transcendent quality. A testament to this quality is the very fact that Native American tribes and individuals continue to exist as functioning cultural entities despite enduring both historical and contemporary sociopolitical oppression. In order to obtain a representative view of contemporary risk and resiliency factors facing and/or characterizing Native Americans, it is first important to look upon the historical

antecedents that continue to shape current reality for indigenous people. Indigenous histories are beginning to emerge as important depictions of the various processes, forces, and factors impacting American Indian life, history, health, economies, and existence (see also Allen, 2002).

Current Status of Native America:

An illustration of multiple risk factors

There is more than one way to starve. (Alexie, 2005, pp. 177)

Native America is a vivid illustration of risk as well as resilience in the face of considerable challenges. Contemporary analyses of Native Americans should include an account of the unique historical aspects of American Indian people in order to be a truly representative and informed. The historical factors of trauma, loss, and oppression have resulted in a complex array of biopsychosocial factors.

Historical antecedents have unquestionably led to significant levels of diverse risk factors facing American Indian people as individuals and as tribal entities. Native Americans as a whole are currently exposed to a myriad of environmental risk factors for health problems in general and for mental health problems in particular. In terms of the etiological risk factors that may confer vulnerability to psychopathology, the literature on causality has traditionally distinguished distal and proximal risk factors.

These risk factors that involve Native Americans include both. In general, distal risk factors can be understood to be longstanding or relatively unchangeable variables that put an individual at higher statistical risk for developing a certain disorder (Abramson, Alloy, & Metalsky, 1988). These predisposing factors can be understood to be genetic factors or "longstanding behavior patterns, childhood experiences, and durable

personal and social characteristics that may alter the susceptibility of the individual to illness" (Rabkin & Struening, 1976, p. 1014).

In contrast, proximal risk factors can be understood to be precipitating factors that influence the actual timing of onset of the illness or disorder. Proximal risk factors for depression, for example, involve the occurrence of a stressor or stressors that act as triggering or catalyst events. It is well documented that substandard socioeconomic conditions exist in many American Indian communities. High rates of unemployment, severe poverty, alcohol abuse, physical illness and premature death characterize many current American Indian reservations. These may all be understood as producing the stressors that are proximal risk factors.

An estimated 32 to 25.1 percent of American Indians live below the national poverty level. Forty-three percent of American Indian children currently live below the federal poverty level (U.S. Census Bureau, 2005; USDHHS, 2004). This rate of poverty is remarkable and is the result of the historical socioeconomic trauma experienced by this population in particular. Indeed, the past historical trauma experienced by American Indians clearly relates to the contemporary communities in varied manners. First of all, distal or long-term risk factors, such as poverty, set many families at increased risk for exposure to stressors and even contemporary traumatic life experiences. Unemployment rates reflecting this long-term status of historical trauma and pervasive poverty include rates ranging from over 80% to about 30% in Native American communities (U.S. Commission on Civil Rights, 2003). These rates are the highest of any major ethnic group in the United States (Brod & McQuiston, 1983). All of the aforementioned problems have been associated with mental health problems as well as health problems in general

and are known to be associated with higher exposure rates to traumatic experiences (U. S Congress, 1990). Although the overall health status of Native Americans has improved since the 1940's, Native Americans maintain a higher risk of death from most causes than the total population (Anderson, Belcourt, & Langwell, 2005; Young, 1997).

Trauma is a frequent antecedent to the psychological suffering observed within American Indian communities. Manson, Beals, Klein, Croy and the AI-SUPPERPFP Team (2005) provided a comprehensive study in the American Indian Service Utilization, Psychiatric Epidemiology, Risk and Protective Factors Project and examined exposure to 16 forms of trauma within 2 American Indian communities (N = 3,084). The authors reported that American Indians reported lifetime exposure rates are significantly higher than their White counterparts in the US. Indeed, 62.4-69.8% of the American Indians in the study reported having been physically attacked, having witnessed a traumatic event, and having had a close relative experience a significant traumatic event, compared to 51.2%-60.7% rates of exposure for other US ethnic groups. The most vulnerable among the tribal members are often the children and women. Thus, past historical trauma seems to have a long-term and pervasively sensitizing relationship within this population as seen in the increased likelihood of exposure to proximal triggering factors such as trauma and loss.

A tragic issue related to the psychological suffering experienced by American Indians is the fact that they have the highest rate of suicide of any ethnic group. This is a particular problem among younger American Indians. American Indian males ages 14-17 have a rate of suicide that is four times the national average. Common antecedents to suicide are depression, legal problems, relational discord, and substance abuse. Native

Americans display disproportionately higher rates of depression, substance abuse, incarceration and legal problems, and, as mentioned, poverty. Some American Indian communities have reported rates of depression that may be four to six times higher than those observed in the U.S. population at large (Manson, Shore, & Bloom, 1985). Depression is the most frequently diagnosed problem among Indian patients seeking treatment from many mental health facilities (Manson, Shore, & Bloom, 1985). In the Billings Indian Health Service area depression has been second only to alcohol dependence in terms of presenting problem frequency (Neligh, 1988). Depression has also accounted for the bulk of the daily caseloads at many American Indian mental health facilities, and it is widely cited as one of the most prevalent problems in these communities. Forty percent of clients who used some Indian Health Service mental health programs were treated for depression, anxiety, and adjustment reactions (see also LaFromboise, 1988 for review).

Native American youths appear to be markedly vulnerable to mental health problems. According to a 1990 report by the Office of Technology Assessment, depression is a frequent problem afflicting proportionately more Native American youths than non-Native youths. In fact, in reviewed studies more than half of American Indian adolescents reported serious depressive symptoms when self-report measures were used. Additionally, young American Indian women are a particularly vulnerable group, much more prone to depression than young Indian men (LaFromboise & Howard-Pitney, 1995). Manson, Ackerson, Dick, Baron, and Fleming (1990) found that young women's levels of depression is consistently higher than young men's measured at every grade

level in high school. This distinction is in line with the existing literature regarding gender differences in depression (Nolen-Hoeksema, 1987).

A clear conclusion to draw is that Native American communities experience significantly higher rates of exposure to both distal long-standing as well as proximally triggering risk factors and trauma. Distal factors of import clearly include the historical trauma and life-long factors of poverty and the aftermath of genocide, and proximal factors include the current level of trauma and loss experienced by many American Indians.

One disturbing fact is that depression--as well as other mental health problems--can often be a lethal condition. Depression has been acknowledged as the most common factor in suicidal behavior and completions (Hafen & Frandsen, 1986). Nearly 20% of American Indian females and 12% of American Indian males have reported engaging in suicidal behavior (U.S. Congress, 1990). Tragically, suicide is the second leading cause of death for American Indian adolescents.

Accidental as well as violent deaths occur more frequently in this population. American Indian males living on a reservation are 6.3 times more likely as members of other ethnic groups to die as a result of homicide (U. S Congress, 1986). A high rate of alcoholism is intertwined with susceptibility to depression, suicide, and violence. Results from the Epidemiological Catchment Area (ECA) study on non-Native Americans suggest that about 30% of people diagnosed with depression have an additional lifetime diagnosis of alcoholism, and 40% of alcoholics have a lifetime diagnosis of depression (Regier, Farmer, Rae, Locke, Keith, Judd, & Goodwin, 1990). Alcohol and substance abuse problems have a pervasive relationship with mental health problems and may

further contribute to overall risk for pathology in general. Death rates from cirrhosis and liver disease are indicative of the tragic nature of this relationship. At one Indian Health Service Area this mortality rate, was 10 times the national rate, and no area reported a rate of death below the national rate (U. S. Congress, 1986). This is perhaps the most extreme illustration of the pervasive effects that alcohol has upon this population.

Child abuse and neglect are also common consequences of many of the aforementioned problems afflicting many Native Americans. Childhood sexual abuse is a frequently cited antecedent to depression in Native American females. In a report on the health status of Native American youth, Robert Blum and his colleagues (1992) found that of the 13,454 Indian youths surveyed 23.9% of females reported physical abuse and 21.6% of females reported sexual abuse by the 12th grade. Recently, the National Center for Childhood Abuse and Neglect revealed that 79.8% of American Indian girls sampled had experienced a lifetime history of sexual abuse (1999). In a recent study on prevalence rates, Duran and colleagues (2004) found that 77% of the respondents reported some history of abuse or neglect. Sixty-three percent of the respondents reported having experienced neglect and of those respondents nearly 90% were also physically and/or sexually abused. In an urban sample, Saylors and Daliparthy (2004) found that 89% of American Indian women seeking substance abuse treatment reported a lifetime history of physical abuse and 69% reported a history of sexual abuse.

An additional environmental stressor unique to the Native American experience is stress experienced due to forced acculturation. Acculturation level is viewed to represent the extent to which an American Indian individual identifies with his or her tribal culture, worldview, and beliefs. However, acculturation stress is a result of the demands to

integrate into and identify with a different, more dominant culture (Mail, 1989). Many studies have shown that rapid acculturation is associated with higher rates of suicidal behaviors. Philip May (1987) found that Indian communities with the highest rates of rapid change and acculturation stress generally had the highest rates of suicides. Van Winkle and May (1986) also found that acculturated tribes had the highest rates of suicide. More traditional American Indian tribes had the lowest rates, and transitional tribes had intermediate rates. This speaks to the potentially important presence of protective cultural factors and challenges historical assumptions that assimilation produces positive results. Adolescence is a time in which young people are sometimes desperately attempting to form an identity and are faced with many difficult choices. It follows that Indian youth seem to be the group most severely impacted by acculturation stress.

"Deculturation stress" is another term associated with factors relating to identity development. As Native Americans face demands to integrate into and identify with a different, more dominant culture, they begin to lose or perhaps devalue their historical traditions. This leads to what is termed deculturation stress (Mail, 1989). The idea is an outgrowth of research addressing the phenomena labeled historical unresolved grief and loss. This theory posits that, due to the massive losses of lives, land, and culture from European contact and colonization, American Indians have experienced a long legacy of chronic trauma, loss, and so called "unresolved grief.[2]" These factors are believed to

[2] The term "unresolved grief" as applied to historical trauma has drawn some cautionary critiques from American Indian scholars (Swaney, 2006). Specifically, authors have reacted to the potential pathological depiction of normative cultural grieving following significant losses. Swaney (2006) highlighted the story of the forced removal of Salish and Kootenai Tribal members from the Bitterroot Valley in Montana (Peterson & Peers,

significantly relate to Native Americans' current emotional status. This historically rooted notion is a direct legacy of the resulting self-inflicted or internalized racism that began in assimilation policies and boarding schools. It is believed that these experiences influence American Indians in an intergenerational manner. Furthermore, these factors are believed to contribute to the current high rates of suicide, homicide, violence, child abuse, alcoholism, and social problems observed among American Indian people (Brave Heart & DeBruyn, 1998).

It should also be noted that an additional legacy of the boarding school era is the fact that entire generations of Native Americans were deprived of living with their own families during their childhoods. A lasting legacy of historically pervasive trauma could be that the effects of later exposure to traumatic experiences encountered could be amplified in a potentially dangerous manner. "Kindling" or sensitization effects for stressors and trauma could result in the establishment of psychosocial vulnerability. In addition, many American Indians were prevented from learning adaptive psychosocial coping strategies from their own parents. In fact, many American Indians who were removed from their families and placed in boarding schools may have had marked difficulty learning how to be a parent themselves (see Horejsi, Heavy Runner-Craig, & Pablo, 1992). Social learning theorists have highlighted the importance of social modeling in learning (Bandura, 1977). Many American Indian people were deprived of

---

1993). This historical account detailed this group of American Indians' forced march at gunpoint away from their ancestral homes. While marching this group were reported to be singing traditional mourning songs, until they approached the boundary of their new reservation, when they dressed in their finest attire and rode proudly into their new home (Peterson & Peers, 1993). Swaney (2006) points out that other authors have begun to highlight the importance of cultural context within the mourning response (see Kastenbaum & Costa, 1977).

familial role models, a critical ingredient for social learning. Given the experiences of forced removal, historical exposure to trauma, genocide, and forced assimilation programs, the developmental environment may not have been conducive to the development of adaptive psychosocial coping and parenting skills.

Considering both historical and contemporary trauma exposure existent within Native American communities, the higher rates of consequential mental health problems are unfortunately not surprising. The historically-influenced contemporary risk variables experienced by many American Indian individuals may establish elevated risk to general pathology and psychopathology. However, as will be explored in more depth in this dissertation, this expectancy is not always supported in either clinical or empirical findings. In fact, it is becoming more apparent that many indigenous people have demonstrated a remarkable ability to cope and remain resilient in the face of a reality including more frequent and more serious exposure to risk factors and trauma. Historical trauma and intergenerational loss and trauma are clearly factors that continue to relate to the biopsychosocial reality facing American Indians today. Thus, empirical investigations of both historical trauma and contemporary loss and stressors are important in this population and are included as an area of direct inquiry of this project.

Native America in Contemporary Psychology

Cross-cultural psychological inquiry is currently at a point where the investigation into potential differences in Native American mental health, psychopathology, orthopsychology (positive psychology), development, and etiology can begin to occur in a more comprehensive manner. In order to identify potential differential etiological processes, it is also important to begin to uncover a more accurate understanding of the

underlying processes that either confer vulnerability or protect against psychopathology. Ethnic minority populations have often been overlooked in the psychological literature. The reality is that Native Americans have routinely been conspicuously overlooked in much of the scientific research on mental health issues regarding development, adjustment, and psychopathology in general.

Recent studies have suggested that the actual experience of mental disorders such as depression within American Indian populations may itself be phenomenonologically different from depression in the general population (Belcourt-Dittloff & Schuldberg, 2006; O'Nell, 1996). This highlights the pressing need for more detailed scientific research in the area of cultural differences in the development of psychopathology and in the pathways leading to positive mental health status. In fact, little is known about "normal" developmental trajectories within Native American individuals, let alone psychopathological development. In spite of the lack of literature in the area, American Indians are currently offered existing modes of psychotherapy when they are able to gain access to mental health care. This occurs in spite of the fact that most of the existing treatments have not been evaluated in terms of efficacy or effectiveness with American Indian or many other minority populations (Comaz-Dias, 2000; Iwamasa & Smith, 1996). One must begin to question the utility of such practices. However, before more adequate and effective treatments can be developed and applied, the etiology of mental health problems as well as a more accurate understanding of the normative developmental nature of Native Americans must first be elucidated.

Problems in Approach and Application

Unfortunately, some of the problems hindering research and application in clinical practices are pervasive and not always easily recognizable in Native American mental health. One such lingering idea is the notion that Native American culture acts as a deficit in individual development. An unfortunate legacy of the Native American historical experiences of genocide, manifest destiny, and assimilation is the idea that Native American culture or ethnic minority culture in general acts as a deficit in an individual's psychological functioning (Sue, Bingham, Porche-Burke & Vasquez, 1999). This notion would hold that the more a Native American individual adheres to traditionally held Native American world-views, beliefs, and practices, the more that individual is prone to pathology and problems in general (i.e., substance abuse, socioeconomic, health, and mental health). This historically rooted notion usually finds its expression in subtle ways, such as institutional racism, lowered teacher expectations, and the use of cultural stereotypes. As noted above, it is also contradicted in part by research findings on acculturation stress and identity (Mail, 1989).

Some individuals may deny the current existence of the culture as deficit idea. Unfortunately, many contemporary examples exist. The underlying assumption is that Native American cultural values are to be devalued and seen as a potential source of pathology. This is a contemporary form of the "kill the Indian save the child" idea that fueled assimilation policies in the past (Otis, 1973). Researchers have begun to highlight the problem of a pervasive ethnocentrism within the field of psychology. Sue, Bingham, Porche-Burke, and Vasquez (1999) recently used the term the "invisible whiteness of being" to characterize this bias in psychology. They have characterized this as the

seemingly invisible presence of monoculturalism and "whiteness." In other words, much of the current psychological literature implies that only one culture is of importance and that the culture of importance is that of the majority culture in the United States (middle-class Caucasians). These authors have used the term "cultural racism", which refers to the individual and institutional expression of the superiority of one group's cultural heritage over that of another, to describe this phenomenon. Cultural racism is said to exist when other groups are consistently and/or systematically devalued, undervalued, misrepresented, or simply ignored.

Ethnocentric monoculturalism builds upon the notion of cultural racism. Ethnocentric monoculturism includes belief in the superiority of one's cultural heritage over another, the belief in the inferiority of another cultural group, the ability of a dominant culture to impose its standards and beliefs on less powerful groups, as well as the manifestations of these ethnocentric values and beliefs in program, policy, practices, structures, and institutions, and the ability of these beliefs to operate outside the level of conscious awareness (Sue et al., 1999). These factors represent conceptual understandings that are clearly applicable to Native American populations, and they have been directly illustrated through the historical experiences of trauma, genocide, loss, assimilation, and oppression. Sue and colleagues (1999) eloquently summarize the pervasive though often overlooked problem of ethnocentric monoculturalism when they write, "Euro-American psychologists are likely to perceive their worldview as normative, and as a result these biases may be reflected in criteria used to judge normality—abnormality, standards of practice, and the code of ethics" (p. 1065).

Consequently, with Native Americans the essential problem is that little is currently known about the actual reality of Native American mental health. This is due in large part to the pervasive use of standards of normality, abnormality, development, practice, and ethics that have been developed for and by members of the majority culture. Few studies exist within psychology about American Indian/Alaska Native populations, despite their disproportionate experiences of depression and other disorders. A significant problem is that assumptions and cultural bias exist throughout psychology, and these assumptions and cultural biases often have a direct relationship with research and practice with Native Americans. Measure development often does not include Native Americans in the normative population; theories of development often have been based upon studies conducted with majority culture subjects; and, very few Native American psychological researchers are available to conduct research or implement clinical or developmental psychological practice.

The problem then becomes that psychology currently uses theoretical understandings in research and practice that do not *necessarily* apply to Native Americans. The ultimate result is the development and use of treatment, preventative, and research protocols that may not be applicable to Native Americans. What becomes absolutely necessary is an elucidation of cross-cultural pathology and developmental etiologies, as well as an investigation into the validity of cross-cultural applications to intervention and research methods.

This empirical research project begins to address the role of resiliency and vulnerability among Native American individuals and communities. This initial step uncovers some of the many complexities inherent within an American Indian etiological

framework. A diathesis-stress model attempts to elucidate the risk and protective components and processes believed to be of etiological importance for this population. Factors contributing to stress in the lives of Native Americans include both contemporary and historical stressors and trauma exposure. To begin with, it is important to consider current literature on the topics in general, and then focus will turn to aspects of Native American cultural resiliency, risk, and contemporary and historical trauma (See also Caldwell, et al., 2005 for recent guidelines).

If we have been researched to death, maybe it is time we start researching ourselves back to life.

(Anonymous Native Elder, Castellano, 2004)

The Resiliency Literature

Psychological resilience is a complex concept that has been defined in a variety of ways and analyzed with a variety of research strategies. It is generally understood to describe an individual's ability to endure and to adapt in a positive manner to negative life events and negative emotional experiences or stressors. Inherent in the construct are the psychological ability to "bounce back" through flexible adaptations, and the strategic use of positive relationships and emotional experiences to regulate emotional experiences (Block & Kremen, 1996; Tugade & Fredrickson, 2004). At its heart, resilience involves the endurance and transcendence of human suffering. Within an American Indian population, resiliency is believed to occur in a similar manner as the population as in general. However, particular elements and factors of this process are believed to be of increased importance for American Indians due to the communal nature of tribal cultures.

For this study, *Reziliency* was understood to describe the psychological, sociological, cultural, spiritual, and behavioral protective factors and attributes that enhance the likelihood of positive developmental outcomes. *Reziliency* is comprised of protective factors that act as a buffer when an individual experiences stressful life experiences and prevent or decrease the likelihood of the development of symptoms of psychological distress. Other authors have hypothesized that a variety of adaptations and factors work to enhance the possibility of positive psychosocial status. Rutter (1990) stated that an important component of protective factors involves an individual's ability to feel cared for and connected to others. He described how this essential human need influences individuals throughout our lives.

This research project involved the elucidation of *Reziliency* factors and processes for the sampled American Indian communities. Goodluck (2002) and others have promoted a strength-based perspective with regard to Native Americans development and functioning. They have proposed that the ability to maintain optimism during adversity, spirituality, compassion, empathy, humor, friendships, and familial and community support are important strengths and well-being indicators within this population. The purpose of this study was to unravel some of the complexities involved within the process of resiliency and positive outcomes for American Indians. Initially, a brief review of the pertinent literature surrounding the construct of general resiliency will be undertaken.

Richardson (2002) recently reviewed general resiliency and resiliency theory and described the initial waves of research in this field. These early works primarily involved the investigation and elucidation of developmental assets and protective factors. Werner (1993) and Werner and Smith (1992, 2001) followed a group of culturally diverse youth

in Kauai for 30 years. Two hundred of the 700 children initially sampled were identified as being at high-risk due to perinatal stress, poverty, daily instability, and serious parental mental illness or problems. Despite this risk exposure, 72 of the 200 children were later found to be doing well and sometimes thriving as adults. Werner identified the personal characteristics of gender (female), robustness, social responsibility, adaptability, tolerance, achievement orientation, good communication skills, and good self-esteem as protective factors. She also identified having caring in-home and out of home environmental support as protective. Her research most notably revealed the vitally important nature of familial or kin support. This support took the form of key relationships with mentors, significant others, and teachers who provided social support, encouragement, and faith in the resilient individual's ability to succeed.

Rutter (1979, 1987) conducted a study with inner-city youth in London and in rural England. He found that one quarter of the children demonstrated significant resiliency despite elevated exposure to risk. In addition, he identified gender, temperament, school climate, self-mastery, self-efficacy, planning/goal setting skills, and having a close personal relationship with an adult as protective factors. Kaufman and Ziegler (1987) and Wilkes (2002) have also documented the fact that most abused children do not become abusive parents, demonstrating the importance of individual coping factors in such developmental outcomes. In a review Bernard (1997) stated that at least 50-70% of high-risk children grow up to be successful caring individuals.

Luthar and Ziegler (1991) and Walsh (1996) indicated that this resilience was due to individualized personal traits or hardiness (see also Luthar, 2003). This early and now somewhat controversial view of the innately "invulnerable child" (Anthony & Cohler,

1987) quickly gave way to a more inclusive view that took into consideration the pivotal role that the environment played in the dynamics of resilience. Families were initially viewed as sources of dysfunction and risk in this body of literature (Wolin & Wolin, 1993). As a result, only extra-familial resources (such as teachers, mentors, or counselors) were viewed as sources of help that could contribute to resiliency. Some of the early theoretical models appeared to have significant limitations due to the emphasis of individual components of resiliency and resilient processes. Critiques of the potentially limited nature of this point of view may be particularly relevant when the theories are applied to culturally diverse groups in which the group rather than the individual is emphasized.

Garmezy (1991) and colleagues (Garmezy, Masten & Tellegen, 1984) illustrated more of the complexity of the dynamic interplay between multiple sources of risk and protective factors and processes including individual, familial, and larger sociocultural variables. The Minnesota Risk Research project found that most children of schizophrenic parents, a high-risk group, did not later develop serious mental health problems or debilitation despite genetic and social environmental risk factors. This finding provided considerable support for the notion of dynamic resilience and protective factors in the environment. Researchers in this study identified personality disposition, a supportive familial environment, and access to an external support system as central to resilient developmental outcomes.

The Search Institute (Benson, 1997) surveyed 350,000 teens from 600 communities from 1990-1995 to identify 40 developmental attributes, called “assets,” of successful life outcomes from a school based intervention program. External factors

identified included social support (familial, adults, schools), a sense of empowerment, knowing boundaries and expectations, and constructive use of time. Internal factors identified included educational achievement commitment, positive values (caring, honesty, responsibility, and integrity), social skill competency, and a positive identity or self esteem. However, it should be mentioned that Benson's list of factors is somewhat controversial and has been critiqued as potentially incomplete and limited in scope. In sum, these works began to provide a considerably deeper portrayal of the forces and assets by which individuals are able to cope with difficulties in their lives.

Current research has further added to the understanding of the complexity of the construct of resiliency. Specifically, Richardson (2002) reviewed additional protective factors identified in the literature. These include happiness (Buss, 2000; Seligman, 2002), subjective well-being (Diener, 2000), optimism (Peterson, 2000), self-determination (Ryan & Deci, 2000), wisdom (Baltes & Staudinger, 2000), excellence (Lubinski & Benbow, 2000), creativity (Simonton, 2000), morality and self-control (Baumeister & Exline, 2000), gratitude (Emmons & Crumpler, 2000), forgiveness (McCullough, 2000), dreams (Snyder & McCullough, 2000), hope (Snyder, 2000), and humility (Tangney, 2000). Tugade and Fredrickson (2004) recently highlighted the important role of positive emotions in resiliency. They found that individuals in three studies relied heavily upon their ability to find positive meaning and emotional experiences in order to rebound from negative experiences. These areas of inquiry, combined with the study of environmental factors, involved in the process of resiliency have begun to add significant complexity to the understanding of the etiological developmental processes of resiliency.

The second wave of resiliency research involved an identification of the processes by which an individual acquires resilient qualities. Flach (1997) suggested that resilience is a process by which individuals attempt to cope with stressors through a series of disruptions and subsequent adaptations. Richardson and colleagues (Richardson, Neiger, Jensen, & Kumpfer, 1990) described a detailed model by which individuals are purported to attempt, through conscious or unconscious means, to maintain biopsychospiritual homoeostasis (e.g., an adaptive state of mind, body, and spirit). This model outlines a process by which individuals choose, unconsciously or consciously, the outcomes for positive or negative disruptions. The clinical application of the model was believed to center around the notion of choice and control, and the resultant adaptations to stressors or disruptions, whether good or bad, reflects the extent to which resilient reintegration is occurring. Resilient reintegration is believed to be the ultimate goal of coping processes that include individual growth, knowledge, and increased wealth of resilient qualities. In this model, the more resilient reintegration that occurs due to disruptions, the more an individual is able to develop resilient qualities and therefore experience most events as more routine and less disruptive. Conversely, dysfunctional reintegration is believed to occur when an individual resorts to substances, destructive behaviors, or other means to deal with disruptions. Life stagnation is a term that refers to individuals who habitually cling to maintaining their homeostatic comfort zones in choice of response to disruption, and it is believed to be characteristic of individuals who simply get past stressors rather than grow from the experiences. Life progression refers, then, to individuals who habitually reintegrate resiliently in response to disruptions (McCullough, & Snyder, 2000).

The latest wave of research on resiliency theory, according to Richardson, began to look experientially at the realm of resilience as a construct to be addressed by the interdisciplinary fields of physics, philosophy, anthropology, theology, psychology, and sociology (Richardson, 2002). This expanded approach looks upon resilient reintegration as a process that requires energy to occur, and the source of the energy is viewed as rooted in spiritual or innate sources. The different academic fields have in common the notion that humans and other living beings have energy and the potential for resilience. Resilience is seen as a force or a drive that is purported to lead individuals to achieve self-actualization, altruism, wisdom, and harmony (Richardson, 2002). This force is referred to by different names. Werner and Smith (1992) refer to it as an innate "self-righting mechanism" (p.202). Lerner (1994) described the human capacity to change despite risks, a concept that is similar to R. W. White's (1959) "competence" or "effectance" motivation

With regard to psychological research Richardson (2002) points to the proposition that psychology is the "study of the soul" (p. 315). He asserts that resiliency is less descriptive of the process of surviving adversity and more reflective of a force sometimes called "quanta, chi, spirit, God, or resiliency" (p. 315), and that the capacity for resilience is within each living being. The interdisciplinary approach holds significant promise to uncover ultimate causal forces behind resiliency.

Research and theoretical writings on resilience have provided a greater understanding of resiliency as a construct. Resiliency is seen as more of a process of growth or adaptation through adversity or disruption than as simple endurance or recovery. The energy or source of resilience is believed to come from the collective

unconscious, spirit, and from the social, ecological, and spiritual environment (Richardson, 2002). The elucidation of the etiological developmental process of resilience is subsequently becoming more complex and comprehensive.

Reziliency - Protective factors in Native American Communities & Individuals

He says he and I don't have the right to die for each other

and that we should be living for each other instead.

(Alexie, 2005, pp. 128)

Reziliency is a descriptive term proposed to denote the psychosocial factors and processes that promote adaptively resilient reintegration within American Indian populations. Cultural differences are slowly beginning to be accepted as the rule rather than the exception within contemporary psychological research. Researchers are currently working within specified diverse cultural groups in efforts to unravel the complexities inherent in cross-cultural psychological and the study of psychopathological functioning.

Recently, in a study by the current author, 136 participants from two tribal colleges in Montana completed various measures of cognitive attribution styles, depression, acculturation level, negative life events, stressors, and various demographic factors (Belcourt-Dittloff & Schuldberg, 2006). Based upon previous empirical findings from the Cognitive Vulnerability to Depression (CVD) Project by Alloy and colleagues (1999), both the Native and non-Native American subjects' scores were expected to be consistent with this earlier series of research findings. This study addressed whether or not this theory would be empirically supported in a Native American sample. It was expected that both stressors and cognitive vulnerability would significantly predict depression scores; that cognitive vulnerability would act as a third variable operating as

either a moderator or a mediator; and, that significant group differences would indicate that the model would fit particularly well in the Native American sample due to the increased presence of depressogenic risk factors in this population.

In fact, surprising differential results emerged. While cognitive vulnerability and stressful life experiences were both found to predict depression scores significantly for both the Native and non-Native samples, important differential cross cultural results emerged. First, within the Native American sample cognitive vulnerability and stressors were related to depression scores, but only as significant main effects; the moderation hypothesis was not supported at all within the American Indian sample. Moderation was supported within the non-Native sample. Furthermore, the predictive strength of the statistical models was different, in that the amount of predicted variance was much smaller in the Native American sample (non-Native American group overall $\Delta R^2 = .62$ versus Native American group $\Delta R^2 = .17$). While the results for the non-Native sample essentially replicated previous research, the results for the Native sample were not only unexpected, they were uniquely surprising.

The findings were most remarkable when considering that the important observed differences occurred despite the fact that the Native Americans sampled experienced significantly more environmental vulnerability factors (such as lower incomes, less educational attainment, and more frequent and severe environmental stressors and negative life events) for depression, yet they did not report significantly different or even clinically elevated depression scores. And, within the Native American sample higher levels of acculturation to Caucasian or majority culture was associated with higher depression scores, while higher acculturation to traditional culture was associated with

lower depression scores in line with earlier research (Mail, 1989). The combined results indicated that additional resiliency or protective factors may be present in this population, and that important distinct etiological patterns are emerging with regard to depression in Native American populations.

Other studies have begun to uncover additional support for the presence of forms of resiliency in American Indian communities and individuals. Some have indicated a rate of child abuse in Native groups that is approximately equivalent to that of other groups (Kunitz, Levy, McCloskey, & Gabriel, 1998), in contrast with other research that indicated higher rates (Fox, 2003). Additionally, Jones and colleagues (1997) found that despite the fact that 61% of the American Indian adolescents reported exposure to at least one significantly traumatic event, only 3% met the diagnostic criteria for Post Traumatic Stress Disorder. It is therefore important to note that, despite an elevated exposure rate to trauma, the Northern Plains Indian teens exhibited a relatively lower rate of diagnosable PTSD. They did report some elevated behavioral and substance abuse problems; but they did not show any significant academic deficiencies. The crucial question that emerges is why unexpected results such as this occur.

Measurement Issues

When discussing applied empirical research with American Indian individuals and communities, issues of appropriateness of measurement arise as an important area for consideration. The fact is that few cross-cultural measurement application studies have been conducted with American Indian samples. As a result, many psychological measurement instruments have yet to be assessed adequately with regard to issues of validity and reliability. Little if any attention has been provided in the literature or by

instrument developers to potential differential cultural definitions of illness, wellness, symptom, etiology, course, and psychopathology, or to the cultural appropriateness of the individual items. The relatively few studies that include Native Americans in instrument development or assessment usually fail to provide a normative sample that is inter-tribally representative or well described. A clear consideration is the fact that inter-tribal heterogeneity is the rule rather than the exception. It should be stated that this critique also applies to cross-cultural and cross-tribal research in general, and it reflects a deeper problem within psychological research, which has traditionally underemphasized work with minority populations.

As a case example, the study of depression etiology mentioned above (Belcourt-Dittloff & Schuldberg, 2006) measured depression and cognitive style with well-known measures developed with primarily Caucasian samples and administered by primarily Caucasian investigators. Consequently, the measures themselves reflected a highly individualistic world-view and value system, and some of the items showed a distinct Eurocentric bias towards values of the Western majority culture. This bias was apparent in both the wording of some items as well as the actual content of the measures. This was most poignantly illustrated by the comments made by Native American participants who questioned the relevance of some items and were even offended by some of them. This was particularly evident when participants completed the cognitive style measure used, the Extended Attribution Style Questionnaire (EASQ, Metalsky & Joiner, 1997). A number of its questions ask participants to answer the questions "as if" the participant had acted in an unhelpful manner towards friends or family members. Numerous American Indian participants wrote on their survey materials that they would <u>never</u> refuse to help

friends or family, and this may be directly reflective of a more communal ideological view regarding themselves and others.

Other participants reacted to the measures of stressors and losses. Specifically, some individuals described how significant losses occurring in their families and their extended families continue to affect their ability to function, beyond the limited time frame presented by the stressor measure (which only asked about events occurring during the previous four weeks). These reactions were perhaps again reflective of the communal relationship based identity many American Indian people describe and are important interpretive considerations. This may also be related to current notions of traumatic grief and loss (Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002) and of longer-term historical or intergenerational trauma.

A number of other items reflected similar biases towards Western individualized culture, and those items, more often than not, led to either verbal or written comments about their inapplicability or perceived offensiveness. These factors likely influenced the way in which the members of the Native American sample responded to the instruments, and this may also have had an impact upon the observed results. Thus, these complexities mandate that future research with Native American participants should carefully consider the cultural appropriateness of the measures used in research and be ever mindful of related ethical considerations, as well as the need to establish mutual trust with regard to psychological research in general.

The approach of the present research was to remain mindful of these complexities within the data collection and analyses processes. The research data were collected in a collaborative manner with tribal communities. Time and forums were also made available

for research participants to voice concerns about the research measures, ethics, concerns about confidentiality, and general feedback. Careful attention was paid to issues of cultural appropriateness of measure selection and data gathering by the researcher.

The issue of including a non-Native American comparison sample as a control group was also carefully considered. This issue has been a contentious issue within the field of cross-cultural research for many reasons. Proponents assert that majority cultural control groups are necessary to ensure more adequately the internal validity of research aimed at delineating areas of important cultural differences between groups of people. However, critiques regarding the issue point to the fact that researchers conducting research with primarily Caucasian or majority cultural groups are not typically required to include culturally diverse control groups in their research to demonstrate either the external or internal validity of research. In addition, many of the individual content items included within this research project only pertain to Native Americans (e.g. participation in ceremonial practices, historical trauma, and American Indian identity and pride). It was therefore decided not to include a non-Native American control group. The inclusion of such a group would have been inappropriate, unduly expensive, and unnecessary for the goals of the project, which were to describe the important components of resiliency within sampled American Indian communities. Thus, this study does not directly address the question of which factors might be endorsed only by American Indian respondents and not by hypothetical members of other cultural groups (although, as noted, numerous questionnaire items do refer specifically to American Indian cultural experiences). The continued review of resiliency literature presented below will discuss factors that may apply cross-culturally, or may only be applicable to American Indians.

Potential Protective Factors for American Indian Peoples

The socioeconomic conditions faced by Native Americans are marked and significant. Jones, Dauphinais, Sack, and Somervell (1997) proposed that, due to the poverty, unpredictability, disruption, and overall more frequent experiences with environmental stressors, Native Americans sampled may be experiencing the exposure to trauma as less "outside the range of usual human experience." In other words, the American Indian teens sampled in their study may have in some ways come to accept frequent exposure to trauma as more normative, and to have become habituated to it. As a result, they may experience the trauma exposure as less disruptive and distressing, and therefore, it will be less likely to result in symptom generation. It may be that the chronic nature of trauma occurring in Native American communities result in some subsyndromal PTSD symptoms, but to reduce the relevant processes to this characterization would be a mistake. It is clearly evident that American Indian individuals and communities have demonstrated a considerable amount of resiliency.

A brief examination of various factors believed to be acting as buffers against the experience of stressors and enhancing positive developmental outcomes for this population will supplement the earlier discussion of general resiliency factors. Goodluck (2002) recently adopted a strength-based perspective in attempting to identify possible well-being indicators specifically relevant to Native Americans. In reviewing 22 psychological publications (descriptive, quantitative, and qualitative) by both Native and non-Native authors, she identified 24 Native American strengths. The themes of these strengths included the power of the group or communal interdependency and support, spirituality and related ceremonial participation, humor, cultural identity, political

relationships and factors (i.e. political involvement, activism, and affiliation), language and stories, tribal values, children, education, and the land or environment. To continue this inquiry a number of these psychosocial factors have been explored.

Humor

And we laughed, you know, because sometimes you'd rather cry. (Alexie, 2005)

Frequently, a coping strategy employed by many American Indian individuals takes the form of humor which is most often experienced in social interactions. Humor has many roles in Native American society. It is an effective strategy that has been used to educate, to unite communities and families, and to endure times of tragedy or adversity. Bullchild (1985) wrote of the role of humor in traditional and contemporary American Indian culture and he wrote about the Blackfeet trickster, Napi, a character who frequently became involved in bizarre, sometimes foolish, and usually humorous adventures. The stories were meant to convey both communal and individual values and codes of conduct through the use of humor.

Alexie (2005) also describes through literature the role humor can play in coping. He eloquently portrays both some of the adversities facing many American Indian people and the frequently observed ability to transcend or cope with tragedy and loss. Werner and Smith (1992) also provided empirical support for the notion that highly resilient individuals cultivate positive emotions through the strategic use of humor. Given the environmental obstacles and stressors experienced by American Indian people, humor is a vital part of the coping repertoire of resilient Native American individuals, and it may be an important component of communal and social support. However, humor is, perhaps by its very nature, difficult to measure and assess. Empirically robust measures of this

construct could not be located, and thus humor was not a directly measured construct within this study. Humor remains an important aspect of coping within the social world of American Indians and is believed to be an important aspect of communal and social support.

Community

The communal nature of American Indian individuals and communities is a well known aspect of American Indian life and was identified as a probable factor in resiliency. Given exposure to significantly high levels of environmental risk factors, Native American participants are frequently expected to exhibit differentially elevated indicators of psychopathology. However, the fact that this outcome has not always been observed is often unexpected. Social and community support are clearly important aspects helping American Indians cope with trauma and loss. Communal factors likely act as buffering agents. Membership in a tribal family and tribal community helps establish a sense of identity and may provide a sense of confidence in one's ability to cope with distress.

Social support is generally known to be a protective factor against the experience of stressful life experiences (Cohen & Wills, 1985). It is clearly a fundamentally important factor in the lives of communal cultures of American Indian people as well. This area of potential resiliency may also be reflective of differential views of the self, such as the presence of more relational identities within the Native American sample. In general, American Indian cultural groups operate using collectivist principles, which emphasize the harmonious functioning of the group as a whole over the individual; thus, relational skills are prized, and individuals tend to rely upon the extended family and/or

tribe when adversity occurs (Hobfoll, Jackson, Hobfoll, Pierce, & Young, 2002; LaFromboise, 1992; Sutton & Nose, 1996). Social support and social affiliation is therefore a potentially crucial protective factor in the lives of American Indian people. The term "family" itself is a culturally embedded word with different meanings. Within American Indian reality family has an extended connotation in which community as well as extended tribal networks are included within family and extended familial relationships.

This reliance upon relationships and community is likely related to the way in which Native American individuals perceive themselves and others; specifically, their individual identity formation is likely to be highly impacted by the relational reality in which they emerge. This more relational view of the self and reliance on community and social support may be a buffer when such individuals are faced with individually experienced negative life events. In addition, the community, family, and extended family of Native American individuals are likely to provide more social support to individuals in times of distress, and this may also help serve as a protective factor. In fact, this proposition was supported by Hobfoll and colleagues (2002) in their prospective study of communal mastery and self-mastery with 160 rural Native American women.

Communal mastery is the personal belief that individual successes are due to social attachments, while self-mastery is the personal belief that individual successes are due to individualized attributes. Communal mastery is related to current understandings of the collective efficacy construct and of social capital (Sampson, Morenoff & Earls, 1999; Sampson, Raudenbush, & Earls, 1997). These authors have analyzed how communities and neighborhoods contribute important elements toward individual well-

being, safety, and health. Hobfoll and colleagues (2002) found that American Indian women having higher ratings of communal mastery experienced less increase in depressive mood and anger when faced with highly stressful conditions than American Indian women with lower ratings of communal mastery. This supported the notion that communal mastery was more beneficial than self-mastery for the Native women participants.

Two other studies with Native American adolescents (Chewning Douglas, Kokotailo, LaCourt, St. Clair, & Wilson, 2001; Cummins, Ireland, Resnick, & Blum, 1999) examined similar protective factors. Chewning's research team identified lower health risk behavior by friends, higher academic performance, higher value of educational achievement, higher self-efficacy, and higher parental support and overall involvement as protective factors against higher risk sexual behavioral patterns. Cummins and colleagues (1999) examined the National American Indian Adolescent Health Survey conducted in 1991-1992 (n = 13,454) and found that the most significant predictor of emotional health was having a supportive family that cared about the adolescent. Family, community, and relationships are clearly important sources of resiliency for Indian peoples. This has been supported by other authors who have begun to illustrate the vital nature of social support from the community, family, and Native American culture in the process of resilience within this population (Cross, 1998: Heavy Runner & Marshall, 2003; LaFromboise, Oliver, Hoyt, & Whitbeck, 2006). This research raises the question of whether resiliency itself should be considered an individual or a communal characteristic. The present research, however, relies on individuals self-report, although some measures inquire about community.

Historical Resilience

Another important potential source of protective factors for American Indians lies in the fact that throughout a history of considerable upheaval, colonization, trauma, and oppression, they have demonstrated both individually and collectively considerable strength and resiliency. Historical factors and the relationship historical experiences have with psychosocial variables are an important area to investigate and consider. Viktor Frankl (1959), an individual painfully familiar with trauma, genocide, and loss due to his own experiences in a Nazi concentration camp, wrote that one way of finding meaning in life is through suffering. Native Americans have suffered much, and these experiences have also brought meaning to many individual and tribal histories. Cultural pride has emerged as a hallmark of the cohesion that exists between tribal members and a way in which many have overcome considerable loss. Zimmerman and colleagues (Zimmerman, Ramirez, Washienko, Walter, & Dyer, 1998) found that this process of enculturation as a common experience is a protective factor for Native American youth. Enculturation is the process by which individuals learn about and identify with their traditional ethnic culture (Little Soldier, 1985). Higher levels of identification and feelings of pride associated with Native American ethnic identity were associated with higher levels of self-esteem. Clearly, lessons remain to be learned from the histories of oppression and transcendence that characterize many American Indians and tribal communities. Elucidating the ways in which individuals and groups of people cope with extraordinary losses and trauma can inform psychological science in an important clinical manner.

Due to the history of both contemporary and historical trauma experienced by American Indians, one promising avenue for investigating resiliency in this population

lies in the field of adversarial growth research. Adversarial growth (also known as posttraumatic growth, stress-related growth, perceived benefit, and/or thriving) is the term used to explain the empirically documented positive changes that can occur following trauma and adversity (see Linley & Joseph, 2004 for a review). Adversarial growth has been proposed to account for the disconnect often occurring between trauma exposure and the development of psychopathology. Linley and Joseph (2004) point out that traditional focus has been upon negative reactions and results following trauma exposure and, as a result, this may have resulted in a biased depiction of posttraumatic reactions. The field emerged with the work of Tedeschi and Calhoun (1995) and Tedeschi, Park, and Calhoun (1998). To date, some 39 empirical studies have demonstrated positive changes that can occur following adversity and trauma (Linley & Joseph, 2004). As noted above, the field encompasses works in the areas of posttraumatic growth, stress-related growth, perceived benefit, and thriving. In general, lower rates of distress are reported by individuals who manage to report and maintain adversarial growth over time. Specifically, the longitudinal evidence suggests that individuals who are optimistic, deeply spiritual, have more positive affect, and cope with traumatic experiences through positive reinterpretation and acceptance coping report higher levels of adversarial growth (Linley & Joseph, 2004).

Garroutte et al. (2003) recently reviewed data from a comprehensive cross – sectional sample of 1456 American Indians and found that individuals with higher levels of cultural spiritual orientation (as measured by an index of spiritual orientation) had a reduced prevalence of attempted suicide compared with individuals with lower levels of

cultural spiritual orientation. In addition, the researchers found that commitment to cultural spirituality was significantly related to lower levels of suicide attempts.

Studies of cultural factors that help individuals cope with loss and trauma are clearly important. Reziliency factors are believed to involve similar traits and processes to those that promote positive coping within other cultural groups. Cultural factors are clearly an important aspect of American Indian life that can promote resilient coping following trauma. The successful examination and identification of the factors that help establish this potential form of dynamic resiliency are important and could help to establish an innovative way to alleviate psychological suffering for American Indians and improvements within Native American mental health care. Important constructs for inquiry include spirituality, humor, extended family and community support, differential concepts of health and illness, as well as more individualized psychological factors, such as differences in personality traits and coping styles.

Explaining Development: Resilient and vulnerable pathways

In general, a productive way of explaining developmental trajectories is to adopt a diathesis stress model (Monroe & Simons, 1991). Such models state that the occurrence or presence of distal etiological risk factors necessarily predisposes individuals towards developing pathology. In other words, the actions of the risk or resiliency factors would produce vulnerability or different levels of strength, which would serve as a diathesis factors. A large body of research has established an important link between stressful major life events and the onset of psychological disorders (Brown & Harris, 1978; Rabkin & Struening, 1976). This relationship is included in the diathesis-stress model.

As a result, such models require the occurrence of some stress in order for diathesis to be actualized into either a mental health problem or an episode of coping. The presence of vulnerability serves to lower the threshold needed for individuals to develop pathology in the presence of stressors, while the presence of resiliency is believed to act as a buffer against the experience of stress. Resilience is a dynamic process encompassing positive adaptations within the context of significant adversity (Luthar, Cicchetti, & Becker, 2000).

Thus, stress will have a differential effect upon individuals depending upon the presence or absence of vulnerability factors, or the degree of vulnerability. Regarding Native Americans, it may be that potential vulnerability factors may increase the risk for developing mental health problems when the individual is faced with stressors. However, it is also possible that Native Americans may have unique resiliency factors that allow them to withstand higher levels of exposure to contemporary environmental risk factors. In line with cognitive theories, it is believed that some American Indians may also have maladaptive cognitive styles or structures, which may serve to predispose them to developing depression, anxiety, psychopathology, and subsequently higher rates of possible suicidality (see also Belcourt-Dittloff & Schuldberg, 2006).

The picture that will emerge presents a dynamic interplay of both distal and proximal risk factors, establishing either a diathesis or vulnerability for the development of pathology in Native Americans, or a diathesis for the development of behaviors aimed at coping with risk factors. In addition, resiliency factors can act proximally in compensating for or buffering contemporaneous or recent stressors. The picture that begins to emerge is more fluid than previous understandings of Native American mental

health and developmental theory. This more comprehensive emerging view of Native Americans can lend itself to useful treatment and preventative implications.

Distal Factors

General Distal Risk and Protective Factors for Native Americans

Environmental variables constitute an important group of distal factors working to increase the risk for psychopathology in Native Americans. Clearly, the environmental risk factors facing American Indian people are considerable. These are complex and include both historical trauma experiences as well as contemporary factors. One rather counterintuitive implication may be that the importance of extended families and community for many Native Americans may actually at times exacerbate this statistical risk. Native American families sustain cultural norms of close extended familial relationships. This would make it more likely that Native American children are cared for by role models who may be struggling with mental health problems themselves. This is further impacted by distal factors of historical trauma and intergenerational loss.

American Indian women have been seen as experiencing heightened levels of many risk factors associated with psychopathology, such as poverty, lack of formal education, and having larger numbers of children early in their lives (McGrath, Keita, Strickland, & Russo, 1990). Accordingly, many American Indian children may find themselves in an environment that may potentially increase risk for psychopathology. Social learning theory has shown the powerful influence of the social milieu in human development (Bandura, 1977). Indeed, children learn how to interact with their environment and interpret events by observing important individuals in their lives, such as parents or care providers and imitating their behavior (Bandura, 1977).

A number of reviews (Alloy et al., 1999; Chiarrello & Orvaschel, 1995) describe the relationship between parent and child psychopathology. They suggest that parental depression may impact children's risk for depression by interfering with the parent's capacity to relate to the child. In particular, Jaenicke and colleagues (1987) found that depressed mothers often display a critical, threatening, and commanding interactional style that actually predicted later development of negative cognitive styles in the children. A similar process may be present with children of Native American mothers or caretakers who struggle with mental and/or physical health problems.

Self-Schema Development in Native Americans

Native American self-schema development is a complex process that may result in a heterogeneous array of outcomes for Native American children and adolescents. Undeniable among the factors affecting American Indian ethnic identity development are the myriad of severe environmental risk factors that have already been mentioned. One unfortunate category of self-schema development includes the development of negative self-schemata. However, conversely, American Indian identity is often strongly shaped by the positive aspects of Native American culture. As stated above, adolescence is a particularly difficult developmental period, something painfully true in the case of Native American adolescents. One of the main tasks of development is the formation of a personal identity or self-schema. According to LaFromboise and Howard-Pitney (1994), American Indian adolescents are further challenged by (a) acculturation pressures; (b) poverty, which limits hope for the present and future; (c) the multigenerational effects of alcoholism and trauma; and, the (d) frequent occurrence of deaths in the family and community.

It may be that some Native American children may be developing negative attributional styles due to negative experiences in these domains; however, many Native American children and individuals may also be developing positive attributional styles (Belcourt-Dittloff & Schuldberg, 2006). Due to modeling or possibly overt feedback provided by family members with mental health problems, some American Indian children may be at a subsequently higher risk for developing negative attribution styles. Additionally, as previously mentioned many American Indian children are subjected to abuse, which is often afflicted by a family member (Blum et al., 1992). The presence of abuse could also add to feelings of hopelessness and worthlessness.

However, the presence of an unhealthy caregiver or family member by no means guarantees that American Indian children will develop a negative view of the self or thinking style. In fact, many American Indian children may find ways of adapting to their social environment that do not require potentially harmful alterations of the sense of self. They may, for example, be able to focus instead upon positive relationships with family or community members and in this way cope with problematic relationships in a more productive manner.

Regarding peer relationships believed to contribute to views of the self, American Indian children who are in non-Indian schools or urban settings may be at particularly high-risk for social isolation and rejection by peers. This may even relate to the consistent finding of higher rates of suicide within more acculturated tribes (May, 1987). Some American Indian children may have difficulty establishing positive relationships with non-Indian teachers, particularly in urban settings, due to acculturation stress, the effects of social isolation, and the potential presence of racism. Conversely, children living in a

reservation or tribal community may possibly be more likely to develop a sense of positive identity. This positive identity development would more likely be shaped by pride in community and culture. In that community setting, American Indians may also have greater access to Native American teachers, elders, professionals, and role models. This would further provide support for healthy identity development.

When American Indian children develop negative schemas, they may begin to interpret reality in potentially maladaptive ways. However, if American Indian children are able to develop positive self-schemas, they may interpret reality in potentially more adaptive ways. That is, they may develop cognitive styles of processing information that could confer either vulnerability or resiliency to psychopathology. The aforementioned socioeconomic factors, and exposure to more stressors, may activate either or both of these potential developmental pathways leading to the development of negative and/or positive self-referent schemas. Beck's (1987) cognitive theory of depression states that these negative self-schemas could establish latent diatheses for depression or other psychological problems that come into play if the disorder is later precipitated by proximal risk factors. The same could be said of positive self-schemas, which could establish latent diatheses for positive outcomes if precipitated by proximal risk factors or stressors, or positive life events.

Research done on self-esteem and alienation with Indian adolescents suggest that Native American teenagers do indeed have more negative views of themselves than are the norm for non-Native teens (U. S. Congress, 1990). In a governmental review of the status of Indian adolescents, it was found that Indians often characterized themselves as friendly, helpful, easy-going, but not as being particularly smart, strong, or good-looking

(Development Associates, 1983). This suggests that American Indian children may be susceptible to developing negative self-schemas. However, many American Indian children have also demonstrated a remarkably strong and positive view of themselves. Uncovering the factors that lead to these developments, as well as potentially important cross-cultural differences in identity development and outcomes, represent an important area to consider.

Proximal Risk and Protective Factors: Catalyst events.

Negative Life Events as Stressors

The diathesis-stress models of pathology and coping states that mental health problems are produced by an interaction of vulnerability factors and environmental conditions that serve to trigger a diathesis and lead to overt symptomatology (Ingram, Miranda, & Segal, 1998). With regard to which environmental conditions may trigger the expression of this diathesis, a wide body of literature suggests that negative life events constitute the stressors that precipitate episodes of depression, illness, and mental disorders in general (see Rabkin & Struening, 1976, for review).

The question of what types of events constitute negative life events or social stressors is a complex one. Holmes and Rahe (1967) have defined social stressors as comprising any set of circumstances which signifies or requires change and adjustment in the individual's life pattern. Stress has been divided into a number of different forms. The first type of stress occurs as a result of significant life events interpreted by the individual as undesirable (Luthar & Ziegler, 1991; Monroe & Peterman, 1988). Examples of this type of stress include loss of employment, divorce, illness, death of a loved one, as well as the abuse of alcohol. A second type of stress results from an accumulation of minor

negative events and hassles (Dohrenwend & Shrout, 1985; Kanner, Coyne, Schaefer, & Lazarus, 1981). In other words, minor stressful events appear to have an additive or cumulative effect. A third type of stress, pointed out by Luthar and Ziegler (1991) occurs due to the important influence of socioeconomic status. Low maternal educational status or membership in an ethnic minority may constitute indices reflecting stressful living circumstances. In addition, some authors assert that positive life events and minor uplifts may also constitute stressors (Holmes & Rahe, 1967). Occurrence of stressors is generally believed to disrupt an individual's physiological and psychological homeostasis, which is believed to increase vulnerability to psychopathology and to disease in general (Monroe & Peterman, 1988). The current study analyzes how stressors -- both positive and negative – relate to psychosocial factors within American Indian communities.

Stressors and Native Americans

When the focus shifts back to Native Americans and their exposure to stressors, a clear conclusion to draw is that American Indian people are exposed to a disproportionate level of stressors. A direct illustration of a unique stress endured by Native Americans is an outgrowth of their minority status. As Luthar and Ziegler (1991) pointed out, membership in an ethnic minority group with low socioeconomic status is a general indicator of the presence of stressful living conditions, and Native Americans exhibit a tragic illustration of these phenomena. As noted, Native Americans are subjected to disproportionate amounts of poverty, unemployment, alcoholism, physical illnesses and premature deaths (U. S. Congress, 1990). These negative life circumstances fuel the high rates of violent crime found in many American Indian communities, including homicide,

domestic violence, and child abuse (Blum et al., 1992; U.S. Congress, 1986, 1990). In short, many Native Americans are frequently exposed to both significant and minor negative life events, and this works to establish this population as highly vulnerable to psychopathology in general.

Native Americans may fit particularly well in this diathesis-stress model of psychological distress. Because of heightened exposure to environmental risk factors, Native Americans are likely a uniquely vulnerable as well as—for reasons described earlier-- a uniquely resilient population. An additionally important factor to consider is past experience of trauma, historical trauma, and also historical resilience. Historical trauma and intergenerational loss experiences may have a sensitizing or "kindling" effect which increases the likelihood that current stressors or traumatic experiences will result in either symptoms or adaptive coping behaviors. In light of the disproportionate experience of negative life events or stressors experienced by Native Americans, the hypothesized resiliency and/or vulnerability factors both have a higher probability of being triggered or actualized. This means that past stressors or trauma can lower the threshold needed for symptoms to emerge when there are current stressors or traumatic experiences. As a result, many Native Americans may be more reactive to or more easily affected by stressors and may therefore display a disproportionate rate of symptoms. Conversely, if intergenerational resiliency factors are present they may act in a buffering manner when stressors occur and re-occur and therefore display resilient coping. Each of these factors may impact the appearance of symptoms or coping behaviors when stressors or traumatic experiences are encountered.

Native Americans continue to display resiliency in the face of staggering environmental stressors. This is remarkable and demonstrative of the complex interplay that exists between risk and protective factors and potential outcomes, and the unique historical resiliency inherent within this cultural group's history. This phenomenon forms the focus of the current research.

Figure 1 displays a visual conceptual representation of this overall model. The model displays the nature of the cyclical course proposed to be involved in the etiology of both wellness and pathology. Native American psychopathology and wellness are complex processes. Many potential ultimate causal factors are likely involved in establishing the coping strategies used when stressors are encountered. Protective factors could also intercede when stressors occur and therefore act as buffering agents or compensatory factors against the development of psychopathology and as an influence on positive psychosocial status. This theoretical model demonstrates the proposed developmental trajectories involved in both mental health problems, as well as the use of resiliency factors and occurrence of wellness among Native American individuals. The current research project was not designed to assess the entire theoretical model described in Figure 1.

If a negative psychosocial status is the ultimate result of this process, the level of stressors experienced will also interact with vulnerability factors to exacerbate symptoms, demonstrating the cyclical nature of psychological symptomatology. Likewise, if a positive psychosocial status is the result, the amount of stressors experienced may interact with the Resiliency Factors but may result in more healthy coping behaviors. Therefore, it is important to keep in mind that the etiological processes are cyclical in

nature, and therefore one should allow for variability in temporal psychosocial status depending on severity and potentially type of stressor or trauma experienced. This also highlights the intergenerational impact this process can have upon American Indian communities. Both resiliency and vulnerability factors are likely transferred in an intergenerational manner in a process that parallels the intergenerational exposure to trauma and history. As described, this research project was designed to investigate aspects of this theoretical model and specifically to assess the potential ways in which hypothesized *Reziliency* factors influence efforts to cope with stressors.

This developmental picture presented in the Figure 1 was intended as a conceptually comprehensive and fluid description of Native American individuals. The potential view of the vulnerable Native American, offset by the view of resilient Native Americans, developed in this dissertation easily implies hopeful and important treatment and preventative implications. Additionally, preventive plans could be implemented in tribal schools to foster resiliency and healthy coping skills. All of these actions could potentially lead to positive changes in Native American mental health care.

Risk and Resilient Pathways: A potential model for Native Americans

Now that an appreciation of some of the risk and protective factors facing Native American has been gained, it becomes possible to envision a model for understanding important etiological factors involving Native American tribes and individuals. As mentioned earlier, the emerging model includes a dynamic interplay of both distal and proximal risk factors in establishing a diathesis for vulnerability and/or resiliency for the development of positive or negative psychosocial coping.

Insert Figure 1 about here.

Latent hypothetical variables (i.e., the diathesis) are believed to develop distally and are posited to result from interactions between environmental and constitutional variables unique to each individual and context. These distal factors include historical loss and trauma as well as personal history experiences. These latent variables can also be composed of factors that predominantly make a Native American individual more resilient and thus more resistant to psychopathological symptoms (Resiliency or Protective Factors). Conversely, the latent risk variables can be predominantly composed of factors that will make the individual more vulnerable to psychopathological symptoms (Vulnerability Factors). Vulnerability factors are believed to be composed of lower levels of protective factors and the possible presence of negative self-schemas. In contrast, the more helpful Resiliency Factors are believed to consist of higher levels of protective factors and possibly the presence of positive self-schemas.

Part of Figure 1 illustrates the process believed to occur proximally in this diathesis-stress model. First, when the individual experiences a stressor, or when a negative life event occurs, this acts as a catalyst or trigger activating previously latent Resiliency and/or Vulnerability factors. At this point, these variables are believed to interact with the stressors experienced to cause the symptoms of psychological distress displayed, or to prevent the expression of symptoms and even lead to positive developmental outcomes. If high levels of resiliency factors and low levels of Vulnerability factors are triggered, the individual is hypothesized to display healthy

coping behavior, possibly experience positive adversarial growth, and may avoid an episode of symptoms. This hypothesized pathway is illustrated in the top portion of Figure 1. It is important to note that if Resiliency Factors and healthy coping behavior occur, these are believed to reinforce and strengthen the dynamic factors of hypothetical Native American resiliency. Conversely, if high levels of Vulnerability factors and low levels of the resiliency factors are triggered, the individual is hypothesized to display symptoms of psychological distress or disorder. This hypothesized pathway is illustrated in the bottom portion of Figure 1. It is hypothesized to represent the more "pathological" etiological pathway.

As noted, it is important to keep in mind that this theoretical etiological process is cyclical in nature, and therefore allows for temporal variability in psychosocial status depending on severity of stressor or trauma experienced. If either positive or negative forms of coping occur, the level of stressors experienced hypothetically interact with resiliency or vulnerability factors to modulate the magnitude of the eventual outcome. Wachtel (1994) eloquently describes the cyclical nature of such "vicious" and "virtuous" cycles within human relationships.

An important consideration is the notion that at every level of the model the community is also impacted. Indeed, children and adolescents are in an etiologically pivotal developmental position due to their ongoing cognitive and emotional development and their reliance or dependency upon the adults around them. In addition, children and adolescents, despite their dependent condition, have a strong relationship with the functioning of their families and communities in both positive and potentially negative ways. Therefore, children may be impacted in many ways depicted in this model

of risk and protective phenomenology and etiology, depending upon their exposure to either resilient or vulnerable role models or caregivers and their own experiences in risk and resilience.

Finally, this process was believed to impact the community in a more general way as well. It may well be that the community at large has a bi-directional relationship with the individual's risk and protective factors. Communities are important areas of social interaction in which individuals share many experiences and social exchanges. It follows that the more negative the developmental outcomes experienced by individuals in a community, the more healthy individuals are exposed to individuals experiencing symptoms mental distress. This could result in more individuals exposed to social vulnerability factors; however, this could also result in more opportunities for the development of resiliency factors and positive developmental outcomes. Subsequently, the more healthy coping strategies and developmental outcomes are experienced by Native American individuals, the more *Reziliency* or Native American resiliency is fostered at both the individual and tribal level. The resultant picture could describe the important episodes of symptomatology and/or resilient coping demonstrated and experienced by the community in general and by members individually.

However, for the purposes of the current study the primary area of interest will remain at the level of the individual, with the study of the processes occurring in response to an individual's negative life experiences. The current methodological strategies adopted to measure Native American Resiliency will focus upon individual characteristics of American Indian peoples who are embedded within a particular Tribal community, and upon only some of the aspects of the theoretical model described in

Figure 1. To account for some of the unique factors impacting Native Americans as both individuals and as members of a community, historical trauma and historical-trauma-associated symptoms are assessed in this research and their effects analyzed. In addition, communal mastery, enculturation, and issues pertaining to spiritual pursuits are individual characteristics that exist within an American Indian cultural and communal context. It was believed that historical trauma factors might play a particularly sensitizing role in the development of symptoms and coping behaviors, and historical trauma associated symptoms were also evaluated as a possible dependent (adjustment) variable.

Because of possible heightened susceptibility to environmental risk factors, historical trauma, and the hypothetical subsequent historical development of potential vulnerability and/or resiliency diatheses, Native Americans were believed to fit particularly well in this elaborated and enlarged diathesis-stress etiological model. Native Americans are resilient in the face of staggering environmental stressors. It is important to investigate empirically the processes by which both Native American resiliency and Vulnerability factors result in observed psychosocial status. In order to identify specifically important factors and variables, this dissertation approaches this empirical question with a number of measurement strategies.

In light of the disproportionate experience of negative life events or stressors experienced by Native Americans, the hypothesized latent vulnerability may have a higher probability of being triggered or actualized in members of this population. However, the same could be said of latent protective resiliency factors. Native Americans may be coping with negative life experiences in highly diverse and individualized manners. Both problems and proficiencies in coping likely are accurately descriptive of

individual capabilities, and these abilities may differ depending upon the unique aspects of the stressor experienced. The complexities and the cyclical nature of the model could help explain the aforementioned disproportionate rates of Native American mental health problems, as well as the documented resiliency demonstrated by this cultural group.

However, when discussing vulnerability and resiliency, it is important to emphasize that the dynamic nature of individual functioning. While vulnerability is generally understood to be a relatively stable trait that may be somewhat resistant to change (Ingram, Miranda, & Segal, 1998), it is not necessarily unalterable or permanent. Resiliency is also viewed as a flexible psychological process that allows for considerable individual variation both in course and developmental outcome. Heterogeneous developmental outcomes are clearly descriptive of the end points of etiological processes. Therefore, the potential view of some Native Americans as dichotomously either resilient *or* vulnerable to psychopathology is both misleading and simplistic. The picture that emerges in this research is believed to reveal glimpses of the dynamic processes by which Native American individuals attempt to cope with the occurrences and re-occurrences of stressors. The fluidity of these processes will likely reveal important avenues for potential treatment and preventative approaches and suggest possibilities of refinement. This is the underlying purpose for engaging in such strategies of inquiry.

For the current study, portions of this diathesis-stress model were examined in a Native American population. The focal emphasis was placed upon individual characteristics within an American Indian cultural and communal context. This approach may or may not be applicable to other cultural groups, and this issue will therefore be best addressed through cross-cultural replications in other groups. The purpose of this

study is to attempt to elucidate and to highlight potential important aspects of resilient coping within an American Indian context.

Portions of the theoretical etiological model were tested in this study in an exploratory manner. This study examined the hypothesized role that resiliency factors play with regard to psychosocial status variables. In addition, the nature of psychosocial and historical stress and trauma represented areas of interest. Therefore, moderation models were tested for each of the resiliency variables paired with each type of psychosocial stressor predicting each psychosocial status variable. Data reduction techniques were then conducted to provide a more cumulative and concise depiction of the results.

Figure 2 presents an illustration of the prediction pathways used for each pairing and depicts the regression models that tested the moderator hypotheses. The adopted criteria used to assess for moderation were established by Baron and Kenny (1986). Moderation was understood to be the influence of a third variable that qualifies the effect of an independent variable on a dependent variable. Therefore, a moderator variable interacts with an independent variable's effect upon a dependent variable. Moderating variables are believed to impact the direction and magnitude of the relationship between the independent variable and the dependent variable in a sensitizing or suppressing manner. Moderating variables act in a sensitizing manner if higher levels of the moderating variable(s) coincide with higher levels of observed dependent variable(s). Moderating variable(s) act in a suppressing manner if higher levels of the moderating variable coincide with lower levers of the observed dependent variable(s). In the regression analyses, this is indicated by a significant change in R^2 for the term

corresponding to the bottom path in Figure 2, after the main effect terms referring to the upper two paths have been entered.

In these models, life stressor scores and resiliency factor scores were used to predict psychosocial status scores both individually and as interacting predictors. To test the moderator hypothesis, the interaction between the two predictors was used to predict the criteria variables for each of the psychosocial status scores.

Insert Figure 2 about here.

Hypotheses

Results were expected to show that the Native American sample scores would consistently support the theoretical etiological model described in this study. To investigate this larger research hypothesis, multiple procedures were conducted to address three general hypotheses.

1. It was expected that higher levels of resiliency or protective factors (as assessed by measures of communal mastery, hope, social support, acculturation, enculturation, coping style, spirituality, and general resiliency) would be significantly correlated with higher life satisfaction/quality, more adversarial growth, and lower levels of psychological distress. Similarly, lower levels of hypothetical resiliency or protective factors (as assessed by measures of communal mastery, hope, social support, acculturation, enculturation, coping style, spirituality, and general resiliency) were expected to be associated with lower levels of life satisfaction/quality, less adversarial growth, and higher levels of psychological distress. It was expected that the stress related growth, social support, and communal mastery would have the strongest positive

relationships with life satisfaction, quality of life, and negative relationships with psychological distress.

It was also expected that significant differences would be detected based upon participant's gender. To test this aspect of the hypothesis, independent samples *t*-tests and χ^2 tests were computed for the various measures and for demographic information. The *t*-tests were used to measure differences between observed means and used with continuous variables, and the χ^2 tests assessed differences between dichotomous variables based upon differences in frequencies or proportions. It was believed that significant gender differences would be observed, in line with previously cited statistics on psychological distress rates, with women showing more signs of psychological distress. It was unclear how gender would relate to the other variables, as little information about differential gender effects upon resiliency exists for this population.

2. After these initial explorations, the theoretical models described in Figure 2 were tested using hierarchical regression techniques to conduct a set of exploratory analyses. The regression analyses investigated the role that hypothesized protective and/or vulnerability factors play with regard to stressors and psychosocial status. As described, these analyses were designed to test for potential moderation as well as main effects. It was hypothesized that historical and contemporary stress, as well as each of the hypothetical resiliency factors, would predict a significant amount of the variance in psychopathology scores, quality of life, happiness, and adversarial growth indices.

Furthermore, it was believed that each of the resiliency factors (measured by communal mastery, hope, social support, acculturation, enculturation, coping style, spirituality, and general resiliency) would have a moderating relationship with each of the

dependent variables observed (quality of life ratings, adversarial growth, and measures of psychological status). This means that resiliency factors were hypothesized to act as buffers between stressors experienced and psychological distress, and that each of these resiliency factors would have a moderating relationship on positive psychological psychosocial status; both buffering and or sensitization can appear in the statistical interactions tested using the criteria described by Baron & Kenny (1986). This type of exploratory analysis does inflate the chances of making a Type I error. Due to the lack of previous empirical research concerning resiliency processes and factors for American Indians, the author relied upon this clinical rationale to guide the decision to accept the risk of Type I error inflation in these exploratory analyses (see Abelson, 1995).

3. Qualitative analyses were conducted to investigate potential information regarding Native American resiliency factors. These analyses utilized a Thought Listing measure of the construct of resiliency. It was expected that the Native American participants would qualitatively report specific resiliency factors at work within the population. These qualitatively reported factors were hypothesized to constitute Reziliency factors for the American Indians sampled and to include factors such as spirituality, cultural identification and practices, and communal support. Qualitative information about participants' experiences during this research collection was included.

Methods

Participants

Participants in this study were 164 self-reported Native American males and females from the tribal college and an urban community Indian center in the Northwest. Subjects were recruited through collaboration with community college classroom

instructors and health care providers at community resource centers at the Indian Center and Community College. Each subject completed a short demographic questionnaire to determine ethnicity or cultural/racial status, mental health history, socio-economic status, gender, and age, as well as a packet of measures of psychosocial functioning. Exclusion criteria included identification with an ethnicity other than Native American; future cross cultural application studies could be conducted with non-Native American samples. Ten participants were excluded from this study due to incomplete questionnaires, and, in one case, due to a participant self-identifying as a non-Native American/American Indian individual.

Materials

A summary of constructs measured and relevant instruments is provided here. A more detailed description of the measures follows.

Independent variables:

Social support
Communal mastery
Coping Style
Hope
Spiritual involvement
Enculturation
Brief Resiliency Coping Scale
Ethnic, Culture, Religion/Spirituality (ECR) scale

Stressors:

Historical Trauma
Stressors experienced

Dependent variables:

Outcome Questionnaire (OQ-45)
Quality of Life Inventory (QOLI)
Adversarial Growth
Historical Trauma Affect
Positive and Negative Affect Schedule-Unpleasant

Positive and Negative Affect Schedule-Pleasant

Instrumentation for the Independent Variables

Individual Protective Factor Measures

Hope Scale

The sense of will and ways (i.e., sense of agency and ability to plan to reach life goals) was measured with the Hope scale (Snyder et al., 1991). This is an 8-item scale that has demonstrated adequate reliability and validity in various samples (Snyder et al., 1991). Sample items of the measure include: "I meet the goals I set for myself" and "Even when others get discouraged, I know I can find a way to solve the problem." Participants are asked to provide their self-report response on a Likert scale ranging from 1 (Definitely False) to 4 (Definitely True). This measure has not been used previously in Native American samples, and the current study computed the relevant reliability indices for the sample in this study and found it to have adequate internal consistency. The calculated *alpha* coefficient for this sample was .86.

Social Support

The SSQ-6 (Social Support Questionnaire-6; Sarason, Sarason, Shearin, & Peirce, 1987) is a twelve-item self-report measure of perceived self-satisfaction with social support. Participants are asked to rank the amount of social support they have in various situations, and their perceived satisfaction with the social support on rating scales. The scale for amount of social support ranges from 0 to 10 individuals providing social support. The Likert scale for perceived satisfaction of social support ranges from 0 to 5, or "Very Dissatisfied" to "Very Satisfied." Sample items from this measure include, "How satisfied are you with the support?" and "How satisfied are you with the

acceptance?" It has been shown to display adequate reliability and validity with other samples. The measure has not been used in Native American samples; in this study's sample the measure was found to have an *alpha* coefficient of .90.

Social Mastery

A communal mastery scale developed by Hobfoll and colleagues (2002) was used to measure the extent to which individuals gain a sense of mastery based upon a sense of collectivist or communal mastery. The measure consists of a 10-item self-report Likert scale and has been used with student, inner-city, and tribal community samples in Montana. Participants were asked to rate their responses on a Likert scale from 1 (Strongly Disagree) to 4 (Strongly Agree). Sample items on this measure are: "What happens to me in the future mostly depends on my ability to work well with others," and "I can do just about anything I set my mind to do because I have the support of those close to me." This scale has been reported to have had internal consistency estimates of .74 and .72 for the Montana tribal samples. The internal consistency was also calculated for the sample participating in the current study. The communal mastery scale was found to have an *alpha* coefficient of .75 for this study's sample, which indicated adequate internal consistency.

Spirituality

The Spiritual Involvement and Beliefs Scale (SIBS; Hatch, Burg, Naberhaus, & Hellmich, 1998) was used as a general assessment tool for spirituality. The SIBS assesses spiritual practices and refers to a "higher power" rather than a specified notion of God. It is designed to measure spiritual principles underlying various belief systems (including atheism). The 39 self-report items are on rated along a 5-point Likert scale ranging

between 1 (Strongly Disagree) to 5 (Strongly Agree). Sample items are: "Some experiences can be understood only through one's spiritual beliefs" and "A spiritual force influences the events in my life." The authors of this measure reported a Cronbach's *alpha* of .96 for the normative sample and a test-retest (9 month interval) of .92. Reliability indices were computed for the sample in this study, and it was found to have an *alpha* coefficient of .59, indicating some internal consistency for this measure with this sample. Results for this scale should thus be viewed with caution.

Coping Style

The COPE inventory (Carver, Scheier, & Weintraub 1989) was used to assess coping style. The COPE is designed to measure the different ways in which people respond to stress. The measure is a 60-item, self-report Likert scale measure whose items are rated ranging from 1 (Never) to 4 (Always). The scale has 15 subscales, each composed of 4 items. The subscales for this measure are Active Coping, Planning, Suppression of Competing Activities, Restraint Coping, Seeking Social Support for Instrumental Reasons, Seeking Support for Emotional Reasons, Positive Reinterpretation and Growth, Religion, Venting Emotions, Denial, Behavioral Disengagement, Mental Disengagement, Alcohol and Drug use. Scores on each subscale range from 4-16, and higher scores indicate a particular area of preferred coping. Sample items for this measure are: "I ask people who have had similar experiences what they did" and "I try to get emotional support from friends or relatives." Test-retest reliability estimates range from .46 to .86 for the subscales, with Cronbach's *alpha*'s ranging from .63 to .92 (Carver, Scheier, & Weintraub 1989). Reliability indices were computed for the participants in this study. The overall COPE inventory was found to have an *alpha* coefficient of .92,

indicating an adequate internal consistency for this sample. The subscales were found to have the following *alpha* coefficients in this sample: Active Coping, .84; Planning, .91; Suppression of Competing Activities, .89; Restraint Coping, .81; Seeking Social Support for Instrumental Reasons, .91; Seeking Support for Emotional Reasons, .84; Positive Reinterpretation and Growth, .85; Religion, .90; Venting Emotions, .82; Denial, .87; Behavioral Disengagement, .89; and Mental Disengagement, .79.

Acculturation Measure

The Orthogonal Acculturation Scale (Oetting & Beauvais, 1991-1992) was used to measure acculturation and personal cultural identification in an exploratory manner secondary to the participants' self-report of cultural identification. The primary determination of cultural group affiliation used to form the group in this study was made based upon each participant's identification of cultural group affiliation or self report of ethnicity. The Acculturation measure has five subscales, and participants are asked to report which cultural group they identify themselves with and to what degree. A sample item is, "Some families have special activities or traditions that take place every year at particular times (such as holiday parties, special meals, religious activities, trips or visits). How many of these special activities or traditions does your family have that are based on…?" Participants are then asked about Native American cultural affiliation, White American/Majority cultural affiliation, Hispanic/Mexican American cultural affiliation, African American cultural group affiliation, and other cultural group affiliation. Each of these cultural affiliations is followed by a Likert scale ranging from 0 (None) to 3 (A lot). The current study only used the Native American cultural affiliation and the White American/Majority cultural affiliation subscales in the analyses due to marked low

reporting for the other observed cultural affiliation scales. The current study computed internal consistency measures for these subscales and found the *alpha* coefficients to be .92 for the American Indian subscale, .92 for the White American/majority culture subscale, .92 for the Hispanic/Latina (o) subscale, .95 for the African American subscale, and .94 for the "other" cultural group subscale.

Enculturation Measure

The Enculturation Measure (Zimmerman, Ramirez, Washienko, Walter, & Dyer, 1998) was used to measure Native American identity, pride, and involvement. The scale consists of three subscales; Cultural Affinity, Family Activities, and Native American identity. The Cultural Affinity scale consists of five self-report Likert items. Sample items include: "How important is it to you to maintain your Indian identity, values, and practices?" "How different do you think Indian culture is from White culture?" "I am proud to be a Native American." Chronbach's *alph*a for this scale was .70 for the authors' sample. The Family Activity scale asks participants to complete a checklist of nine activities they do with their families. The activities include memorials, pow-wows, sweat lodges, feasts, naming ceremonies, giveaways, healings, fasts, pipe ceremonies, and Sundances. Scores range from 0-9, with 1 point assigned per activity While not all tribes necessarily participate in all the customs on the list, the total score provides an index of culturally-relevant family activities engaged in by the participant. Finally, Native American identity is assessed with a single question, and the possible responses are: Not at all (0), a little (1), some (2), and a lot (3). The question is "Do you see yourself as an American Indian/Native American?" For this study's sample the *alpha* coefficient for the Cultural Affinity scale was .83, and this indicated an adequate internal consistency.

General Resiliency Measures

Qualitative Resiliency Measure

The Thought Listing Technique (Cacioppo & Petty, 1981) is an open-ended protocol analysis method for assessing various cognitive structures, constructs, and thought processes. It was used in conjunction with structured questionnaires to measure the same underlying construct of resiliency within Native American populations. It adds a level of flexibility and the ability to gain qualitative information regarding the construct of resiliency within a Native American context. This measure allows free association of thought patterns and provides additional information regarding individualized cognitive organization, thoughts, feelings, appraisals, expectancies, ideas, and schematic representations.

For this study, participants were asked to think about and record any thoughts associated with resiliency and to specify whether the thoughts were positive, negative, or neutral. Specifically, they were asked to think about an American Indian person that they have known who has been through many difficult life experiences yet was able to get through the experience in a positive manner and perhaps even benefit from the experience. They were then asked to write for two minutes about attributes that the individual possessed and what factors led to the positive outcome. Finally, participants were asked to rank each attribute or factor as either positive (+), neutral (=), or negative (-).

Most of the participants did not adhere to the specific instructions provided and instead listed the qualitative attributes of the resiliency construct and descriptive information about resilient American Indian individuals they have known. Early in the

data collection process it also became evident that many participants were unclear about the definition of the term "resiliency" or "resilient" persons. Therefore, each participant was subsequently provided a brief explanation of the term which was that "resiliency refers to factors or processes that help people cope with stressful experiences in a positive way." Due to the problems encountered with this measure, it is used descriptively within this study.

Quantitative Resiliency Measures

Native American Resiliency

The Ethnic, Culture, Religion/Spirituality (ECR) scale (Cross, 1998; Long & Nelson, 1999) was designed to measure levels of identification and involvement with Native American culture and inherent resiliency or protective factors. The scale developers reported good reliability and internal consistency indices and reported that factor analysis supported a structure consisting of context, mental, and spiritual factors. The instrument is a brief self-report measure consisting of 12 questions which are intended to assess cultural pride, view of culture (as source of strength or weakness), religious or spiritual identity, bilingualism, participation in tribal or spiritual activities, and use of ceremonial or spiritual resources and healers. Participants are asked to rank how they feel about their cultural, spiritual, and religious background on a Likert-type scale ranging from "Ashamed" to "Proud." Sample items of the measure are: "How do you feel about your ethnic or cultural background?" and "How do you feel about your religious/spiritual identity?" Participants are also asked to rank the extent to which they feel that their culture, spirituality, and religion work in a positive manner in their lives on

a Likert type scale ranging from 0 (Not at all) to 4 (A lot). The *alpha* coefficient was .66 for the sample in this study, which indicated a low but adequate internal consistency.

Brief Resiliency Coping Scale

The Brief Resiliency Coping Scale (BRCS; Sinclair & Wallston, 2004) is a four item measure designed to measure tendencies to cope with stress in an adaptive manner. The items on the measure include: "1. I look for creative ways to alter difficult situations. 2. Regardless of what happens to me, I believe I can control my reaction to it. 3. I believe I can grow in positive ways by dealing with difficult situations. 4. I actively look for ways to replace the losses I encounter in life." The items are rated on a 5-point Likert scale ranging from (5) Strongly Agree to (0) Strongly Disagree. Scale developers report adequate internal consistency (Chronbach's *alpha* = .69), test retest reliability, and construct validity. Internal consistency was assessed for the samples participating in this study. The *alpha* coefficient for this sample was .84, which indicated an adequate internal consistency.

Stressor Measures

Historical Trauma

Two scales were used to assess historical trauma. The Historical Loss Scale (Whitbeck, Adams, Hoyt, & Chen, 2004) is a 12-item scale designed to measure perceived historical losses for Native American individuals (such as losses of land, culture, language, and spiritual knowledge). The second scale is The Historical loss Associated Symptom Scale (which was considered as a dependent variable in this analysis). It is also composed of 12 items and is designed to assess the feelings pertaining to historical loss. The scales were developed in cooperation with tribal focus groups and

advisory boards composed of tribal elders from two reservations in the upper Midwestern United States. Measurement characteristics were based upon 143 American Indian adult parents involved in a longitudinal study of American Indian families. The authors report high internal consistency reliability and validity of the instrument. Participants were asked to rate their responses on a 5-point Likert scale ranging from 0 (Never) to 4 (Always). Sample items on this measure are: "I think about losing our traditional spiritual ways," and "I feel uncomfortable around white people when I think about these losses." The internal consistency reliability estimates were calculated for the sample participating in the current study. The *alpha* coefficient for the Historical Loss Scale was .95, with .92 for the Historical Loss Associated Affect Scale. The Historical Loss Scale was used as an independent variable, and the Historical Loss Associated Affect Scale was used as a dependent variable in this analysis; this use is consistent with the intended conceptualization of the authors of these scales.

Life Events Scale

Stressful life experiences were measured with the Hammen Perception of Negative Life Experiences Survey (HPNLES; Hammen, Marks, Mayol, & DeMayo, 1985). This is a 120-item self-report measure of life experiences on which subjects are asked to rate the positive and negative impact of events that occurred over the four weeks prior to the time of assessment. The life experiences measured included the following categories: work and/or school, finances, health, romantic relationships, home, friends, family life, and other personal events. For each event that occurred in the specified time interval the participants are asked to indicate the relative impact of the event by rating it on a Likert scale ranging from -3 (extremely negative impact) to +3 (extremely positive

impact). Sample items from this measure are: “Dropping out of school due to financial difficulties,” and “Death of immediate family member with whom you are living.”

Test-retest reliability has been reported to be $r = .79$ over a five week period (Klocek, Oliver, & Ross, 1979). The internal consistency of each subscale was also computed for the recent samples studied (Belcourt-Dittloff & Schuldberg, 2006). The Total sample ($n = 136$) had an *alpha* coefficient of .98 for the negative life events, the Native American sample ($n = 92$) had an *alpha* coefficient of .98 for negative life events, and the non-Native American sample ($n = 43$) had an *alpha* coefficient of .98 for negative life events. Similar levels of internal consistency were found within this current study’s sample. The *alpha* coefficient for negative life events was .98, for all life events was .98, and it was .90 for positive life events. The All Life Events Scale, which consists of the sum of positive and negative life events scores, was used in the analyses reported here.

Dependent Variables

Quality of Life

The Quality of Life Inventory (QOLI; Frisch, 1994) is a brief 12-item measure used to assess life satisfaction and positive psychological functioning. It addresses 16 areas of life including work, health, love, friends, creativity, and community. The total Quality of Life score is used in this study. Participants are asked to rank how important different areas of their lives are on a scale from 0 to 2 (0 = not important, 1 = important, 2 = extremely important) and to rate how satisfied they are with the different areas of their lives on a scale of –3 to +3 (-3 = very dissatisfied, -2 = somewhat dissatisfied, -1 = a little dissatisfied, 1 = a little satisfied, 2 = somewhat satisfied, and 3 = very satisfied). Sample items of this measure are: “How important are friends to your happiness?” and “How satisfied are you with your creativity?” The total score is calculated as the sum of the

satisfaction ratings, each multiplied by the corresponding importance ratings. The author (Frisch, 1994) reports adequate internal consistency estimates, along with convergent and discriminant validity coefficients. Internal consistency estimates were calculated for the sample participating in this study. The *alpha* coefficient for this sample for the total scale was .87, which indicates an adequate level of internal consistency.

Adversarial Growth Measure

The Stress-Related Growth Scale (SRGS; Park, Cohen, & Murch, 1996) was used to measure positive outcomes of stressful events. The measure is a 50-item self-report Likert scale; in addition a 15 item version of the measure is available as well. The version used in this study asked participants to rank if they had developed or learned various ways of coping following stressful life events, rated as "Not at all," "Somewhat," or "A Great Deal." Sample items of the measure are: "A prior relationship with another person became more meaningful," and "I learned that I was stronger than I thought I was." The SRGS was normed on a college sample of 922 students, and the authors reported a Cronbach's *alpha* of .94 and a test-retest reliability of .81. The measure was found to have adequate internal consistency within this sample. The *alpha* coefficient was .97 for this sample.

Psychopathology Measures

General Psychosocial Outcome Measure

The Outcome Questionnaire (OQ-45.2, Lambert, Hansen, Umpress, Lunnen, Okiishi, Burlingame, et al., 1996) was used to assess general levels of psychological outcome. It is a brief self-report instrument designed as an outcome measure for psychological functioning over the course of therapeutic programs. The scale has three

subscales: Symptom Distress, Interpersonal Relations, and Social Role. Responses are reported on a five-point Likert scale ranging from 0 (Never) to 4 (Almost Always) The Symptom Distress scale has more items relating to depression and anxiety, as these symptoms represent the most common symptoms of psychological distress. There are also items assessing substance abuse. The Interpersonal Relations scale measures problems and satisfaction level with interpersonal relationships, which are proposed to be essential to life satisfaction. The Social Role Performance scale assesses information regarding an individual's performance in employment, school, family, and more general areas of life. This measure allows for the assessment of both positive and negative aspects of life experience and outcome. Sample items for this measure are: "I blame myself for things," and "I am a happy person."

The OQ-45.2 is scored by adding the items to form a total score, and higher scores indicate a greater level of psychological distress, interpersonal difficulties, and role difficulties. Investigators have also found the measure to be valid and reliable with reported internal consistency estimates ranging from .70 to .93 (Burlingame & Lambert, 1995). Three-week test-retest estimates ranged from .78 to .84. Internal consistency estimates were computed in this sample. The OQ-45.2 total score was found to have adequate internal consistency, with an *alpha* coefficient of .93. The subscales were found to have *alpha* coefficients ranging from .93 down to .60.

Positive and Negative Affect Schedule

The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) is a brief, 28-item checklist of descriptive emotional labels. The measure is designed to measure both positive and negative affective states for individuals. The two subscales of the PANAS were calculated for the participants in this study and used as dependent variable measures of general psychological state. Internal consistency estimates were calculated for this sample. The PANAS-Unpleasant Scale was found to have an *alpha* coefficient of .91, and the PANAS-Pleasant was found to have an *alpha* coefficient of .84; both subscales were found to have adequate internal consistency.

Procedures

These measures were presented in fixed order to the participants in small group settings. Each participant was provided a packet of the measures and fully informed of his or her rights as a research participant. Participants were then asked to agree voluntarily to complete the questionnaire packet. Each subject was asked to fill out a short demographic questionnaire regarding identified ethnicity or cultural/racial status, mental health history, socio-economic status, gender, age, and then the psychological measures described previously. Each participant was paid $10.00, regardless of completion of the measures, for their participation in the study. All measures in the packet were self-report measures, as previously described. The time required to complete the questionnaire ranged from one hour to one hour and a half. It is possible that fatigue may have been a factor for some participants due to the length of the questionnaire packet.

Participants:

Participants in this study were 164 self identified Native American/American Indian male and female students from a Northern Plains community college and American Indian community members from an urban community in Montana. They ranged in age between 18 and approximately 72 years of age $M = 33.20$, $sd = 12.57$, and those reporting their gender included 113 females and 43 males. All participants were either enrolled tribal members or descendents of federally recognized tribes. Most participants had children (mean number of children = 2.1, $SD = 1.82$).

The reported monthly average income was $957.50 with a standard deviation of $1,418.93. The reported annual average income was $11,562.60 with a standard deviation of $10, 277.85. Both of these income distributions were positively skewed, and the median monthly income was $600, and the median annual income was $9,000. The modal income reported for both monthly and annual income was $0. The number of years of formal westernized education was one-year post high school *(*mean years of education = 13.0, $SD = 2.07$).

Thirty-seven individuals (22%) sampled reported having experienced a recurrent medical condition (such as diabetes, hypertension, or asthma). Fifty-seven individuals (34.7%) reported having had some lifetime occurrence of a diagnosed mental health problem. The most frequently reported mental health disorder was major depressive disorder, followed by Post-Traumatic Stress Disorder. In total, 53 individuals (32%) reported having received some sort of mental health care in their lifetimes. Ten participants were dropped from the study, nine due to incomplete questionnaire packets and one due to a self-identification as a non-Native American/American Indian. This

participant also stated that he could not complete the packet because many items did not apply to his cultural background and experiences.

Analyses

The measures were scored, and means and standard deviations were calculated for each of the measurements as well as for pertinent demographic variables (i.e., income, marital status, mental health history, and educational status). To test Hypothesis 1, independent sample *t*-tests and *chi-square* tests were then conducted on the scores for the various measures and demographic variables to test for gender differences. The *t*-tests tested differences between observed means and were used with continuous variables. The χ^2 tests were designed to test differences between dichotomous variables based upon differences in frequencies or proportions. As described, this exploratory analysis process does inflate the chances of making a Type I error while decreasing the chances of making a Type II error. Little previous research has empirically investigated resiliency processes and factors for American Indians. Therefore, clinical rationale for the importance of exploratory analysis guided the decision to accept Type I error inflation.

An initial test of Hypothesis 2 was conducted by examining the correlations of the primary variables in the study using the Pearson Product-moment correlation coefficient. To test Hypothesis 2 further, exploratory hierarchical multiple regression analyses were then conducted with the data (Cohen & Cohen, 1983). This procedure was used to test predictions based upon the hypothesized diathesis-stress model. The predictor variables were the *Reziliency* or Native American resiliency factors scores, (composed of scores of measures of hypothetical *Reziliency* construct, which included enculturation/ethnic pride, ethnic cultural religion and spirituality, social support, communal mastery, spiritual

involvement and beliefs, coping skills, hope, and a brief general resiliency measure) and Stressors scores (composed of the measures of stressors including historical trauma/loss experienced, total life events stressors, positive life events stressors, and negative life events stressors). In each case, the hypothesized *Reziliency* or risk variable was entered into the equation first, followed by the stressor scores, and then the interaction variable. Within this process, the criteria established by Baron and Kenny (1986) for moderation were used to assess whether or not moderation was occurring between the variables of interest.

As noted, in addition to individual predictors, interactions between each of the stressor and resiliency variables were evaluated using terms composed of the products of each of the variable's mean-centered scores in order to explore potentially important prediction pathways. The criterion variables were life satisfaction, quality of life, general psychosocial status, historical trauma affect, PANAS-Pleasant and Unpleasant, and stress related growth. Each individual pairing of an independent variable stressor with an independent variable of hypothetical resiliency or risk factor was used to test for main effects and moderation for each of the criterion dependent variables.

Following the construction of this large number of regression models from individual scales, data reduction was conducted in order to create summary Life Satisfaction/Quality, Psychological Distress, and *Reziliency* scales to simplify and clarify the findings. Exploratory factor analyses were conducted to guide the construction of the scales used to test the resiliency factors, stressors, and psychosocial status variables in a more comprehensive manner. Regression equations were derived to predict these

summary measures, and the results of these then guided the interpretation of the much more extensive set of models mentioned above.

Finally, stepwise hierarchical regression analyses were conducted to determine the relative importance of each individual predictor in relation to the criterion variables. Each of the predictor variables was used in multiple regression models to predict each of the criterion variables. The predicted proportion of variance (R^2) and change in predicted variance (ΔR^2) for each of the predictor variables were computed and analyzed for significance. The standardized regression coefficients (*Betas*) were then examined to determine the relative importance of each of the predictors. The squared partial and semi-partial correlations were also examined to determine the unique contributions of each of the predictors to the overall R^2 value for each of the criterion variables.

In addition, to evaluate Hypothesis 3, the qualitative measure used was analyzed to gain important descriptive information about the construct of resiliency as it specifically pertains to American Indian communities and individuals. Due to the fact that very few participants completed the measure in the manner instructed, this measure was not coded in the usual manner, as this proved to be impossible with the provided data. Many participants did not follow the instructions, and instead provided open-ended responses describing perceived resiliency factors and/or American Indian individuals they believed were resilient. Due to the limitations in the data, it was instead decided to assess the data more qualitatively using two American Indian clinicians (the author and an American Indian community health nurse). All responses were read by both raters individually. Coding was conducted individually initially and was based upon general categories derived from the responses provided. The two raters then conjointly met to

agree mutually upon the categories and to tally the number of responses that fell into each category. The raters then discussed the responses to identify representative examples of participant responses to include. Protective factors and processes mentioned and described were tallied and summarized to provide information about the nature of the qualitative findings. Examples of written qualitative descriptive information are provided in both the results and discussion sections.

Results

Quantitative Results

The initial *t*-tests were conducted to determine whether or not significant gender differences existed on the demographic variables, resiliency factors, and dependent variables (see Table 1 for results and descriptive statistics). These analysis revealed that significant differences existed between the males (n = 33) and females (n = 106) in this sample. Specifically, male participants reported significantly lower monthly incomes, annual incomes, lower educational attainment, more social role problems, and greater numbers of life event stressors (i.e. financial, health, academic, and familial/relationships). Females were also found to receive significantly higher scores on Stress Related Growth, Quality of Life, the Brief Resiliency Coping Scale, the Ethnic Cultural and Religion Scale, and the Social Support Questionnaire.

Chi-square tests revealed that the female participants reported experiencing significantly more mental health problems, $\chi^2(1, N = 156) = 4.51$, $p < .05$; mental health care received $\chi^2(1, N = 156) = 7.26$, $p < .05$; alcohol or drug use problems $\chi^2(1, N = 156) = 9.86$, $p < .05$; and head injuries $\chi^2(1, N = 156) = 10.97$, $p < .05$. The *chi-square* analyses were designed to determine the statistical significance of differences in the

categorical or nominal variables based upon gender. The effect size measure used with *chi-square* is the *Phi* coefficient. Values of *Phi* less than .3 are considered weak, scores within the range of .3-.6 are considered moderate, and scores over .6 are considered large. The effect sizes for the observed significant differences in this study were .17, .22, .25, and .26 respectively, all in the weak range.

The size of the mean differences, measured by the *t*-tests, can be understood in terms of Cohen's *D* (Cohen, 1988), the ratio of the mean difference over the pooled standard deviation. Effect sizes range from, ”small” effects (from .10 to .35), to ”medium” (from .35 to .65) and ”large” effects (from .65 and greater). This study’s effect sizes for the continuous variables are also presented in Table 1. This study found that the statistically significant differences found represented either medium or large effects. These results provided important information about gender differences in income, alcohol usage patterns, resiliency factors, and psychosocial status variables as described above.

The correlation results provide an initial set of tests of Hypothesis 1 and important information about how each of the *Reziliency*, stressor, and psychosocial status variables relate to each other for this population. (see Table 2 for correlations summary). In general, the correlation findings support the hypothesized relationship between higher levels of *Reziliency* or Native American resiliency factors and higher levels of positive adversarial growth, life quality, positive affect, and lower levels of psychopathology, unpleasant affect, and affect associated to Historical Loss. Social support, Communal Mastery, Ethnic Pride/Enculturation, and American Indian spirituality were all found to be positively related to positive psychosocial status. These findings support the

hypothesized association between American Indian culture and health and positive psychosocial status factors (see Table 2 for detailed results).

In particular, Social Support scores were found to predict 17% of the variance in adversarial growth scores, 13% of the variance in psychosocial status, 10% of the variance in Affective Historical Loss, and 9% of the variance in unpleasant affect scores. As hypothesized, higher levels of social support were also associated with higher levels of adversarial growth. Higher scores of social support were associated with lower levels of reported unpleasant affect, affective Historical Loss, and scores on psychological distress in general. This finding supports the hypothesized importance of social support for adjustment in American Indians, at least within the current sample.

In addition, Hope was found to predict 24% of the variance in adversarial growth scores; this supports the hypothesis that hope has a significant relationship to observed adversarial growth for American Indians sampled in this study. General Resiliency was also found to predict 32% of the variance in adversarial growth scores, supporting the hypothesized importance of resiliency with regard to adversarial growth for these American Indians. In addition, Communal Mastery was found to predict 13% of the variance in adversarial growth. This supports the hypothesized importance of community and communal identification for adaptive coping and adversarial growth.

Moreover, many of the hypothetical resiliency factors were found to be significantly related to each other. Communal Mastery and General Resiliency were found to have a shared variance of 38%. This again supports the hypothesized importance of community as a component of resiliency for American Indians. In addition, the measures of Hope and General Resiliency were found to share 41% of their variance.

This highlights how importantly intertwined hope and resiliency are for American Indians and supports hypothesized relationships between *Reziliency* factors. Ethnic pride/Enculturation and Spirituality were found to share 44% of their variance. This finding supports the notion that these factors have a strong positive relationship to each other for American Indians. Enculturation or ethnic pride and American Indian self-identity were also found to share 40% of their variance. Finally, social support was found to share 25% of its variance with Hope. This provides further support for the notion that hope and social support are important interrelated factors for American Indians. These intercorrelations also support the notion of constructing summary scales to produce a reduced number of *Reziliency* measures.

With regard to the exploratory multiple regression analyses conducted using individual measures, multiple significant findings emerged. The primary finding was that the results varied depending upon the type of stressors involved, as well as the dependent variable under investigation. To summarize the findings for each dependent variable, results are presented individually and related to the hypothesized findings in Appendix 1. For each of the variable pairings the linear multiple regression techniques described above were used to test for moderation and significant main effects. This hierarchical regression model used the hypothesized resiliency or risk factor as the first predictor; stressor scores were then entered; and, finally the interaction term was entered to statistically predict each dependent variable score (Baron & Kenny, 1986). Appendix 1 provides a brief overview of the moderation and main effect result summaries for the analyses using each of the individual measures.

A review of the results of the separate multiple regression analyses detailed more extensively in Appendix 2 and 3, and it indicated that a large number of the hypothesized *Reziliency* variables showed positive contributions to psychosocial status, producing both main effects and acting as moderators. It should be noted that the meaning of individual significant findings was somewhat clouded by the effect of the large number of statistical tests conducted, inflating the probability of Type I error, as mentioned previously. Due to the sheer volume of significant findings and the intercorrelations among many of the predictor variables, an attempt was next made to reduce the number of independent (*Reziliency* and Stressor) variables, and the number of Criterion Variables. In the course of this data reduction process two psychosocial status scales and four *Reziliency* scales were constructed. Regression models were then constructed using these variables, resulting in a reduced and somewhat easier to interpret set of findings.

Results are first reported for these summary variables. Then, this paper returns to a discussion of the original regression analyses using individual trios of variables in order to illuminate more specified findings and the contributions of particular resiliency factors to higher levels of psychosocial status in the face of particular types of stressors. The individual scale regression analyses detailed in Appendices 2 & 3 will also be mentioned briefly in the discussion section.

Data Reduction

As described, multiple significant relationships were found to exist between the observed variables of interest. Therefore, a Principal Components Analysis (PCA) was conducted to allow a more parsimonious and comprehensive summary analysis of the findings. (see Table 3 for a summary of Component loadings).

First, a decision was made to use the All Life Events score as the sole representative of the stressor variables measured by the HNLES. This decision was based upon the fact that the Positive and Negative Life Events scales on this measure were substantially intercorrelated (r = .423). The Historical Loss scores were also used as stressor variables.

Then, to construct simplified psychosocial status variables, a Principal Components Analysis with Varimax rotation was conducted on the psychosocial status variables Quality of Life total, PANAS Pleasant, PANAS Unpleasant, the OQ total score, Historical affect, and Stress-related growth. Two components were extracted, accounting for 65% of the variance in the measures. The first rotated component consisted of PANAS unpleasant affect, OQ total, and Historical affect and was labeled "Negative Life Variables." To simplify the reporting of results, when computing a psychosocial status variable related to this factor, scores were reversed so that a high score refers to a positive psychosocial status. The second factor consisted of the QOLI total, PANAS Pleasant adjectives, and Stress related growth; and was labeled "Positive Life Variables." Rather than constructing weighted factor scores, z-scores were computed for each of the most salient constituent variables for each scale (listed above), and means of these Z-scores make up each scale. For the Positive Life Variables scale Cronbach's *alpha* in this sample is somewhat marginal, at 0.63, and for the Negative Life Variables scale the *alpha* is 0.77. The two psychosocial status scales are somewhat correlated (r = .153).

Finally, data reduction of the resiliency variables was accomplished via several Principal Components analyses, also using Varimax rotation. Variables entered were, first, the COPE subscales of Active coping, Planning, Suppression of competing

activities, Restraint coping, Seeking social support for instrumental reasons, Seeking social support for emotional reasons, Positive reinterpretation and growth, Acceptance, Turning to religion, and Focus on venting of emotions. (The COPE subscales of Denial, Behavioral disengagement, Mental disengagement, and Alcohol and drug disengagement were omitted from these analyses due to questions about the relationship between these more "Emotion-focused" coping strategies and positive psychosocial status). The other *Reziliency* variables included were Hope, Brief Resiliency Coping Scale, the Communal Mastery Scale, the Spirituality Involvement and Beliefs scale, Ethnic Pride/Enculturation, Ethnic culture and Religion/Spirituality, and the Social Support Questionnaire total.

Preliminary analyses of the data led to a four factor solution. This four-factor solution was chosen, with the components accounting for a total of 61% of the measures' variance. At this point, the arrangement of the candidate variables on the various scales was changed slightly for conceptual reasons to simplify the interpretation of each scale. The Brief Resiliency Coping Scale, which loaded most strongly on Component 1, was moved to the summary scale based on Component 4, tapping Coping. The Social Support total score was removed from Scale 4 to Scale 3 (Social support). Again, unit weights were used to compute scale scores

To promote clarity within the interpretive process and to describe the nature of each *Reziliency* combined scale, the author created names for each of the combined scales. The names created for each scale were conceptually designed to summarize the descriptive nature of the *Reziliency* factors under analyses and were not intended to replicate explicitly the constructs described by each author of the scales corresponding to each observed variable. These names were created based upon the author's conceptual

knowledge of the constructs under analysis and the nature of the American Indian culture described in the current study. The names should therefore be considered within the context of the current psychological investigation of resiliency within an American Indian sample.

The scale based on the first component, which was called *Positive Active Coping* (PAC; *alpha* = .78), consisted of Cope Active Coping, Cope Planning, Cope Suppression, and Cope Restraint Coping. The second scale, which was called *Cultural Hope* (CH; *alpha* = .72), consisted of Hope, Ethnic Culture Religion, and Spirituality scores, and Enculturation Scores. Hope was included on this summary scale both on psychometric grounds and because the qualitative findings suggested an important connection between hope for the future and involvement in traditional activities and beliefs. The third scale, called *Social and Religious Support* (SRS; *alpha* = .69), consisted of Cope Social Support Seeking for Instrumental Reasons, Cope Social Support Seeking for Emotional Reasons, Cope Positive Reinterpretation and Growth (this measure did not seem to fit as well conceptually), the Social Support-6 score, and Cope; Religion scores. The fourth scale, called *Communal Resiliency* (CR; *alpha* = .63), consisted of Communal Mastery, SIBS Spirituality Involvement and Beliefs, and the Brief Resiliency Coping Scale. The internal consistencies of the *Social and Religious Support* and the *Communal Resiliency* summary scales were somewhat marginal. As with the dependent variables mentioned above, the scales used in the following analyses were constructed by taking the variables identified for each component and computing the mean of their Z-scores. This procedure resulted in four *Reziliency* scales that are not orthogonal (intercorrelations range from r = .26 to .55).

Sixteen regression analyses were conducted testing for main effects and moderation of pairs of each of these *Reziliency* scales and of the Stressor variables (*Positive Active Coping*, *Cultural Hope*, Social and *Religious Support*, *Communal Resiliency*, and the stressor variables Historical Loss and All Life Event Stressors) and each dependent variable (Negative Life Variables; negative affect, psychosocial status, and historical trauma, and Positive Life Variables; adversarial growth, positive affect, and life quality).

Tables 4a-4p detail summary findings for these moderation analyses. The only variable found to moderate a relationship between the stressor and Life Event variables was *Cultural Hope*. *Cultural Hope* was found to act as a moderating variable in the relationship between All Life Events Stressors encountered and positive scores on Negative Life Variables (affect, psychosocial status, and historical trauma). This finding highlights the vital importance of American Indian Cultural factors that may facilitate a unique form of hope for this population and provides some important empirical support for the hypothesized importance of cultural factors in resiliency processes for American Indians. *Cultural Hope* appears to have a particularly important moderating relationship between current stressors, psychosocial status, unpleasant affect, and historical trauma for American Indians.

Furthermore, *Cultural Hope* was also found to have a significant main effect on Positive Life Variables (adversarial growth, affect, and life quality), with 28% of the variance predicted for this dependent variable. This provides further evidence supporting the hypothesized role of cultural factors for resiliency and psychosocial status for American Indians. *Communal Resiliency* was found to predict 29% of the variance in

Positive Life Variables scores and only 3% of the variance in Negative Life Variables scores. This finding further illuminates the empirical and qualitative importance of American Indian Community with regard to adversarial growth, positive affect, and life quality. It also provides a depiction of the differential effects of various forms of resiliency factors have upon two distinct psychosocial adjustment domains. Social and Religious Support was also found to predict 19% of the variance in Positive Life Variables scores and only 3% of the variance in Negative Life Variables scores. This finding provides empirical support for the role of society and religion within hypothesized resiliency processes for American Indians, particularly with regard to Positive Life Variables in the areas of adversarial growth, positive affect, and life quality. Finally, *Positive Active Coping* was found have a significant main effect for Positive Life Variables scores, predicting 8% of their variance. Significant main effects were not found in the possible relationship between *Positive Active Coping* and Negative Life Variables. This supports the notion that *Positive Active Coping* is an important area of consideration, but only with regard to adversarial growth, positive affect, and quality of life ratings.

Figure 3 depicts a preliminary path model based on these findings that can be investigated in future research with this population. This model graphically displays how *Reziliency* factors may serve as both main effects and in once case a moderating variable factor, using Baron and Kenny's criteria (1986), in the relationships involving stressors or traumatic live events and psychosocial coping.

Insert Figure 3 about here

Qualitative Results

The qualitative measure used in this research project was the thought listing technique (Cacioppo & Petty, 1981), although, as noted, participants in this study did not typically follow the provided verbal instructions for this measure. The following results emerged with regard to the participants' qualitative understanding of resiliency and resilient persons for American Indians. Most of the participants described familial relationships as the primary important factor involved in resiliency. These relationships included those with children, spouses, parents, grandparents, uncles, aunts, cousins, and friends. This clearly demonstrated the importance of family, social support, and relationships for American Indian people, a factor that was also supported by the quantitative findings in this study. Many participants described how specific family members or friends acted as positive role models or mentors within their lives, and how this had an important relationship with their overall functioning.

The second most frequently cited factor that the American Indian participants identified as contributing to resiliency was spirituality, faith, God, and involvement in Native American traditional spiritual beliefs and practices and/or Christian beliefs and practices. Many participants described how attending ceremonies, talking with spiritual advisors, and involvement in and adherence to traditional American Indian culture were important components that facilitated adaptive coping with significant losses and trauma. Although not specifically instructed to describe losses and traumas experienced, many participants described how they had experienced events such as sudden deaths due to suicide, cancer, and accidents, as well as abuse, incarceration, racism, oppression, poverty, and many other traumatic experiences. They related in a powerful manner how

they had coped with these experiences through social support from family members, spirituality, communal support, and internal factors that helped them deal with staggering human losses, traumas, and tragedies.

Participants also provided eloquent descriptions of the internal factors related to resiliency for American Indians. Many described having strength, endurance, increased tolerance for suffering, acceptance, transcendence ("rising above the ashes"), bouncing back, determination, overcoming trauma and stress, strength, bravery, love, and courage. As one participant stated "a resilient person is a person that never gives up." One young woman participant described how she had lived through years of emotional, physical, and verbal abuse and domestic violence before turning to what she termed "educational empowerment." She concisely stated that now, "I feel free."

Participants described how they have developed a sense of confidence, happiness, and joy by finding ways to cope with trauma and loss. Many identified humor, communal support, achievement in the community, abstinence from drug and alcohol use, and American Indian pride and identification as vital components of this process. Individuals described how they have healed emotional wounds through factors such as prayer, forgiveness, kindness, empathy, and, most importantly, relying upon their familial relationships as curative factors. Throughout the narratives themes of hope emerged as an important source for psychological and spiritual renewal for American Indians. One participant summarized the construct of Native American resiliency or *Reziliency* when he stated:

> *The word resiliency describes Native North Americans. They have had to adapt over and over. They laugh, smile, and joke even though*

they come from generational alcoholism, poverty, violence, and many other hardships. They bounce back from trauma with resilience.

They endure. They are tolerant, even though they get no justice in life.

I believe the creator is carrying them. He knows what they have been through. He hears their sorrows and prayers.

Discussion

This research project examined some of the myriad risk factors facing Native American communities and individuals and empirically investigated protective factors believed to allow American Indian tribes and individuals to remain resilient. This study has begun to uncover some of the complexities inherent in these processes and to provide important empirical and clinical evidence for culturally specified resiliency. The exploratory factor analysis and regression models conducted within this study provide support for the importance of several groupings of cultural factors related to American Indian community, including religion, spirituality, identity, hope, pride, and coping factors for the participants sampled in this study.

Cultural Hope and *Communal Resiliency* were found to be the most important predictors of psychosocial status scores. In fact, *Cultural Hope* was also found to moderate the relationship between life event stressors and unpleasant affect, psychosocial status, and historical trauma. This is an important finding that demonstrates how vital cultural variables are for American Indians. *Cultural Hope* was also found to predict 28% of the variance in combined adversarial growth, positive affect, and life quality ratings. This demonstrates the powerful role of culture within American Indian life. Culture matters and it influences how American Indians feel about the quality of their lives, make

meaning from coping adaptively with losses they have experienced, and experience positive emotional experiences. Similarly, *Communal Resiliency* was also found to predict 30% of the variability in psychosocial status. This provides clear support for the vital role American Indian communities serve with regard to individual member's ability to cope adaptively with, heal from, and perhaps even transcend traumatic experiences.

This study also clearly had some limitations due to the exploratory nature of the study and the self-report nature of the mode of inquiry. As noted previously, the lack of a non-Native American control group, although controversial within multicultural research, does limit the scope of the implications for this study. Participant fatigue may have been an additional factor that may have confounded the results. The questionnaire packet was extensive, and this may have impacted the observed results in an undesirable manner.

Another potential problem with the study relates to the extensive nature of the inquiry. This research project was intended to constitute an exploratory investigation of resiliency factors and processes within a specific group of American Indians. As a result, the initial hypotheses and design of the project allowed for an intentional inflation of Type I error. It appears that this inflation of Type I error may have allowed for a very high number of statistically significant relationships between observed variables. This result implies a distinct need for caution when approaching the observed results. These require replication within future research projects. Future research would be well served to focus on key variables of interest to minimize Type I error inflation. An additional limitation of the study relates to the nature of research practices within a specific tribal community. The observed result were likely descriptive of a particular tribal community and should not necessarily be assumed to apply to other tribal communities.

Despite the limitations of the study, there were clearly compelling findings within this research project. As with previous findings (Belcourt-Dittloff & Schuldberg, 2006), the American Indian participating in this research reported lower incomes, less formal western education, more traumatic life experiences, and more serious losses than other populations typically experience. American Indian males reported even lower incomes, less educational opportunities, more social role problems, and more financial, health, academic, and familial problems than their female counterparts. American Indian females reported more mental health problems experienced, alcohol or drug use problems, head injuries, and displayed differences in their reported scores on some of the resiliency variables.

Specifically, the American Indian women sampled reported significantly higher levels of hope and spiritual involvement and beliefs than their male counterparts. In addition, American Indian women reported significantly higher quality of life with regard to health, self-esteem, learning, and relationships with children and others. American Indian males reported significantly more negative life events related to academics and legal issues. They also reported significantly more positive feelings about their financial situations—a finding which is difficult to interpret given the noted differences in income. Yet, despite some of these statistics, the clearest and most consistent finding was that cultural resiliency factors are an important part of American Indian life for both men and women. The findings regarding *Cultural Hope* and *Communal Resiliency* place particular emphasis upon the importance of these culturally specified factors for American Indian participants in this study.

Numerous important empirical and qualitative findings emerged with regard to processes involving risk and protective factors within American Indian communities and individuals. In fact, a primary task in this project was to sort out the relative importance of these positive factors, to link them to specific types of psychosocial status, and to determine which *Reziliency*, or Native American resiliency factors operate only as main effects and which interact with stressors as buffers. As hypothesized, individuals scoring higher on measures of hypothetical *Reziliency* or Native American resiliency factors reported higher levels of stress related growth, quality of life, and more positive general psychosocial status. These empirical findings are consistent with qualitative information obtained in this study, and with previous findings for this population (Belcourt-Dittloff & Schuldberg, 2006 LaFromboise, 1992; Sutton & Nose, 1996; Hobfoll et al., 2002).

Social support, Hope, general resiliency factors, communal mastery, Enculturation or Ethnic Pride, and coping style were all *Reziliency* factors that were found to have significant main effects upon psychosocial status variables, including adversarial growth, affect, psychosocial status, historical loss, and quality of life ratings. Each of these individual *Reziliency* factors was also found to moderate the effects between different specific forms of stressors on the various different psychosocial status variables observed (see Appendix 1).

Social Support was found to have a significant relationship with overall psychosocial status and to moderate the effects of stressors on observed adversarial growth as well as quality of life ratings. Hope was also found to be an important factor that had a significant relationship with quality of life, pleasant affect, psychosocial status, adversarial growth, and it moderated the relationship between positive life events and

adversarial growth, with higher levels of hope associated with more positive psychosocial status. Hope also moderated the relationship between historical loss and psychosocial status as well as between negative life events and unpleasant affect status. Thus, hope was found to buffer the relationship between negative life events and unpleasant affective state, as well as buffering the relationship between historical loss and general status.

The brief resiliency measure and the enculturation or ethnic pride were found to have significant relationships with adversarial growth, psychosocial status, quality of life, unpleasant affect, and to moderate the relationships between total life event stressors and psychosocial status. Thus, general resiliency skills and enculturation were found to enhance the expression of positive psychosocial status and buffer the effects of stressors. In addition, general resiliency and enculturation were found to act as buffers between negative life events and unpleasant affect, as well as between total life event stressors and historical loss associated affect. Communal Mastery was found to have a significant relationship with adversarial growth and quality of life reported, and to moderate the relationship between positive life events and adversarial growth. General resiliency skills -- as measured by the Brief Resiliency Coping Scale --- were also found to have a significant relationship with adversarial growth, psychosocial status, quality of life ratings, and pleasant affect ratings. General resiliency skills were also found to moderate the relationship between total life event stressors and psychosocial status. Finally, general coping style was found to have a significant relationship with adversarial growth, psychosocial status, and historical loss. It was also found to moderate the relationship between positive life events and quality of life ratings, indicating that general coping abilities seem to facilitate life satisfaction ratings for American Indians.

Neither ethnic cultural religion and spiritual involvement or general spiritual involvement or beliefs were found to moderate the relationship between stressors experienced and the psychosocial status variables. However, these spirituality and cultural factors were found to have significant relationships (as main effects) with adversarial growth, psychosocial status, quality of life and affect for American Indians. This highlights the importance of these variables with regard to emotional experiences, post-traumatic growth, and psychological distress. Spirituality is a topic that warrants further study for American Indians, and it is likely to be intertwined with factors of communal support, hope, and traumatic growth and recovery processes. This construct will benefit from further elucidation and study.

The findings of this study also provide evidence that clearly differentiates American Indian spirituality and spiritual practices from the more general measures assessing "religion" for this group. This finding was evident in the differential empirical results found in the multiple regression and exploratory factor analyses with regard to the SIBS, Cope Religion subscale, and the measure specifically pertaining to American Indian spiritual beliefs and practices (ECRS). Further study could help to clarify the nature of this difference and explain how these factors operate within American Indian communities. The qualitative information gathered in this study also points to the importance of specifying factors related to religion in general (or Western religion) versus American Indian spirituality. Many participants cited Christian beliefs and/or American Indian Spirituality as important resiliency factors. It was notable that participants made the decision to make this distinction when discussing matters of faith.

Perhaps the strongest regression results coming from this empirical investigation illustrate how adversarial growth, overall psychosocial status, and quality of life may develop within this population. Hope, social support, and communal mastery all appear to have a partial moderating or buffering effect between both positive and total stressors experienced and stress related or adversarial growth. In fact, the prediction model for hope and positive life events was found to predict statistically 37% of the variance in observed adversarial growth scores (see Appendix 2 and 3). Furthermore, the Brief Resiliency Coping Scale (generalized resiliency), involvement in and adherence in traditional American Indian cultural practices and spirituality, coping ability, and general spiritual involvement and beliefs all had strong statistical relationships with adversarial growth. These findings firmly highlight the important and specific functional role that culture, community, hope, spirituality, and identity may perform in relation to adversarial growth and resiliency for American Indians. This underscores the clinical importance of remaining mindful of culturally grounded variables when working with American Indian communities and individuals. In light of the harsh realities of violence, trauma, loss, and adversity facing most American Indians today, the question of how to grow through loss in a positive manner becomes particularly crucial to address. The current findings provide an important empirical link to literature elucidating adversarial growth (Linley & Joseph, 2004; Tedeschi, Park, & Calhoun, 1998). Future investigations should continue to provide vital information about how this process develops within this population. Clinicians working within an American Indian community or with American Indian clientele would benefit from considering the inclusion of cultural resiliency factors (such as social support, hope, spirituality, communal mastery, enculturation/ethnic pride, and

resilient coping strategies) within intervention plans for families and individuals experiencing traumatic losses or stressors. This also provides particularly strong rationale for the inclusion of family and community members in the treatment of American Indians who have experienced traumatic experiences or losses (Attneave, 1989).

With regard to overall psychosocial status, hope also partially moderated the relationship that historical loss had with emotional status. This further indicates the extent to which American Indians may rely upon both the will and the ability to create strategic mental interpretations to cope with past losses, trauma, and even oppression due to racism or poverty. Generalized resiliency as well as enculturation or ethnic pride each partially moderated the relationships that total stressors experienced (positive and negative) had with overall psychosocial status. Thus, it appears that the American Indians sampled who relied upon resilient coping strategies and used culturally specific internal and external coping strategies were more likely to report higher levels of positive psychosocial status. This provides additional empirical support for how vitally important American Indian identification, pride, and ability to work to overcome obstacles may be in helping Indian people adaptively cope with stressors. Thus, hope, resiliency, and cultural pride all had an important relationship upon how historical loss and total stressors, respectively, relate to general psychosocial status for the American Indians sampled in this study. Historical loss was found to be a significant stressor related to overall psychosocial status. This highlights how historical loss and intergenerational grief continue to impact many American Indians and supports those theories elucidating this construct. The psychosocial role historical trauma as a potential “kindling” factor in amplifying the effects of contemporary stressors should continue to be elucidated.

Clinicians working with American Indians would do well to remain mindful of the importance of historical factors upon the psychological status of many contemporary persons.

Statistical evidence also supported the importance social support, general resiliency, American Indian identification with and adherence to spiritual and cultural practices, hope, spiritual involvement, coping ability, and historical loss experienced had upon general psychosocial status. These findings are important in beginning to unravel how cultural processes involved in psychological functioning unfold. Previous authors have explored how traumatic or stressful life experiences may affect individuals in general (Cohen & Wills, 1985; Holmes & Rahe, 1967; Linley & Joseph, 2004, Tedeschi, Park, & Calhoun, 1998) and even how culture relates to this process (Jones, Dauphinais, Sack, & Somervell, 1997; Luthar & Ziegler, 1991). The importance of culturally relevant factors for American Indians facing adversity, stressors, and historical loss were is underlined in this study. This finding was supported by the qualitative information provided by participants. Overall psychosocial status is significantly related to each of these important Native American resiliency or *Reziliency* factors, and this is an important factor for clinicians and psychological scientists to consider, be particularly important for clinicians approaching American Indian individuals and communities. Trauma, loss, grief, and adaptive traumatic growth are all particularly important areas for clinicians to consider, as well as cultural factors of community, identity, hope, and spirituality into conceptualizations and interventions.

Quality of life ratings were also found to be significantly related to numerous risk and protective factors. Specifically, social support was found to moderate partially the

relationship between positive stressors experienced and quality of life ratings for this sample. This finding indicates that in American Indian communities social support is particularly empirically important as being associated with higher levels of reported quality of life. This finding supported the findings of recent authors who have also highlighted the importance of community and social support within American Indian life (Belcourt-Dittloff & Schuldberg, 2006; Goodluck, 2002; LaFromboise, 1992; Sutton & Nose, 1996; Hobfoll et al., 2002). The role of communal social support simply cannot be overstated. This provides important potentially useful clinical information about how to conduct and plan psychotherapeutic interventions, research, and educational programming for American Indian communities.

It appears that the collectivist nature of American Indian communities has a clear and consistently strong relationship with both psychosocial status and the quality of life experienced. In addition, general coping skill ability was the only summary variable found to purely moderate the relationship between positive life events and overall quality of life ratings. This indicates that the more an individual uses diverse coping strategies the more likely positive life quality is reported when stressors are encountered. It is further important to note that, again, hope, general resiliency, communal mastery or identity, American Indian cultural identification and spiritual involvement, and enculturation or ethnic pride were all found to be significantly related to quality of life ratings for this cultural group. Humor is likely an important aspect of how communal and social support each operated as resiliency factors for American Indians. Although not a direct topic of investigation in this study, clinical and personal experience with this

population provides support for this notion. Future research should continue to explore these relationships.

Finally, the results were different depending upon the nature of the dependent variable under investigation. Specifically, the positive affect summary scores were significantly related to hope, communal mastery, spirituality involvement and beliefs, general resiliency, and social support scores. This finding provides further support for the potential importance of these variables in facilitating positive psychological status. In contrast, for unpleasant affect scores partial moderation effects were found for social support and negative life events, enculturation and negative life events, hope and negative life events, social support and total stressors experienced, as well as enculturation and total stressors experienced. Ethnic identification and participation in traditional American Indian cultural and spiritual practices were also significantly negatively related to unpleasant affect scores. These findings delineate the important relationship between cultural factors as well as psychosocial variables in predicting levels of negative versus positive psychological status.

As has been described, the types of stressors experienced by American Indian individuals appear to have a differential relationship with the reported psychological status variables. Type of stressor may have a strong relationship with the manner in which resiliency and risk processes operate within this population. The strongest statistical prediction models related to the positive stressors, to psychosocial factors, general resiliency factors, coping abilities, spirituality, and cultural variables such as enculturation and involvement in and identification with traditional Native American values, practices, and beliefs. These latter *Reziliency* processes and factors are uniquely

related to American Indian culture. The statistical findings consistently supported the notion that cultural factors are of vital importance in considering psychosocial health and wellness variables in American Indian communities and individuals. However, the nature of the stressor experienced did significantly relate to the effects of the risk and protective factors, depending upon the dependent variable under consideration. This finding consistent with previous research on differential significant relationship with stressful life experiences (Holmes & Rahe, 1967; Luthar & Ziegler, 1991).

The qualitative information collected in this project provides the clearest and arguably most powerful support for the construct of *Reziliency*, or Native American resiliency factors and processes. American Indian participants provided concise and eloquent descriptions of Native American resiliency and resiliency processes in this study. Participants powerfully conveyed how they have relied upon family, community, spirituality, faith, hope, and cultural factors to cope with and overcome traumatic loss and pain. The qualitative analyses appeared to provide important support for particular aspects of cultural factors in resilient coping processes. In fact, quantitative measures of spirituality appeared to have modest ability to assess this construct within an American Indian context. This finding underscores the importance of investigating the cross-cultural validity of measurement strategies developed within non-Native American population. One project participant eloquently described the specified nature of American Indian resiliency when he stated:

> *I am a Blackfeet Person. I was raised by my Grandparents. The traditional upbringing was a positive upbringing, even through the hardships. My Grandparents continued to stress to me*

to continue to follow our Traditional Belief System.

This is what made me very strong.

Strong physically, mentally, emotionally, and spiritually.

It is clear that American Indian communities and individuals have been truly fortunate in the cultural traditions, histories, beliefs, and world views they possess. It is clear that historical resilience as well as historical loss have been vital factors empowering them to display incredible courage, strength, hope, bravery, compassion, and transcendence in the face of suffering.

Historical factors have left an undeniable mark upon the lives of Native Americans. These factors clearly influence contemporary issues in Native American mental health. The developmental impact of the genocidal practices such as massacres, forced relocations, forced removal of American Indian Children, boarding schools, as well as subtler forms of discrimination, oppression, victimization, and institutional racism appear to shape directly the processes of Native American risk and resiliency. Native Americans have displayed a considerable amount of dynamic and distinct resiliency which has recently begun to be investigated (Belcourt-Dittloff & Schuldberg, 2006; Hobfoll et al., 2002; Kunitz et al., 1998; Jones et al., 1997; LaFromboise, 1992; LaFromboise, Hoyt, Oliver, & Whitbeck, 2004; Sutton & Nose, 1996).

This study analyzed how historical loss and associated affect relate to American Indians' ability to cope effectively with stressors. It appears that enculturation or ethnic pride factors served in a buffering role (i.e., moderation) between total stressors experienced and historical loss associated affect for the American Indians participating in this study. This empirically supports the notion that affiliation with cultural values,

beliefs, practices, and ethnic pride can play an important protective role against traumatic affect associated with historical loss and trauma. In addition, social support and coping skills were both found to have important predictive relationships with the level of historical loss associated affect observed in the samples in this study. As noted, cultural factors, such as communal mastery, ethnic identification and cultural practices, and spirituality, all have important relationship with the reported affect associated with historical losses.

These findings emphasize the potential importance of community, hope, spirituality, cultural identification and pride, and of individual coping strategies in relation to observed historical loss and trauma. The findings also augment findings regarding the psychosocial relationship historical trauma has within American Indian communities and individuals (Brave Heart & DeBruyn, 1998).

This project both empirically and qualitatively assessed critically pertinent information regarding risk and resiliency factors through the presentation of a theoretical model describing risk and resiliency among Native Americans, investigation of hypotheses, and the gathering of qualitative data. Furthermore, the resultant empirical evaluation of the proposed theoretical model provides important preliminary evidence for an etiologically distinct portrait for American Indian cultures. To this end, a new descriptive construct-*Reziliency,* or Native American resiliency factors-was proposed as a specified descriptor for the protective processes occurring for Native Americans. This unique construct is intended to encapsulate specific resiliency processes and factors in the developmental trajectory of symptomalogy and wellness within American Indian individuals and groups. Further longitudinal research is needed to investigate whether this

theoretically based etiological understanding will actually describe the developmental processes of psychological health and illness for American Indians. Native American resiliency is a dynamic process occurring within indigenous communities that appear to act as a buffer against the development of psychopathology in the face of an increased exposure to stressors. This construct is likely descriptive of a very complex sequence of factors relating to contemporary indigenous populations, as displayed in the more general hypothetical model in Figure 1. Additional research in this area is needed to elucidate this construct further, and the processes involving risk and protective factors in this population. Additional research investigating potentially marginalized American Indians or urban American Indians would be especially beneficial, considering this empirical evidence supporting the importance of American Indian familial and social support. Again, longitudinal research would ultimately provide important further information about the developmental processes inherent within both risk and protective factors for American Indians.

Research on resiliency and research findings regarding risk and protective factors within Native American communities and individuals have multiple important potential applications. Clinical intervention, prevention, as well as education and curriculum development stand to benefit directly from elucidations of the inherent cultural aspects of risk and protective factors. In a large urban American Indian sample (n = 869), Buchwald, Beals, and Manson (2000) found that 70% of the sample used traditional health practices and 52% reportedly felt that this use significantly improved their health. Garroutte et al. (2003) recently reviewed data from a comprehensive cross-sectional sample of 1456 American Indians and found that individuals with higher levels of

cultural spiritual orientation had a significantly lower prevalence of suicide attempts compared with individuals with lower levels of cultural spiritual orientation. In addition, the researchers found that commitment to cultural spirituality was significantly related to fewer suicide attempts.

This empirical investigation and future research hold significant promise for providing important guidance for clinical practice, assessment, and public health policy. American Indian communities and individuals have long demonstrated a remarkable ability to survive and even thrive in the face of staggering adversity. Many lessons could be gained for all people from the investigation of risk and resiliency in this population.

Currently, attempts are beginning to be made at the levels of a tribal individual members and communities to advance the understanding and fostering of resiliency among Native Americans. This resurgence has taken the form of revitalization of traditional Native American languages, ceremonial practices, religions, cultural practices, healing strategies, and mentorship programs, and these have occurred throughout Indian Country. Numerous applied projects have emerged aiming to promote health and wellness within American Indian Communities (Anderson, Belcourt, & Langwell, 2005). This is a common programmatic effort seen in many tribal communities today (e.g., Blackfeet, Salish, Kootenai, Crow, and Navajo).

Prominent American Indians have also joined this struggle for health and wellness. N. Scott Momaday, a Pulitzer-prize winning Indian author, has established the Buffalo Trust, an elder mentorship program for Indian children, to combat the spiritual degeneration experienced since the time of initial western contact. Language immersion schools have emerged in many tribes, including the Blackfeet and Arapaho. Such schools

have increased interest in Native Languages and helped to fuel resurgences of interest in Native American traditional culture. In addition, The Navajo Healing Project is a collaborative effort between Navajo and non-Navajo researchers to improve healthcare by understanding the nature of the therapeutic process in Navajo religious healing (Csordas, 2004).

LaFromboise and Howard-Pitney (1994) have developed a curriculum designed to facilitate psychological resilience to prevent suicide. This curriculum is currently (2006) being implemented within multiple American Indian communities and appears to be a promising psychological intervention. The Circles of Care Initiative (Freeman, Iron cloud-Two Dogs, Novins, & Lemaster, 2004; Thurman, Allen, & Deters, 2004), funded by the Center for Mental Health Services, is designed to research culturally appropriate mental health services models for children with emotional disturbances. Each of these clinical approaches collaborates closely with Tribal communities to develop, research, and assess psychological interventions for American Indians.

Collaborations such as this one open up important new avenues for the development of a more effective mental health care system for Native Americans. Thus, the journey has begun toward a better understanding of Native Americans and human kind in general. This journey will hold challenges, in that it will cause the field of psychology to question underlying assumptions that have been held for years about American Indians and American Indian communities, as well as challenging some Western views about psychological reality. Native Americans do deserve to be accorded the fullest respect as human beings in research, practice, and throughout psychology in general. This process has only just begun and will likely be led by the American Indian

communities themselves. Providing scientific, clinical, and professional voice to the narratives of American Indian resiliency and hope will provide a psychological science that is more representative and inclusive of all peoples.

> *Who was the Indian?…The Indian was not a cliché. The Indian was a providing family man, a protective mother, a teaching grandparent, a child learning to survive in a changing world. To this day children are taught by their parents to survive the neglect and the many injustices heaped upon them by a new world order. And to remember a people's lives on the plains. These are not noble red men. Nor Savages. These are Native Americans. Human beings.*
>
> (Welch, 1994)

Remembering the people's lives on the Plains includes the narrative of suffering as well as narrative of transcendence of suffering. Human beings of all nations and cultures have long experienced suffering. Many have been able to rise above, adapt to, and overcome extraordinary losses and suffering. Pain, grief, loss, and trauma are an unfortunate reality for many American Indians today. Harnessing the spirit of culturally informed resiliency, or *Reziliency*, through psychological science and practice can provide American Indians with untold renewal and regeneration. Emotional healing through cultural resiliency, hope, and spiritual practices and beliefs holds promise for this growth. Trauma and loss may continue to occur for American Indians at elevated rates. Through cultural resilience, communities can heal. Lessons can be learned. Hope can be shared. This is the process of healing and of hope. I believe that the hope that can inform this process lies within culturally informed resiliency or *Reziliency*. One American Indian

participant in this study wrote about her experiences with *Rezilient* recovery after experiencing years of loss, trauma, and violence. She wrote:

> *When I finally had had enough we completely split apart. I wanted no more and I also had to think about my children. I didn't want them to see anymore of what I was going through. But, I also had to think about myself. What would my children do if something happened to me? Because they would have no one. Also, I was and still am somebody.*

She finished by describing how she and her children held each other up. They inspired each other. They saw and validated the abilities and potential in each other. They helped each other and they loved each other. In the end she went on to explain in writing "I have a future to look forward to, as do my children." It is this spirit of hope, determination, bravery, courage, and ferocious love that creates resilient people and resilient recovery from loss and trauma. It is this spirit that will help American Indian people today and tomorrow. Psychological science would be well served to continue investigating and facilitating resiliency within American Indian communities. Together is where strength lies.

As an American Indian researcher, I found that the process of conducting this research project was humbling, challenging, rewarding, heart wrenching, and always inspiring. Many participants (although frequently voicing complaints about the length of the measures) thanked me. A few refused to accept payment for participating, because they stated that they wanted to support this project. I gave multiple presentations to classes at the community college about the nature of the research and the process of research in general, after the data collection was completed. Problems were identified

with the measures. Specifically, certain items were found to be culturally insensitive and the fact that many of the measures have not been adequately normed with an American Indian population. This issue along with some of the unexpected differences in quantitative and qualitative measures such as spirituality, calls into question the scientific utility and cultural relevance of applying Western scientific methodologies within an American Indian context.

Most of the American Indian participants voiced a genuine interest in the construct of *Reziliency* and thanked me for attempting to provide voice to American Indians in psychological science. I remain honored by this experience and will continue to work for American Indian psychological understanding and health. No matter what comes along. My community will undoubtedly continue to walk alongside. Even if we fall sometimes, we will undoubtedly hold each other up. Together we will see what we will find. Hopefully, it will be a long and good walk.

The answer to the question of suffering is love.

Frankl (1959)

References

Abelson, R. P. (1995) *Statistics as Principled Argument.* New Jersey: Lawrence Erlbaum Associates.

Abramson, L. Y., Alloy, L. B., & Metalsky, G. I. (1988). The cognitive diathesis-stress theories of depression: Toward an adequate evaluation of the theories' validities. In L. B. Alloy, *Cognitive processes in depression*. New York: Guilford Press.

Alexie, S. (2005). *The Lone Ranger and Tonto Fistfight in Heaven.* New York: Grove Press.

Allen, C. (2002). *Blood Narrative: Indigenous identities in American Indian and Maori Literary and Activist texts.* Duke University Press.

Anderson, S. R., Belcourt, G. M., & Langwell, K. M. (2005). Building Healthy Tribal Nations in Montana and Wyoming through collaborative research and development. *American Journal of Public Health, 95(5)* 784-789.

Anthony, E. J., & Cohler, J. (1987). *The vulnerable child.* New York: Guilford Press.

Attneave, C. (1989). Who has the responsibility? An evolving model to resolve ethical problems in intercultural research. *American Indian and Alaska Native Mental Health Research: The Journal of the National Center, 2(3),* 18-24.

Baltes, P. B., & Staudinger, U.M. (2000). Wisdom: A metaheuristic (pragmatic) to orchestrate mind and virtue toward excellence. *American Psychologist,* 55, 122-136.

Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice-Hall.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 5*(6) 1173-1182.

Baumeister, R. F., & Exline J. J. (2000). Self-control, morality, and human strength. *Journal of Social and Clinical Psychology, 19*, 29-42.

Beck, A.T. (1987). Cognitive model of depression. *Journal of Cognitive Psychotherapy*, *1*, 2-27.

Belcourt-Dittloff, A., & Schuldberg, D. A. (2006). Native American Depression: A cognitive vulnerability analysis. *Manuscript in preparation for publication.* The University of Montana-Missoula, MT.

Benard, B. (1997). *Turning it around for all youth: From risk to resilience.* Lunceston, Tasmania; Resiliency Associates and Global Learning Communities.

Benson, P.L. (1997). *All kids are our kids.* Minneapolis: Search Institute.

Blum, R. W., Harmon, B., Harris, L., Bergiesen, L., & Resnick, M. (1992). An inventory of American Indian adolescent health. *The Journal of the American Medical Association, 267*(12), 1637-1645.

Block J., & Kremen, A. M. (1996). IQ and ego resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Personality, 70*, 349-361.

Brave Heart-Jordan, M. & Debruyn, L. (1995). So she may walk in balance: Integrating the impact of historical trauma in the treatment of Native American women. In, J. Adleman & G.M. Enguidanos (Eds.), *Racism in the lives of women: Testimony, theory, and guides to antiracist practice.* (pp. 345-368). New York: Haworth.

Brave Heart, M. Y. H., & DeBruyn, L. M. (1998). The American Indian Holocaust: Healing unresolved historical grief. *American Indian and Alaska Native Mental Health Research. 8* (2), 56-78.

Brod, R. L., & McQuiston, J.M. (1983). American Indian Adult education and literacy: The first national survey. *Journal of American Indian Education, 22(2),*1-16.

Brown, G. W., & Harris, T. (1978). Life events and depression. In *Social origins of depression.* 100-129, Tavistock Publications.

Buchwald, D., Beals, J., & Manson, S. M. (2002). Use of traditional health practices among Native Americans in a primary care setting. *Medical Care, 38(12),* 1191-1199.

Bullchild, P. (1985). *The Sun Came Down: The history of the world as my Blackfeet elders told it.* Harper & Row.

Burlingame, G. M. & Lambert, M. J. (1995). Pragmatics of tracking mental health outcomes in a managed care setting. *The Journal of Mental Health Administration*, *22*, 226-236.

Buss, D. M. (2000). The evolution of happiness. *American Psychologist*, 55, 15-23.

Caldwell, J. Y., Davis, J. D., Du Bois, B., Echo-Hawk, H., Shepard Erickson, J., Goins, R. T., Hill, C., Hillabrant, W., Johnson, S. R., Kendall, E., Keemer, K., Manson, S. M., Marshhall, C. A., Running Wolf, P., Santiago, R. L., Schacht, R., & Stone, J. B. (2005) Culturally competent research with American Indians and Alaska Natives: Findings and recommendations of the first symposium of the work group on American Indian Research and program evaluation methodology. *American*

Indian and Alaska Native Mental Health Research The Journal of the National Center12(1), 1-21.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing Coping Strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56(2),* 267-282.

Chewning, B., Douglas, J., Kokotailo, P. K., LaCourt, J., St. Clair, D., & Wilson, D. (2001). Protective Factors associated with American Indian adolescents' safer sexual patterns. *Maternal and Child Health Journal,* 5(4) 273-280.

Chiarello, M. A., & Orvaschel, H. (1995). Patterns of parent-child communication: relationship to depression. *Clinical Psychology Review, 15*, 395-407.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd edition). Hillsdale, NJ: Erlbaum.

Cohen, J. A., Mannarino, A. P., Greenberg, T., Padlo, S. & Shipley, C. (2002) Childhood traumatic grief: Concepts and controversies. *Trauma Violence & Abuse*, 3(4), 307-327.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin,* 98, 310-357.

Comaz-Diaz, L. (2000) An ethnopolitical approach to working with people of color. *American Psychologist, 55*(11), 1319-1325.

Cross, T. L. (1998). The Ethnic, Culture, and Religion/Spirituality (ECRS) Questionnaire. National Indian Child Welfare Association (NICWA), Casey Family Programs.

Csordas, T. J. (2004) Healing and the human condition: Scenes from the present moment in Navajoland. *Culture, Medicine, and Psychiatry, 28(1),* 1-14.

Cummins, J. C., Ireland, M., Resnick, M. D., Blum, R. W. (1999). Correlates of physical and emotional health among Native American Adolescents. *Journal of Adolescent Health,* 24, 38-44.

Diener, E. (2000). Subjective well-being. *American Psychologist,* 55, 34-43.

Dohrenwend, B. P., & Shrout, P. E. (1985). "Hassles" in the conceptualization and measurement of life stress variables. *American Psychologist, 40(7),* 780-785.

Duran B., Malcoe L.H., Sanders M., Waitzkin H., Skipper, B., & Yager, J. (2004). Child maltreatment prevalence and mental disorders outcomes among American Indian women in primary care. *Child Abuse & Neglect, 28*(2), 131-45.

Emmons, R. A., & Crumpler, C. A. (2000). Gratitude as a human strength: Appraising the evidence. *Journal of Social and Clinical Psychology, 19*, 56-69.

Flach, F. F. (1997). *Resilience: How to bounce back when the going gets tough*. New York: Hatherleigh Press.

Fox. K. A. (2003). Collecting data on the abuse and neglect of American Indian children. *Child Welfare, 82(6),* 706-726.

Frankl, V. (1959). *Man's search for meaning.* New York: Washington Square Press.

Freeman, B., Iron Cloud-Two Dogs, E., Novins, D. K., Lemaster, P. L. (2004). Contextual issues for strategic planning and evaluation of systems of care for American Indian and Alaska Native communities: An introduction to Circles of Care. *American Indian and Alaska Native Mental Health Research The Journal of the National Center, 11(2)*, 1-29.

Frisch, M. B. (1994) *Manual and Treatment Guide for the Quality of Life Inventory (QOLI).* Minneapolis, MN: Pearson Assessments—formerly, NCS Assessments.

Garmezy, N. (1991). Resiliency and vulnerability to adverse developmental outcomes associated with poverty. *American Behavioral Scientist, 34*, 416-430.

Garmezy, N., Masten, A. S., & Tellegen, A. (1984). The study of stress and competence in children: A building block for developmental psychopathology. *Child Development*, *55,* 97-111.

Garroutte, E. M., Goldberg, J., Beals, J., Herrell, R., Manson, S.M., and the AI SUPERPFP Team. (2003). Spirituality and attempted suicide among American Indians. *Social Science and Medicine, 56,* 1571-1579.

Goodluck., C. (2002). *Native American children and youth well-being indicators: A strengths based perspective*. Seattle, WA, Casey Family Programs.

Hafen, B. Q, & Frandsen, K. J. (1986). *Youth suicide: Depression and loneliness.* Evergreen, CO: Cordillera Press.

Hammen, C., Marks, T., Mayol, A., & DeMayo, R. (1985). Depressive self-schemas, life stress, and vulnerability to depression. *Journal of Abnormal Psychology, 94*, 308 319.

Hatch, R. L., Burg, M. A., Naberhaus, D. S., & Hellmich, L. K. (1999). The Spiritual Involvement and Beliefs Scale: Development and testing of a new instrument. *Journal of Family Practice, 46*, 476-486.

Heavy Runner, I., & Marshall, K. (2003). Miracle survivors: Promoting resilience in Indian students. *Tribal College Journal of American Indian Higher Education, 14,* 15-17.

Hobfoll, S. E., Jackson, A., Hobfoll, I., Pierce, C. A., & Young, S. (2002). The Impact of communal-mastery versus self-mastery on emotional outcomes during stressful

conditions: A prospective study of Native American women. *American Journal of Community Psychology, 30(6)*, 853-871.

Holmes, T., & Rahe, J. (1967). *Journal of Psychosomatic Research, 11*, 213.

Horrejsi, C., Heavy Runner Craig, B., Pablo, J. (1992). Reactions by Native American Parents to child protection agencies: Cultural and community factors. *Child Welfare, LXXI (4),* 329-342.

Ingram, R. E., Miranda, J., & Segal, Z. V. (1998). *Cognitive vulnerability to depression*. New York: Guilford Press.

Iwamasa, G. Y., & Smith, S. K. (1996). Ethnic diversity in behavioral psychology: A review of the literature. *Behavior Modification, 20(1),* 45-59.

Jaenicke, C., Hammen, C., Zupan., B., Hiroto, D., Gordon, D., Adrian, C., & Burge, D. (1987) Cognitive vulnerability in children at risk for depression. *Journal of Abnormal Child Psychology, 15*, 559-572.

Jones, M. C., Dauphinais, P., Sack, W. H. & Somervell, P. D. (1997). Trauma related symptomatology among American Indian adolescents. *Journal of Traumatic Stress, 10*(2), 163-173.

Kanner, A. D., Coyne, J. C., Shaefer, C., & Lazarus, R. (1981). Comparison of two modes of stress measurement: Daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine, 4*, 1-39.

Kastenbaum, R., & Costas, P. T. (1977). Psychological perspectives on death. *Annual Review of Psychology, 28,* 225-249.

Kaufman, J. & Ziegler, E. (1993). The intergenerational transmission of abuse is overstated. In Gelles, R.J., and Loseke, D. (eds.), *Current Controversies on Family Violence,* Sage, Newbury Park, CA, pp. 209-221.

Klocek, J. W., Oliver, J. M., & Ross, M. J. (1997). The role of dysfunctional attitudes, negative life events, and social support in the prediction of depressive dysphoria: A prospective longitudinal study. *Social Behavior and Personality*, *25*, 123-136.

Kunitz, S. J., Levy, J. E., McCloskey, J., & Gabriel, K. R. (1998). Alcohol dependence and domestic violence as a sequelae of abuse and conduct disorder in childhood. *Child Abuse and Neglect*, 22, 1079-1091.

La Capra, D. (2001). *Writing History, Writing Trauma*. Johns Hopkins University Press.

La Capra, D. (1994). *Representing the Holocaust: History, theory, trauma*. Cornell University Press.

LaFromboise, T. D. (1988). American Indian mental health policy. *American Psychologist, 43,* 388-497.

LaFromboise, T.D., (1992). An interpersonal analysis of affinity, clarification, and helpful responses with American Indians. *Professional Psychology: Research and Practice, 23,* 281-286.

LaFromboise, T. D., & Howard-Pitney, B. (1994). The Zuni life skills development curriculum: A collaborative approach to curricular development. *American Indian and Alaska Native Mental Health Research, 4,* 98-121.

LaFromboise, T. D., & Howard-Pitney, B. (1995). Suicidal behavior in American Indian female adolescents. In S. S. Canetto & D. Lester (Eds.) *Women and suicidal behavior.* New York, NY: Springer Publishing, 157-173.

LaFromboise, T. D, Hoyt, D. R., Oliver, L., & Whitbeck, L. B. (2006) Family, community, and school influences on resilience among American Indian adolescents in the upper Midwest. *Journal of Community Psychology, 34(2),*193 209.

Lambert, M. J., Hansen, N. B., Umpress, V., Lunnen, K.., Okiishi, J., Burlingame, G. M., & Reisinger, C. W. (1996). *Administration and scoring manual for the OQ-45.2.* Wilmington, DE: American Professional Credentialing Services LLC.

Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Studies*, *17*, (1) 11-21.

Little Soldier, L. (1985). To soar with the eagles: Enculturation and acculturation of Indian Children. *Childhood Education, 61(3),* 185-191.

Leupp, F. E. (1910). *The Indian and His Problem.* New York: Scribners.

Long, C. R., & Nelson, K. (1999). Honoring diversity: The reliability, validity, and utility of a scale to measure Native American resilience. *Journal of Human Behavior in the Social Environment, 2,* 91-107.

Lubinski, D., & Benbow, C. P. (2000) States of excellence. *American Psychologist,* 137 150.

Luthar, S. S., (2003). *Resilience and Vulnerability: Adaptation in the context of childhood adversity.* Cambridge: Cambridge University Press.

Luthar, S. S., Cichetti, D., & Becker, B. (2000) The construct of resilience: A critical evaluation and guidelines of future work. *Child Development, 71,* 543-562.

Luthar, S. S., & Ziegler. E. (1991) Vulnerability and competence: A review of research on resilience in childhood. *American Journal of Orthopsychiatry, 61*, 6-22.

Mail, P. D. (1989). American Indians, stress, and alcohol. *American Indian Alaska Native Mental Health Research, 3,* 7-26.

Manson, S. M., Ackerson, L. M., Dick, R. W., Baron, A. E., & Fleming, C. (1990). Depressive symptoms among American Indian adolescents: Psychometric characteristics of the Center for Epidemiologic Studies Depression Scale (CES D). *Psychological Assessment 2,* 231-237.

Manson, S. M., Beals, J., Klein, S. A., & Croy, C. (2005). Social Epidemiology of trauma among 2 American Indian reservation populations. *American Journal of Public Health, 95(5)* 851-859.

Manson, S. M., Shore, J. H., & Bloom, J. D. (1985). The depressive experience in American Indian communities: A challenge for psychiatric theory and diagnosis. In A. Kleinman and B. Good (Eds.) *Culture and Depression.* University of California Press.

May, P. A. (1987). Suicide and self destruction among American Indian youths. *American Indian and Alaska Native Mental Health Research, 1(1),* 52-69.

McCullough, M. E. (2000). Forgiveness as a human strength: Theory, measurement, and links to well-being. *Journal of Social and Clinical Psychology, 19,* 43-55.

McCullough, M.E., & Snyder, C. R. (2000). Classical sources of human strength: Revisiting an old home and building a new one. *Journal of Social and Clinical Psychology, 19,* 1-10.

McGrath, E., Keita, G.P., Strickland, B.R., & Russo, N.F. (Eds.). (1990). *Women and Depression: Risk factors and treatment issues.* Washington, DC: American Psychological Association.

Monroe, S. M. & Peterman, A. M. (1988). Life stress and psychopathology. In L. Cohen, (ed.) *Research on stressful life events: Theoretical and methodological issues.* Newbury Park, CA: Sage.

Monroe, S. M., & Simons, A. D. (1991) Diathesis-Stress Theories in the context of life stress research: Implications for the depressive disorders. *Psychological Bulletin, 110*(3), pp. 406-425.

Neligh, G. (1988). Secondary and tertiary prevention applied to suicide among American Indians. *American Indian and Alaska Native Mental Health Research, 1*(2) 4-18.

Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. *Psychological Bulletin, 101*, 259-282.

Oetting, E. R., & Beauvias, F. (1990-1991). Orthogonal cultural identification theory: The cultural identification of minority adolescents. *International Journal of the Addictions, 25,* 655-685.

O'Nell, T. D. (1996). *Disciplined Hearts: History, identity, and depression in an American Indian community.* Berkeley and Los Angeles, CA: University of California Press.

Otis, D.S. (1973). *The Dawes Act and the Allotment of American Indian Land.* Norman: University of Oklahoma Press.

Park, C. L., Cohen, L. H, & Murch, R. L. (1996). Assessment and prediction of stress related growth. *Journal of Personality, 64,* 71-105.

Peter, J., & Peers, L. (1993). *Sacred Encounters: Father DeSmet and the Indians in the Rocky Mountain West.* Norman: University of Oklahoma.

Peterson, C. (2000). The future of optimism. *American Psychologist, 55(1), 44-55.*

Rabkin, J., & Struening, E. L (1976). Life events, stress, and illness. *Science*, *194,* 4269, 1013-1020.

Regier, D. A., Farmer. M.E., Rae, D. S., Locke, B. Z., Keith, S. J., Judd L. L., & Goodwin, F. K. (1990). Comorbidity of mental disorders with alcohol and other drug abuse. Results from the Epidemiologic Catchment Area (ECA) study. *The Journal of the American Medical Association, 264(19),* 1013-1034.

Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology, 58*(3), 307-321.

Richardson, G. E., Neiger, B., Jensen, S., & Kumpfer, K. (1990). The resiliency model. *Health Education*, *21*, 33-39.

Rutter, M. (1990). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry, 57*, 316-331.

Rutter, M. (1979). Protective factors in children's responses to stress and disadvantages In M. W. Kent & J. E. Rolf (Eds.), *Primary prevention of psychopathology, Vol, Social competence in children* (pp. 49-74) Hanover, NH: University Press of New England.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55, 79-88.*

Sampson, R. J., Morenoff, J. D., & Earls, F. (1999). Beyond Social Capital: Spatial dynamics of collective efficacy for children. *American Sociological Review, 64*, 633-660.

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science, 277*(15), 918-924.

Sarason, I., Sarason, B., Shearin, E. & Peirce, G. (1987). A brief measure of social support: Practical and theoretical implications. *Journal of Social and Personal Relationships, 4*, pp. 497-510.

Saylors, K. & Daliparthy, N. (2004). Aiming to balance: Native women healing in an urban behavioral health care clinic. In E. Nebelkopf & M. Phillips (Eds.), *Healing and mental health for Native Americans: Speaking in red* (pp. 169-178). Walnut Creek, CA: Alta Mira Press.

Seligman, M. E. P. (2002). *Authentic happiness: Using the new Positive Psychology to realize your potential for lasting fulfillment*. N.Y.: Free Press.

Simonton, D. K. (2000). Creativity. *American Psychologist, 55,* 151-158.

Snyder, C. R. (2000). The past and possible futures of hope. *Journal of Social and Clinical Psychology, 19*, 11-28.

Snyder, C. R., & McCullough, M. E. (2000). A positive psychology field of dreams: "if you build it they will come…" *Journal of Social and Clinical Psychology, 19*, 151-160.

Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L.M., Sigmon, S. T., Yoshinobu, L., Gibb, J., Langelle, C., & Harney, P. (1991). The will and ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*, 570-585.

Stannard, D. E. (1992). *American Holocaust: Columbus and the conquest of the new world.* New York: Oxford Press.

Sue, D. W., Bingham, R. P., Porché-Burke, L., & Vasquez, M. (1999). The Diversification of Psychology: A multicultural revolution. *American Psychologist, 54*, 12, 1061-1069.

Sutton. C. T., & Nose, M. (1996). American Indian Families: An overview. In. M. McGoldrick, J. Giordano, & J. K. Pears (Eds.). *Ethnicity and Family Therapy* (pp. 31-34). New York: Guilford.

Swaney, G. (2006). *Personal Communication*. The University of Montana, Missoula, Montana.

Tangney, J. P. (2000) Humility: Theoretical perspectives, empirical findings, and directions for future research. *Journal of Social and Clinical Psychology, 19*, 70-82.

Tedeschi, R. G., Calhoun, L. G. (1995). *Trauma and transformation: Growing in the aftermath of suffering.* Thousands Oaks, CA: Sage.

Tedeschi, R. G., Park, C. L., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9*, 455-471.

Thurman, P. J., Allen, J. & Deters, P. (2004). The circles of care: Doing participatory evaluation with American Indian and Alaska Native communities. *American Indian and Alaska Native Mental Health Research The Journal of the National Center, 11(2)*, 139-154.

Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology, 86*(2), 320-333.

U. S. Bureau of Census (2005). U. S. Census Bureau News. [Retrieved from http://www.census.gov/Press Release/www/releases/archives/population/006808.html]

U.S. Commission of Civil Rights (2003). *A Quiet Crisis: Federal funding and unmet needs in Indian Country.* Washington, D.C: Government Printing Office.

U.S. Congress, Office of Technology Assessment. (1986). *Indian health care.* Washington, DC: Government Printing Office.

U.S. Congress, Office of Technology Assessment. (1990). *Indian adolescent mental health care*. Washington, DC: Government Printing Office.

U.S. Department of Health and Human Services, Indian Health Services (2004). *Trends in Indian Health, 2000-2001.* Office of Public Health, Washington, DC: U.S. Government Printing Office.

Van Winkle, N.W., & May, P. A. (1986). Native American suicide in New Mexico. 1957-1979: A comparative Study. *Human Organization, 45,* 296-309.

Wachtel. P. L. (1994).Cyclical processes in personality and psychopathology. *Special Issue: Personality and Psychopathology, 103*(1), 51-66.

Walsh, F. (1996). The concept of family resilience: Crisis and challenge. *Family Processes 35(3),* 261-281.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Schedules. *Journal of Personality and Social Psychology, 54(6),* 1063-1070.

Welch, J. (1994) *Killing Custer.* New York: W.W. Norton & Company.

Werner, E. (1993). Risk, resilience, and recovery: Perspectives from the Kauai Longitudinal Study. *Development and Psychopathology, 5(4),* 502.

Werner, E., & Smith, R. (2001). *Journeys from Childhood to Midlife; Risk, resilience, and recovery.* Ithaca, NY: Cornell University Press.

Werner, E., & Smith, R. (1992). *Overcoming the odds: High risk children from birth to adulthood.* Ithaca, NY: Cornell University Press.

Whitbeck, L. B., Adams, G. W., Hoyt, D. R., & Chen, X. (2004). Conceptualizing and measuring historical trauma among American Indian people. *American Journal of Community Psychology, 33*, ¾, 119-130.

White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review, 66*, 297-333.

Wilkes, G. (2002) Abused child to nonabusive parent: Resilience and conceptual change. *Journal of Clinical Psychology, 58,* 261-276.

Wolin, S. J., & Wolin, S. (1993). *Bound and determined: Growing up resilient in a troubled family.* New York: Villard.

Young, T. K. (1997). Health trends in the Native American population. *Population Research and Policy Preview, 16,* 147-167.

Zimmerman, M. A., Ramirez, J., Washienko, K. M., Walter, B., & Dyer, S. (1998). Enculturation hypothesis: Exploring direct and protective factors among Native American youth. In H. I. McCubbin, E, A. Thompson, A. I. Thompson, & J. E. Fromer (Eds.), *Resiliency in Native American and immigrant families* (pp. 199 220). Thousand Oaks, CA: Sage.

Appendix 1. Summary of Individual Regression Models

Resiliency Factor	Significant Main Effects?	Moderation Supported?
Social Support (SSQ-6)	SRGS, OQ-45, PANAS-U, PANAS-P & Historical Loss	X PLES→SRGS X NLES→SRGS X ALES→SRGS X PLES→Qual. of Life
Hope Scale	SRGS, OQ-45, Quality of Life & PANAS-P	X PLES→SRGS X His. Loss→OQ-45 X NLES→PANAS-U
Brief Resiliency Coping Scale (BRCS)	SRGS, OQ 45, Quality of Life & PANAS-P	X ALLES→Outcome Q.
Communal Mastery	SRGS & Quality of Life	X PLES→SRGS
Ethnic Culture Religion & Spirituality (ECRS)	SRGS, OQ-45, Quality of Life & PANAS-U	No Moderation Support
Enculturation/Ethnic Pride	SRGS, Quality of Life	X ALLES→OQ-45 X NLES→PANAS-U X ALLES→Hist. Loss Affect
Coping Style	SRGS, OQ-45 & Historical Loss	X PLES→Qual. Of Life*
Spirituality Involvement & Belief Scale (SIBS)	SRGS, OQ-45& PANAS-P	No Moderation Support

*Pure Moderation supported= No Significant Main Effects for Stressor or Resiliency factor alone

**All other moderation pairings were found to have Significant Main Effects for Resiliency Factors

Appendix 2. Moderation Models with Significant Moderation -Single Factor Pairings

Predictor Variables	Criterion Variable	R^2 *(for each step)*	ΔR^2 *(for each step)*	β (in final model)	*p (for change in R^2)*
Analysis 1:					
1) Hope	SRGS	.241	.241	.421	$p < .01$
2) PLES	SRGS	.280	.039	-.268	$p < .01$
3) Hope X PLES	SRGS	.372	.072	-.274	$p < .01$
Analysis 2:					
1)SSQ-6	SRGS	.175	.175	.341	$p < .01$
2)PLES	SRGS	.222	.047	-.322	$p < .01$
3)SSQ-6 X PLES	SRGS	.316	.094	-.321	$p < .01$
Analysis 3:					
1)Communal Mastery (CM)	SRGS	.128	.128	.350	$p < .01$
2)PLES	SRGS	.196	.079	-.326	$p < .01$
3)CM X PLES	SRGS	.253	.061	-.254	$p < .01$
Analysis 4:					
1)SSQ-6	SRGS	.175	.175	.411	$p < .01$
2)NLES	SRGS	.183	.008	-.202	$p = .23$
3)SSQ-6 X NLES	SRGS	.238	.074	.429	$p < .01$
Analysis 5:					
1)SSQ-6	SRGS	.175	.175	-.280	$p < .01$
2)ALES	SRGS	.195	.020	.152	$p < .05$
3)SSQ-6 X ALES	SRGS	.268	.074	-.245	$p < .01$
Analysis 6:					
1)Hope	OQ-45	.085	.085	-.351	$p < .01$
2)Historical Loss	OQ-45	.136	.051	.245	$p < .01$
3)Hope X Historical Loss	OQ-45	.160	.024	.159	$p < .05$
Analysis 7:					
1)BRCS	OQ-45	.067	.067	-.243	$p < .01$
2)ALES	OQ-45	.094	.027	.108	$p < .01$
3)BRCS X ALES	OQ-45	.118	.024	-.166	$p < .05$

Predictor Variables	Criterion Variable	R^2 *(for each step)*	ΔR^2 *(for each step)*	β (in final model)	*p (for change in R^2)*
Analysis 8:					
1)Enculturation	OQ-45	.018	.018	-.132	$p = .09$
2)ALES	OQ-45	.058	.040	.184	$p < .05$
3)Enculturation. X ALES	OQ-45	.092	.034	-.185	$p < .01$
Analysis 9:					
1)SSQ-6	QOLI	.041	.041	.192	$p < .05$
2)PLES	QOLI	.041	.000	-.074	$p = .81$
3)SSQ-6 X PLES	QOLI	.073	.032	-.187	$p < .05$
Analysis 10:					
1)Cope	QOLI	.019	.019	.168	$p = .08$
2)PLES	QOLI	.027	.008	-.059	$p = .25$
3)Cope X PLES**	QOLI	.056	.029	-.173	$p < .05$
Analysis 11:					
1)SSQ-6	PANAS-U	.093	.093	-.258	$p < .01$
2)NLES	PANAS-U	.113	.026	.099	$p = .06$
3)SSQ-6 X NLES	PANAS-U	.144	.031	-.183	$p < .05$
Analysis 12:					
1)Enculturation	PANAS-U	.007	.007	-.076	$p = .30$
2)NLES	PANAS-U	.043	.036	.159	$p < .05$
3)Encult. X NLES	PANAS-U	.076	.033	-.186	$p < .05$
Analysis 13:					
1)Hope	PANAS-U	.014	.014	-.081	$p = .13$
2)NLES	PANAS-U	.044	.030	.121	$p < .05$
3)Hope X NLES	PANAS-U	.070	.026	-.169	$P < .05$
Analysis 14:					
1)SSQ-6	PANAS-U	.093	.093	-.255	$p < .01$
2)ALES	PANAS-U	.109	.016	.094	$p = .09$
3)SSQ-6 X ALES	PANAS-U	.141	.032	-.183	$p < .05$
Analysis 15:					
1)Enculturation	PANAS-U	.007	.007	-.080	$p = .30$
2)ALES	PANAS-U	.041	.034	.171	$p < .05$
3)Enculturation. X ALES	PANAS-U	.075	.034	-.085	$p < .05$

Predictor Variables	Criterion Variable	R^2 *(for each step)*	ΔR^2 *(for each step)*	β (in final model)	*p (for change in R^2)*
Analysis 16:					
Enculturation	HLAA	.005	.005	.078	$p = .36$
ALES	HLAA	.050	.045	.197	$p < .05$
Enculturation X ALES	HLAA	.083	.038	-.185	$p < .01$

*** R^2, ΔR^2, β (Standardized *Beta's*) tabled and here reported only for analyses with significant interaction variables. *p* values refer to the significance of the ΔR^2 for this variable.**

****Pure moderation—all other models support partial moderation.**

Note: HLAA = Historical Loss Associated Affect; BRCS = Brief Resiliency Coping Scale; SIBS = Spiritual Involvement & Beliefs Scale; SRGS = Stress Related Growth Scale; OQ-45 = Outcome Questionnaire-45.2; PANAS = Positive & Negative Affect Scale (U= Negative & P = Positive); ECRS = Ethnic Culture Religion & Spirituality Scale; QOLI = Quality of Life Inventory.

Non-significant moderators tested for the individual Criterion Variables:

Stress Related Growth Scale:

Brief Resiliency Coping Scale (BRCS)
Ethnic Culture Religion & Spirituality (ECRS)
Enculturation/Ethnic Pride
Coping Style
Spirituality Involvement & Belief Scale (SIBS)

Outcome Questionnaire-45.2:
Ethnic Culture Religion & Spirituality (ECRS)
Coping Style
Spirituality Involvement & Belief Scale (SIBS)
Communal Mastery
Social Support (SSQ-6)

Quality of Life Scale:
Brief Resiliency Coping Scale (BRCS)
Ethnic Culture Religion & Spirituality (ECRS)
Enculturation/Ethnic Pride
Hope
Spirituality Involvement & Belief Scale (SIBS)
Communal Mastery

PANAS-Unpleasant:
Brief Resiliency Coping Scale (BRCS)
Ethnic Culture Religion & Spirituality (ECRS)
Coping Style
Spirituality Involvement & Belief Scale (SIBS)
Communal Mastery

Historical Loss Associated Affect:
Brief Resiliency Coping Scale (BRCS)
Ethnic Culture Religion & Spirituality (ECRS)
Coping Style
Spirituality Involvement & Belief Scale (SIBS)
Communal Mastery
Hope
Social Support

Appendix 3. Summary of individual scale regression analyses

These finer-grained analyses of hypothesized *Reziliency* factors elucidate the more specified nature of resiliency processes within this American Indian sample. This detailed account describes how each *Reziliency* factor and stressor variable pairing related to the dependent variables within multiple regression models addressing moderation. This presentation is intended to provide a more in-depth exploration of the noted findings described in the results section. As described, the nature of this exploratory analysis provides an empirical rationale for the importance of further exploring resiliency processes with additional statistical analyses. While increasing the probability of making a Type I error, or finding false positives, it does also increase our clinical knowledge of resiliency processes for Americans Indians in this sample and decrease the chance of making a Type II error.

Stress Related Growth Dependent Variable Results

Numerous significant results emerged with regard to stress related growth as the dependent variable, measured by the Stress Related Growth Scale (SRGS; Park et al., 1996). This in part echoes the findings for the Negative Life Variables summary scale described in the results section. Partial moderation was supported for the Hope Scale and Positive Life Events in predicting SRGS scores. Partial moderation was supported for SSQ-6 scores and Positive Life Events in predicting SRGS scores. In addition, partial moderation was also supported with regard to Communal Mastery scale scores and Positive Life Events Scores in predicting SRGS scores. Partial moderation was also supported for social support and overall exposure to life event stressors, as well as for negative life events. These findings support the notion that hypothesized resiliency

factors would act as a moderating variables with regard to stress related or adversarial growth. Specifically, social support, communal mastery, and hope were all found to act as an enhancing or moderating factor with regard to predicting scores on adversarial growth for American Indians.

Significant main effects were also found for the Stress Related Growth Scale as the dependent variable with, as predictors the Brief Resiliency Coping Scale ($R^2 = .328$, $p < .01$), the Ethnic, Culture, and Religion/Spirituality Questionnaire ($R^2 = .289$, $p < .01$), Enculturation/Ethnic pride ($R^2 = .130$, $p < .01$), Spiritual Involvement Beliefs ($R^2 = .052$, $p < .01$), and the COPE scale ($R^2 = .149$, $p < .01$). Similar findings occur for Positive Life variables. Moderation was not supported for these independent variables. Each of these analyses supported the hypothesized relationship that resiliency factors have with adversarial growth.

Outcome Questionnaire-45 Dependent Variable Results

Multiple significant relationships also emerged with regard to the overall psychosocial dependent variable, OQ-45, an important constituent of the Negative Life Variables summary variable. Partial moderation was supported with regard to the Hope Scale and Historical Loss in predicting OQ-45 scores. Partial moderation was also supported when BRCS and Total Life Event Stressor scores were used to predict OQ-45 scores. In addition, partial moderation was also supported when Enculturation and Total Life Event Stressor scores were used to predict OQ-45 scores. These findings provided support for the hypothesized moderating role that Hope plays with regard to Historical Loss and psychological status. Hope appears to buffer the relationship of reported historical trauma upon current psychological status. In addition, the Brief Resiliency

Coping Scale scores were also found to buffer the relationship stressful life experiences had with psychosocial status. These findings provide support for the importance of Hope and Resiliency in predicting psychosocial factors for American Indians.

Significant main effects were also found for the relationship between the OQ-45 as the dependent variable and the SSQ-6 (R^2 = .130, p < .01), Brief Resiliency Coping Scale (R^2 = .067, p < .01), the Ethnic, Culture, and Religion/Spirituality Questionnaire (R^2 = .052, p < .01), the Hope Scale (R^2 = .085, p < .01), Spiritual Involvement Beliefs (R^2 = .050, p < .01), the COPE scale (R^2 = .055, p < .01), and Historical Loss (R^2 = .052, p < .01). Moderation was not supported for these independent variables. However, these findings support the hypotheses concerning the importance of proposed resiliency factors for psychosocial coping. More of the resiliency variables are implicated as having main effects in this analysis. In each case hypothesized *Reziliency* variables were found to have a significant negative relationship with psychological distress as measured by this scale. Thus, as hypothesized, higher scores on *Reziliency* variables were associated with lower levels of psychological distress (and vice-versa).

Quality of Life Questionnaire Dependent Variable Results

Multiple significant relationships also emerged with regard to the Quality of Life Measure as the dependent variable; note that the QOLI total is a constituent of the summary Positive Life dependent variable. Partial moderation was supported for the SSQ-6 and Positive Life Events in predicting Quality of Life scores. In addition, pure moderation was supported with regard to the COPE and Positive Life Events in predicting Quality of Life scores. As hypothesized, social support and coping skills were found to act as third (sensitizing or moderating) variables acting between positive life

events and subjective ratings of life quality. In fact, coping skills were found to moderate completely the relationship between positive life events and life quality. This supports the hypothesized importance of social support and coping skills to life quality ratings.

Significant main effects in predicting the Quality of Life Scores were found for the Hope Scale (R^2 = .167, p < .01), The Brief Resiliency Coping Scale (R^2 = .151, p < .01), the Communal Mastery Scale (R^2 = .126, p < .01), the Ethnic, Culture, and Religion/Spirituality (R^2 = .066, p < .01), and Enculturation (R^2 = .048, p < .01). Moderation was not supported for these independent variables. As hypothesized, life quality ratings were found to be significantly related to Hope, Resiliency, Communal Mastery, Ethnic Pride, and American Indian Religion and Spirituality for American Indians.

Positive and Negative Affect Schedule (PANAS) Unpleasant Affect Results

Multiple significant relationships also emerged with regard to the Positive and Negative Affect Schedule Unpleasant Affect (PANAS-U) Scale as dependent variable; the Unpleasant affect score was also reflected and used in the construction of Negative Life summary dependent variable. Partial moderation was supported for the SSQ-6 and Negative Life Events in predicting PANAS-U scores. Partial moderation was supported for Enculturation and Negative Life Events in predicting PANAS-U scores. Partial moderation was also supported with regard to the Hope and Negative Life Events in predicting PANAS-U scores. Partial moderation was supported with regard to the SSQ-6 and Total Life Events in predicting PANAS-U scores. It was also supported with regard to the Enculturation and Total Life Events in predicting PANAS-U scores. Thus, as hypothesized, some *Reziliency* variables were found to buffer the relationship between

life stress and unpleasant affect status. Hope, Enculturation or Ethnic Pride, and Social Support were all found to be important moderating or buffering factors. Significant main effects were also found between the PANAS-U and the Ethnic, Culture, and Religion/Spirituality Questionnaire ($R^2 = .044$, $p < .05$); moderation was not supported for this factor. This finding does support the hypothesized importance American Indian culture and spirituality factors have upon emotional variables.

Positive and Negative Affect Schedule (PANAS) Pleasant Affect Results:

Multiple significant main effects were observed involving the PANAS-P as dependent variable and prediction variables of interest. The PANAS-P Scale also was a component of the Positive Life summary dependent variables. Moderation was not supported for any of the independent variables used to predict PANAS-P scores. Significant main effects were found for the Hope Scale ($R^2 = .108$, $p < .01$), Communal Identity ($R^2 = .089$, $p < .01$), Spiritual Involvement and Beliefs Scale ($R^2 = .065$, $p < .01$), Brief Resiliency Coping Scale ($R^2 = .038$, $p < .05$), and the SSQ-6 ($R^2 = .031$, $p < .05$). These findings support the hypothesized importance that Hope, Communal Mastery, Spirituality, Social Support, and Resiliency have in the relationships involving reported pleasant emotional status for American Indians.

Historical Loss Associated Affect Scale Dependent Variable Results

Finally, multiple significant relationships were observed involving the Historical Loss Associated Affect Scale (HLAS) – a constituent of Negative Life summary variable--as dependent variable and several predictor variables of interest. Partial moderation was supported for Enculturation and Total Life Events in predicting HLAS scores. This supports the hypothesized importance of culture and cultural pride in the relationship

between life event stressors and Historical Loss Associated Affect. Significant main effects were also observed in the relationship between the HLAS and the SSQ-6 (R^2 = .107, $p < .01$) and the COPE Scale (R^2 = .096, $p < .01$); moderation was not supported for either of these factors. This illustrates the importance of the relationship between social support and coping strategies and affective responses to Historical Loss.

Simple Stepwise Analyses

Given the moderation and regression results for the individual status dependent variables, the Stress Related Growth Scale, Outcome Questionnaire, PANAS-Unpleasant, Quality of Life, and Historical Loss Associated Affect, simple main effect analyses were completed for these variables using stepwise multiple regression and the individual Resilience measures as Independent Variables. The strongest predictors of Stress Related Growth scores were: 1) BRCS, 2) ECRS, 3) Hope, and 4) SIBS. This finding demonstrates how important resiliency, cultural factors, hope and spirituality are in predicting adversarial growth status for American Indians. The strongest predictors of Outcome Questionnaire-45 scores were: 1) Social Support, 2) Historical Trauma, and 3) Hope.

This demonstrates the importance of social support, historical trauma, and hope as predictors of general psychosocial status. The strongest predictors of PANAS-Unpleasant scores were 1) Social Support and 2) Historical Trauma, this that demonstrates the strong relationship between social support, historical loss, and emotional status for American Indians. The strongest predictors of Quality of Life scores were 1) Hope and 2) Communal Mastery. This highlights how important each of these variables is in predicting life quality ratings. Finally, the strongest predictors of Historical Loss

Associated Affect scores were 1) Historical Trauma, 2) Social Support, 3) Cope, and 4) SIBS scores. These combined findings support the hypothesized importance of each of these hypothesized *Reziliency* for psychosocial status. It appears that each of these variables has an important relationship with affective responses to historical trauma for this American Indian Sample. These implications are summarized in the Results and Discussion section.

Table 1. Descriptive Statistics and statistical tests for gender differences.

Variable	Males	Males	Females	Females	*t* or X^2 *(df)*	*Cohen's D* or *phi*
	M	***SD***	***M***	***SD***		
Demographics						
Average monthly income	411.00	451.88	1154.40	1588.55	-2.801*	.53
Yearly income	6710.19	8620.37	13256.52	10290.79	-3.29*	.63
Years of Education	12.52	1.534	13.27	2.185	-2.04	.39
High School or GED?*	.86	.345	.95	.225	3.45 (1)	.149
Medical Condition or Illness?*	.16	.374	.27	.444	1.81	.11
Mental Illness or Disorder?*	.23	.427	.42	.495	4.51 (1)*	.17
Mental Health Care Received?*	.16	.374	.39	.490	7.26 (1)*	.22
Alcohol or Drug use?*	.35	.482	.50	.502	3.03 (1)	.13
Alcohol or Drug use Frequency*	.98	1.456	1.28	1.392	-1.21	
Alcohol or Drug Problem?*	.28	.454	.59	.798	9.86 (1)*	.25
Head Injury?	.09	.294	.45	.813	10.97 (1)*	.26
Stressors						
ALLES	92.95	60.56	61.79	72.28	2.51**	.44
NLES	59.16	52.35	46.28	61.18	1.22	
PLES	33.79	23.43	15.50	17.66	5.25**	.87
Historical Loss	31.33	13.50	33.42	12.52	-.910	
Independent Variables						
Cope Scale	133.70	23.55	133.89	17.47	-.053	
Enculturation	3.59	.63	3.73	.72	-1.06	
Hope Scale	24.44	4.87	25.78	3.54	-1.88	
BRCS	15.46	3.01	16.55	2.94	-2.05*	.36
Communal Mastery	30.09	4.69	31.06	4.39	-1.20	.
SIBS	86.50	10.17	86.63	7.57	-.08	
SRGS	119.39	18.69	129.09	18.60	-2.90**	
SSQ-6	46.08	19.89	54.47	16.84	-2.64**	.46
Acculturation Amer. Indian	14.88	2.68	13.77	4.48	1.51	

Table 1. Descriptive Statistics and statistical tests for gender differences (continued)

Variable	Males	Males	Females	Females	*t* or X^2 *(df)*	*Cohen's D* or *phi*
	M	***SD***	***M***	***SD***		
Independent Variables						
Acculturation White	7.46	5.74	8.19	5.53	-0.72	
ECRS	2.49	.505	2.73	.52	-2.63**	.51
Dependent Variables						
OQ 45.2	62.42	26.40	55.05	20.77	1.83	
PANAS-P	3.44	.91	3.35	.74	.64	
PANAS-U	1.97	.65	1.88	.66	.70	
Historical Loss Affect (DV)	17.55	9.42	17.30	10.59	.132	
QOLI	1.77	.23	1.81	.21	-.98	

Notes:

Dichotomous variables are indicated by an asterisk (*) in the first column. For these variables (1 = yes) the mean is equivalent to the proportion responding "yes."

For continuous variables *t*-tests ($df = 154$) are reported; effect sizes are reported for significant mean differences as Cohen's *D* (.2 considered small, .5 medium, .8 large).

For dichotomous variables *chi-square* tests are reported; effect sizes are *phi* (<.3 considered weak, .3-.6 moderate, >.6 large).

*$p < .05$ **$p < .01$

Table 2. Intercorrelations of the main variables in the study (Pearson Correlations n = 157)

	Indian	White	Cope	HLAA	Hx. Loss	Hope	BRCS	Com. Mas.	SIBS	SRGS	OQ-45	PAN-P	PAN-U	ECRS	Encult.	QOLI
American Indian	1															
White American	-.108	1														
Cope	.097	.088	1													
Historical Affect	.232**	-.186	.311**	1												
Historical Loss	.278**	.056	.398**	.473**	1											
Hope	.239**	.244**	.213**	-.141	.173*	1										
BRCS	.135	.351**	.375**	-.044	.264**	.644**	1									
Comm. Mast.	.062	.252**	.414**	-.071	.195*	.484**	.619**	1								
SIBS	.132	-.037	.119	.087	.087	.238**	.204**	.268**	1							
SRGS	.175	.231**	.221**	-.003	.192*	.491**	.573**	.357**	.227**	1						
OQ-45.2	-.004	-.070	.122	.467**	.171*	-.292**	-.258**	-.286**	-.224**	-.244**	1					
PANAS-P	.007	.061	.088	.060	.104	.328**	.195*	.299**	.256**	.323**	-.395**	1				
PANAS- U	.037	-.103	.122	.484**	.178*	-.119	-.138	-.117	-.042	-.049	.610**	.029	1			
ECRS	.400**	.125	.088	-.100	.210**	.360**	.524**	.391**	-.018	.537**	-.229**	.146	-.112	1		
Enculturation	.636**	.061	.152	.073	.396**	.347**	.371**	.219**	.103	.360**	-.136	.051	-.083	.667**	1	
QOLI	.135	-.024	.139	.098	.193*	.409**	.389**	.355**	.115	.339**	-.321**	.329**	-.022	.256**	.220**	1
SSQ-6	.160*	.373**	.180*	-.327**	.108	.502**	.511**	.487**	.231**	.418**	-.360**	.175*	-.305**	.411**	.278**	.202*

** Correlation is significant at the 0.01 level (2-tailed test). * Correlation is significant at the 0.05 level (2-tailed).

Note: HLAA = Historical Loss Associated Affect; BRCS = Brief Resiliency Coping Scale; SIBS = Spiritual Involvement & Beliefs Scale; SRGS = Stress Related Growth Scale; OQ-45 = Outcome Questionnaire-45.2; PANAS = Positive & Negative Affect Scale (U= Negative & P = Positive); ECRS = Ethnic Culture Religion & Spirituality Scale; QOLI = Quality of Life Inventory.

Table 3. Principal Components Analysis: Rotated Component Loadings

	Component			
Measure	***Positive Active Coping***	***Cultural Hope***	***Religious & Social Support***	***Communal Resiliency***
Cope-Active Coping	**.680**	.358	.153	.155
Cope-Planning	**.827**	.054	.187	.142
Cope-Suppression of Competing Activities	**.829**	.126	.066	.115
Cope-Restraint Coping	**.630**	-.370	.276	-.052
Cope-Instrumental Social Support Seeking	.401	.198	**.572**	.143
Cope-Emotional Social Support Seeking	.210	.151	**.688**	.226
Cope-Positive Reinterpretation	.386	-.029	**.543**	.326
Cope-Acceptance	.449	-.080	.267	.393
Cope-Religion	.042	.127	**.738**	-.161
Cope-Venting Emotions	.066	-.521	.403	.130
Hope Scale	.298	**.517**	.019	.504
Brief Resiliency Coping Scale (BRCS)	.325	.558	.220	**.469**
Communal Mastery scale	.344	.316	.257	**.578**
Spirituality & Beliefs Scale (SIBS)	-.035	-.146	.028	**.775**
Enculturation	.067	**.727**	.182	-.010
Ethnic Culture Religion & Spirituality (ECRS)	-.044	**.841**	.247	.082
Social Support Questionnaire-6 (SSQ-6)	.207	.487	**-.020**	.584
Percent variance accounted for	32.9	13.8	7.8	6.5

Notes:

See text for details of the derivation of the components and for a description of how the scales used in the analyses were derived and computed. Overall percentage variance accounted for: 61.1%.

For the scales used in the analysis (relevant loadings are bolded in the table):

Positive Active Coping includes variables Cope-Active Coping, Cope-Planning, Cope-Suppression of Competing Activities, and Cope-Restraint Coping

Cultural Hope includes variables Hope Scale, Enculturation Scale, and ECRS.

Religious and Social Support includes variables Cope-Instrumental Social Support Seeking, Cope-Emotional Support Seeking, Cope-Positive Reinterpretation, SSQ-6 (on rational grounds), and Cope-Religion

Communal Resiliency includes variables BRCS, Communal Mastery, and SIBS.

The COPE Acceptance and Venting subscales were not used in computed scales.

Unit weights were used in computing the scales used in the analyses.

Table 4a.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized β**
Positive Life Events					
Step 1					
	Positive Active Coping	.081	.081	<.05	.284
Step 2					
	Positive Active Coping				.284
	All Life Events Stressors	.103	.022	.054	-.149
Step 3					
	Positive Active Coping				.276
	All Life Events Stressors				-.152
	Interaction	.104	.001	.665	-.034

Table 4b.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized β**
Negative Life Events					
Step 1					
	Positive Active Coping	.000	.000	.972	.003
Step 2					
	Positive Active Coping				.002
	All Life Events Stressors	.063	.063	<.05	-.250
Step 3					
	Positive Active Coping				.034

Table 4c.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized *β***
Positive Life Events					
	Step 1				
	Positive Active Coping	.081	.081	<.05	.284
	Step 2				
	Positive Active Coping				.248
	Historical Loss	.107	.026	<.05	.165
	Step 3				
	Positive Active Coping				.252
	Historical Loss				.166
	Interaction	.107	.000	.827	.018

Note: Statistics are reported for each step.

Table 4d.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized β**
Negative Life Events					
Step 1					
	Positive Active Coping	.000	.000	.972	.003
Step 2					
	Positive Active Coping				.081
	Historical Loss	.115	.115	<.05	-.348
Step 3					
	Positive Active Coping				.043
	Historical Loss				-.344
	Interaction	.132	.016	.092	.128

Note: Statistics are reported for each step.

Table 4e.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized β**
Positive Life Events					
Step 1					
	Cultural Hope	.278	.278	<.05	.529
Step 2					
	Cultural Hope				.524
	All Life Events	.279	.000	.816	-.016
Step 3					
	Cultural Hope				.529
	All Life Events				-.008
	Interaction	.280	.001	.616	.036

Note: Statistics are reported for each step.

Table 4f.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized *β***
Negative Life Events					
Step 1					
	Cultural Hope	.037	.037	<.05	.193
Step 2					
	Cultural Hope				.142
	All Life Events	.079	.042	.816	-.210
Step 3					
	Cultural Hope				.172
	All Life Events				-.163
	Interaction	.118	.001	.616	.205

Note: Statistics are reported for each step.

Table 4g.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized *β***
Positive Life Events					
Step 1					
	Cultural Hope	.278	.278	<.05	.528
Step 2					
	Cultural Hope				.511
	Historical Loss	.281	.002	.493	.050
Step 3					
	Cultural Hope				.509
	Historical Loss				.057
	Interaction	.281	.001	.713	.026

Note: Statistics are reported for each step.

Table 4h.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized *β***
Negative Life Events					
Step 1					
	Cultural Hope	.031	.031	<.05	.193
Step 2					
	Cultural Hope				.338
	Historical Loss	.206	.179	<.05	-.447
Step 3					
	Cultural Hope				.334
	Historical Loss				-.434
	Interaction	.206	.002	.538	.046

Note: Statistics are reported for each step.

Table 4i.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized *β***
Positive Life Events					
	Step 1				
	Social & Religious Support	.189	.189	<.05	.434
	Step 2				
	Social & Religious Support				.431
	All Life Events Stressors	.208	.019	.051	-.139
	Step 3				
	Social & Religious Support				.427
	All Life Events Stressors				-.142
	Interaction	.212	.004	.405	-.060

Note: Statistics are reported for each step.

Table 4j.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized β**
Negative Life Events					
Step 1					
	Social & Religious Support	.034	.034	<.05	.184
Step 2					
	Social & Religious Support				.178
	All Life Events Stressors	.094	.060	<.05	-.139
Step 3					
	Social & Religious Support				.183
	All Life Events Stressors				-.242
	Interaction	.099	.005	.356	.071

Note: Statistics are reported for each step.

Table 4k.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized *β***
Negative Life Events					
Step 1					
	Social & Religious Support	.034	.034	<.05	.184
Step 2					
	Social & Religious Support				.337
	Historical Loss	.211	.177	<.05	-.447
Step 3					
	Social & Religious Support				.334
	Historical Loss				-.445
	Interaction	.216	.006	.282	.078

Note: Statistics are reported for each step.

Table 4l.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized β**
Positive Life Events					
Step 1					
	Social & Religious Support	.189	.189	<.05	.434
Step 2					
	Social & Religious Support				.487
	Historical Loss	.194	.006	.303	.080
Step 3					
	Social & Religious Support				.412
	Historical Loss				.081
	Interaction	.198	.004	.384	.063

Note: Statistics are reported for each step.

Table 4m.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized β**
Negative Life Events					
Step 1					
	Communal Resiliency	.296	.296	<.05	.544
Step 2					
	Communal Resiliency				.534
	All Life Events Stressors	.301	.004	.338	-.066
Step 3					
	Communal Resiliency				.537
	All Life Events Stressors				-.069
	Interaction	.301	.000	.775	-.020

Note: Statistics are reported for each step.

Table 4n.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized *β***
Positive Life Events					
	Step 1				
	Communal Resiliency	.038	.038	<.05	.194
	Step 2				
	Communal Resiliency				.159
	All Life Events Stressors	.087	.049	<.05	-.224
	Step 3				
	Communal Resiliency				.152
	All Life Events Stressors				-.216
	Interaction	.089	.003	.516	.052

Note: Statistics are reported for each step.

Table 4o.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized *β***
Negative Life Events					
Step 1					
	Communal Resiliency	.038	.038	<.05	.194
Step 2					
	Communal Resiliency				.290
	Historical Loss	.190	.152	<.05	-.402
Step 3					
	Communal Resiliency				.294
	Historical Loss				-.404
	Interaction	.191	.001	.624	-.036

Note: Statistics are reported for each step.

Table 4p.

Summary of Stepwise Regression Analysis for Combined *Reziliency* Scales Predicting Life Event Stressors (N = 157)

Dependent Variable	**Predictor Variable**	**Overall R^2**	**ΔR^2**	***p***	**Standardized *β***
Positive Life Events					
Step 1					
	Communal Resiliency	.296	.296	<.05	.544
Step 2					
	Communal Resiliency				.522
	Historical Loss	.305	.008	.177	.094
Step 3					
	Communal Resiliency				.525
	Historical Loss				.092
	Interaction	.306	.001	.610	-.035

Note: Statistics are reported for each step.

Figure 1. **Theoretical Model**

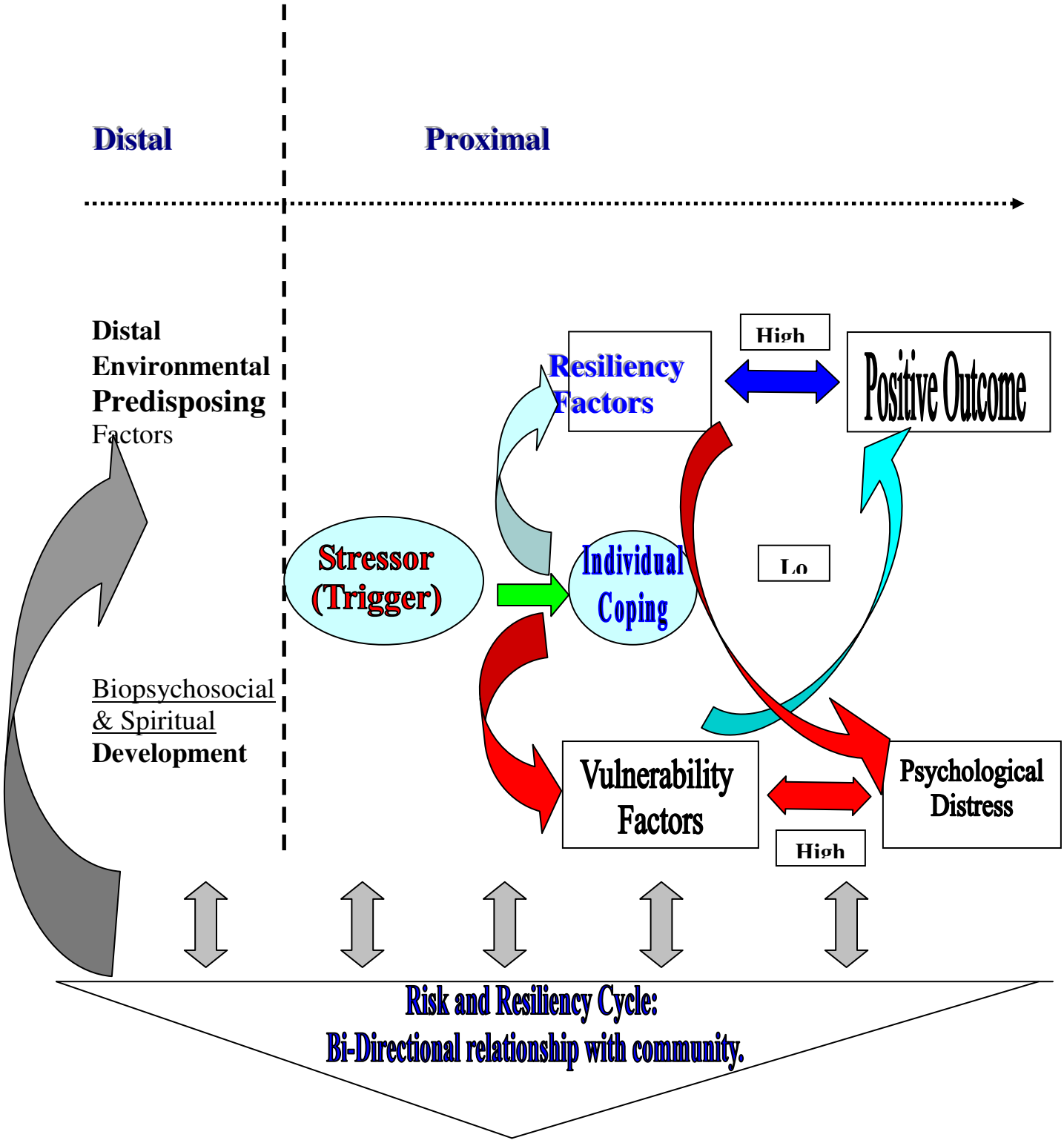


Figure 2.

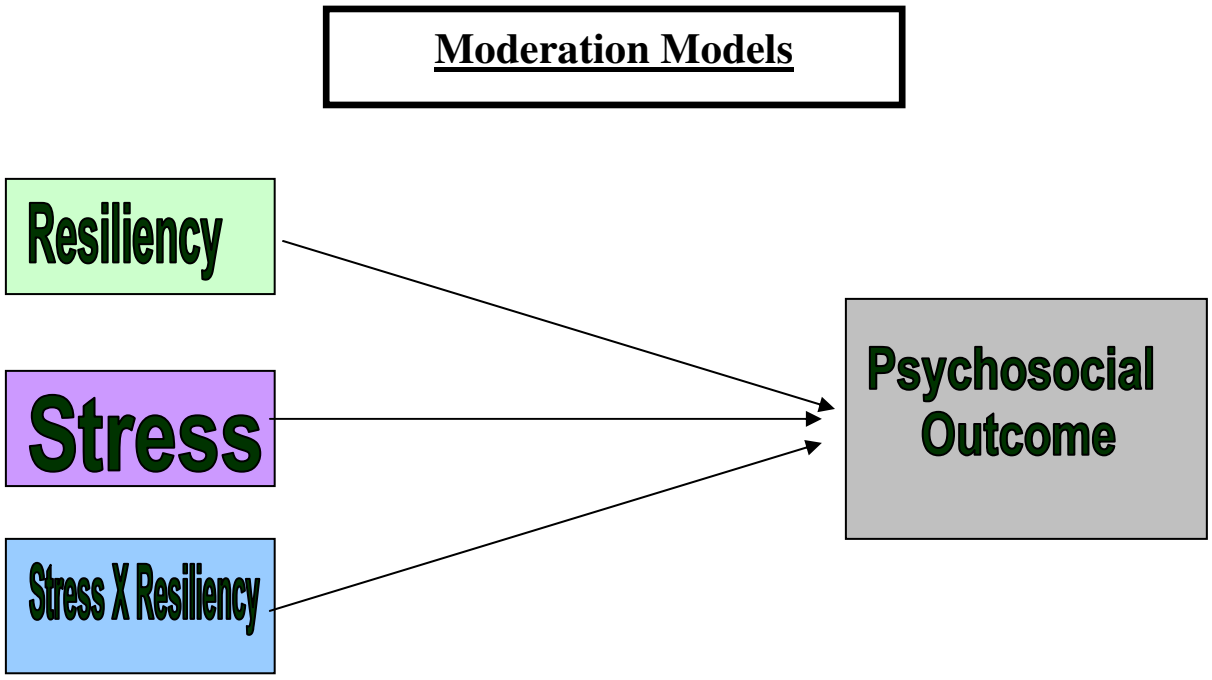
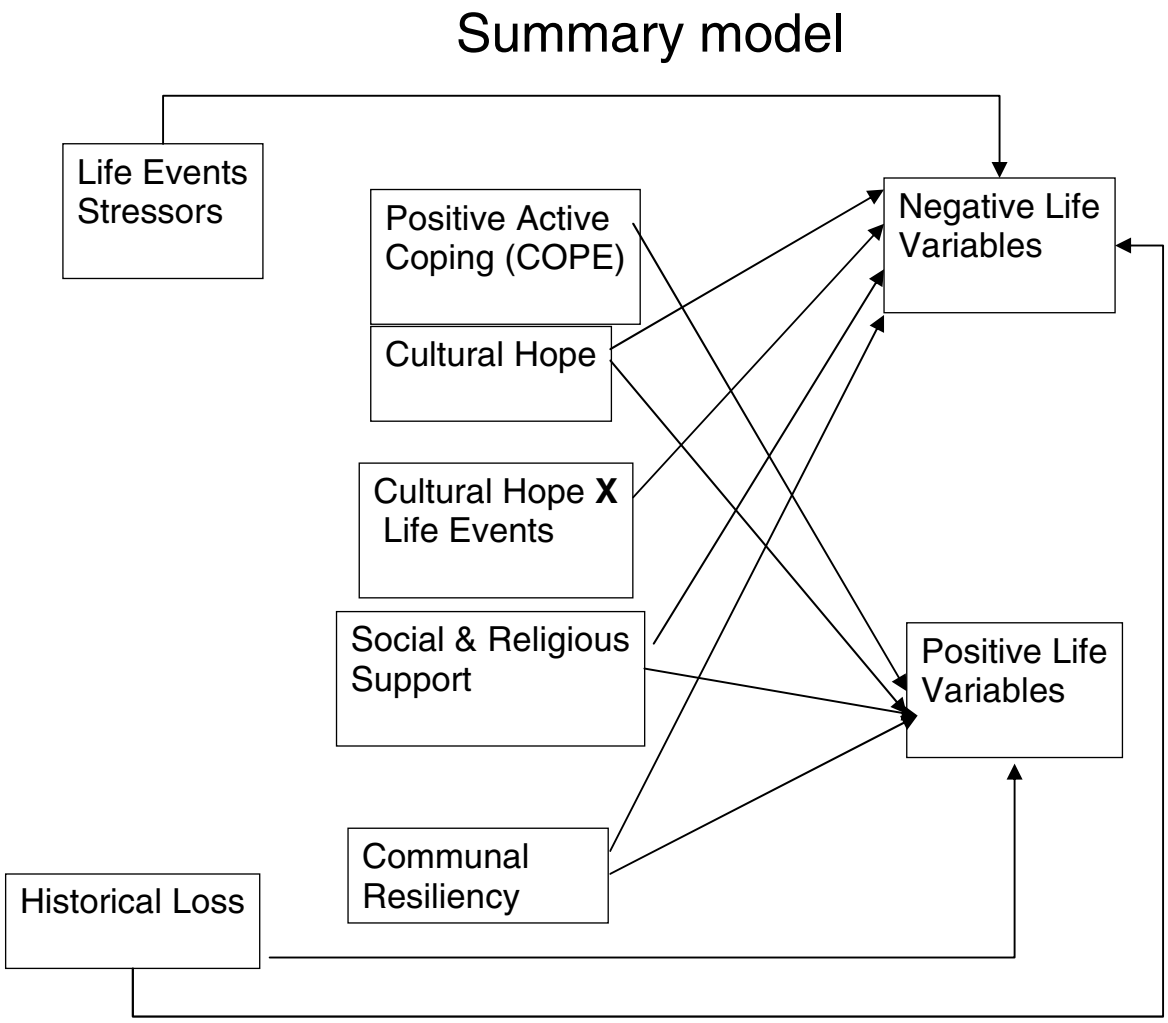

Moderation Models
Resiliency
Stress
Stress X Resiliency
Psychosocial Outcome

Figure 3.


Summary model
Life Events Stressors
Positive Active Coping (COPE)
Cultural Hope
Cultural Hope X Life Events
Social & Religious Support
Communal Resiliency
Historical Loss
Negative Life Variables
Positive Life Variables