

HISTORICAL TRAUMA, COPING, AND POSITIVE MENTAL HEALTH AMONG
AMERICAN INDIANS

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ABSTRACT

American Indians (AI) have survived numerous historical tragedies resulting in posttraumatic stress, unresolved historical grief, and historical trauma (Brave Heart & DeBruyn, 1998). AIs also face a heightened risk for undergoing traumatic and violent life events compared to other ethnic and racial groups (Bassett, Buchwald, & Manson, 2014). Factors such as heightened levels of enculturation and use of traditional coping methods have been linked to more positive mental and behavioral health outcomes; however, positive psychology research focused on racial/ethnic minorities is limited (Rao & Donaldson, 2015). The present study utilized the Indigenist Stress-Coping Model (ISCM) to examine the relationships between historical trauma, enculturation, and positive mental health outcomes among AIs (Walters, Simoni, & Evans-Campbell, 2002). One-hundred and twenty-one participants completed survey materials. Regression analyses demonstrated that enculturation was not found to buffer the effects of historical trauma on positive mental health; however, moderating effects were found for aspects of traditional spirituality on the relationship between historical loss-associated symptoms and integrated well-being. Results

further expand our conceptualization of historical trauma and its impact on AIs. Clinical implications and future directions for research are discussed.

APPROVAL PAGE

The faculty listed below, appointed by the Dean of the School of Education, have examined a dissertation titled “Historical Trauma, Coping, and Positive Mental Health Among American Indians,” presented by Amanda Estelle McLarty, candidate for the Doctor of Philosophy degree, and certify that in their opinion it is worthy of acceptance.

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CHAPTER 1

INTRODUCTION AND REVIEW OF THE LITERATURE

Can their own culture protect American Indians from the effects of trauma?

American Indians (AIs) have suffered a great deal of societal oppression and discrimination, contributing to their heightened levels of alcohol use, suicide rates, and overall reports of mental distress when compared to the general population (Pole, Gone, & Kulkarni, 2008). European colonists forced AIs to shed their cultures, practices, and lands, resulting in an accumulation of stress and trauma throughout AI tribes and nations. Brave Heart and DeBruyn (1998) described this accumulation of stress as *historical loss* or *historical trauma*. AIs' use of traditional spiritual practices and heightened levels of enculturation have been found to have a protective effect against stressors such as trauma and are linked to more positive mental and behavioral health outcomes (Bassett et al., 2014; Kading et al., 2015; Whitbeck, Adams, Hoyt, & Chen, 2004a). Enculturation refers to the process in which an individual identifies with their traditional culture by practicing and adhering to cultural values, beliefs, and/or behaviors in the context of the majority culture (Wolsko, Lardon, Mohatt, & Orr, 2007). Given this context, Chapter 1 provides an overview of the impact of European colonization on AIs. Specifically, this chapter addresses the historical losses and experienced traumas of AIs, and the protective effects of culture on positive mental health using the Indigenist Stress-Coping Model (ISCM).

The present study expanded existing literature on positive psychology related to AIs using the Indigenist Stress-Coping Model (ISCM; Walters, Simoni, & Evans-Campbell, 2002). The ISCM is used as a culturally relevant model when working with and researching AI populations (Walters et al., 2002). The model proposes that the relationship between an

individual's level of trauma (i.e., historical trauma, traumatic life events, etc.) and health outcomes is moderated by cultural factors (i.e., level of enculturation, AI spirituality, etc.; Walters et al., 2002). There is a need for further evaluation of stressors and potential cultural buffers that moderate mental health outcomes using the ISCM (Lawrence, 2012). My purpose is to expand the evidence of culture as a buffer to AI populations and further explore cultural buffers in relation to positive mental health using the ISCM.

European Colonization

American Indians (AI) and Alaska Natives make up 5.4 million of our nation's population, with over 560 federally recognized tribes (United States Census Bureau, 2015). AIs experience poverty and negative mental health outcomes at a rate higher than any other racial or ethnic group in the United States (Sarche & Spicer, 2008). These mental health disparities are largely due to the colonization or arguable genocide of the AI people. AIs are victims of genocide as defined by the United Nations General Assembly's Convention on Genocide from 1948:

Genocide means any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial, or religious group, as such: killing members of the group; causing serious bodily or mental harm to members of the group; deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part; imposing measures intended to prevent births within the group; and forcibly transferring children of the group to another group (UN General Assembly, 1948, p. 277).

AIs have survived numerous historical tragedies that forever affected their way of living. Numerous injustices damaged AIs' cultural, social, economic, physical, and

psychological well-being (BigFoot & Schmidt, 2010). Christian missionaries and boarding schools were one of the many injustices that damaged AIs' well-being. AI children were forced to assimilate to the dominant culture through use of boarding schools starting as early as the late 1700s (Brave Heart & DeBruyn, 1998). AI children were removed from their families and communities. Speaking native languages and wearing traditional clothing was prohibited, abusive behaviors were endured, and shaming messages were delivered leading to dire consequences for subsequent generations (Brave Heart & DeBruyn, 1998). Boarding school survivors were unprepared to raise their own children from a traditional AI perspective, leading to further loss of AI culture (Brave Heart & DeBruyn, 1998).

The AI assimilation process continued throughout the 1830s, when five southern American Indian tribes (Choctaw, Creek, Chickasaw, Seminole, and Cherokee) were forcibly removed from their homes and mandated to walk thousands of miles west towards modern day Oklahoma (Davis, 2008). This removal process, often known as the Trail of Tears, resulted from the Indian Removal Act of 1830 and was initiated for White settlers to gain access to AI lands for farming and assimilation (Davis, 2008). The Act allowed President Jackson authority to divide lands west of the Mississippi river as he saw fit, resulting in the forced relocation and death of thousands of AIs (Davis, 2008).

AI assimilation was unrelenting through government acts such as the Dawes General Allotment Act of 1887, which gave over 60% of AI land to non-Indians, primarily White individuals (Newcomb, 2013). This act was one of many intended to assimilate AIs into the dominant culture (Newcomb, 2013). The Allotment Act not only resulted in the taking of tribal and nation lands, but also furthered the cultural disruptions felt by AIs throughout the European colonization process (Newcomb, 2013).

Post-Traumatic Stress Disorder and Historical Trauma

European contact not only led to AI loss of culture and forfeiture of homes, but also to negative mental and physical health outcomes passed down from generation to generation. These negative health outcomes have taken form as posttraumatic stress disorder, historical trauma, and/or historical unresolved grief (Brave Heart & DeBruyn, 1998). A posttraumatic stress disorder (PTSD) diagnosis requires multiple criteria to be met. An individual must have been exposed to death, threatened death, experienced actual or threatened serious injury, or experienced actual or threatened sexual violence (American Psychological Association, 2013). The traumatic event must be persistently re-experienced, taking form as flashbacks, bad dreams, or frightening thoughts. The individual also avoids trauma-related stimuli, experiences negative thoughts or feelings post-trauma exposure, and experiences trauma-related arousal and reactivity that began or worsened after the trauma occurred (American Psychological Association, 2013).

AIs that faced the colonization process are said to have suffered from posttraumatic stress disorder (Brave Heart & DeBruyn, 1998; Hartmann & Gone, 2016). PTSD symptoms can include: intrusive thoughts, nightmares, flashbacks, emotional distress, negative affect, irritability or aggression, and/or hypervigilance (American Psychological Association, 2013). AIs continue to face problematic rates of trauma exposure with PTSD being described as one of the most serious mental health problems faced by AIs today (Basset et al., 2014). AIs experience a heightened risk for undergoing traumatic and violent life events compared to other ethnoracial groups, which is likely the cause of their elevated rates of PTSD compared to the general U.S. population (Bassett et al., 2014).

Succeeding generations of AIs are thought to suffer from historical trauma or historical loss. The concept of historical trauma emerged through the study of subsequent generations of Jewish Holocaust survivors (Kellermann, 2001). Many holocaust survivors displayed similar symptoms, including: nightmares, sleeplessness, chronic anxiety, flashbacks, continuous depression, and isolation (Barocas, 1975). The combination of symptoms was first labeled “survivor syndrome,” which, surprisingly, was not thought to have negatively impacted the parenting of survivors, and subsequently, their children (Barocas, 1975; Kestenberg, 1980; Neiderland, 1981). Holocaust survivors faced difficulties establishing or re-establishing families due to their negative symptomology. Children of survivors reported higher levels of depression, rage, and inability to emotionally express themselves. This transmission of negative symptoms from parent to child has been linked to the parental emotional suffering brought on by experiencing the Holocaust (Barocas, 1975). This intergenerational transmission of trauma, or collective psychological and emotional suffering spanning across generations, is clearly applicable to AIs, beginning with initial European colonization (Brave Heart & DeBruyn, 1998; Hartmann & Gone, 2016).

One important difference between the experiences of the AIs and of Jewish Holocaust survivors is that AI losses are continuous, and not confined to one tragic period (Whitbeck et al., 2004a). European colonization involved the stripping of AI culture and freedom through forced relocation, starvation, kidnapping, and re-education to majority practices (Whitbeck et al., 2004a). AIs had no place safe to which to return, and many were forced to relocate to reservations. Leaving the reservations was illegal, and residents were dependent on the government for survival (Whitbeck et al., 2004a). Traditional religious/spiritual practices were banned, and AI children were taken and placed in boarding schools. This ethnic

cleansing did not stop after the initial colonization, but carried on for generations, with present day AIs facing daily reminders, such as reservation living, loss of religious/spiritual and healing practices, loss of language, loss of community, health disparities, and continuous discrimination (Brave Heart & DeBruyn, 1998; Whitbeck et al., 2004a). The continued discrimination, oppression, and daily reminders of colonization and ethnic cleansing, all comprise the concept of AI historical trauma (Whitbeck et al., 2004a).

The negative impacts and effects of AI historical trauma have been studied across a variety of research platforms. Whitbeck, Chen, Hoyt, and Adams (2004b) investigated the effects of historical loss, discrimination, and enculturation on levels of alcohol abuse among AI families living on two reservations in the upper Midwest, and on one Canadian First Nation reserve. Participants were taking part in a three-year longitudinal study, the Healing Pathways Project, which was designed to identify culture-based resiliency and risk factors to better inform AI interventions (Whitbeck et al., 2004b). Bivariate correlations indicated moderate to strong, positive correlations between discrimination, historical loss, and enculturation (Whitbeck et al., 2004b). Findings suggest that historical loss, as measured by the Historical Loss and Historical Loss-Associated Symptoms scales, mediates the effects of perceived discrimination on alcohol abuse. Also, that perceived discrimination was strongly and positively associated with historical loss, and historical loss was found to be positively associated with alcohol abuse (Whitbeck et al., 2004b). In other words, negative stressors, such as perceived discrimination, trigger a sense of loss for some AIs, and can increase their risk of developing negative mental health outcomes. Researchers called for use of the Historical Loss and Historical Loss-Associated Symptoms scales with a variety of

reservation-based and urban AIs and pointed out the need for more research focusing on AI culture-specific risk and resiliency factors (Whitbeck et al., 2004b).

Enculturation and its relation to historical loss was also explored in a study conducted by Ehlers, Gizer, Gilder, Ellingson, and Yehuda (2013), evaluating how the frequency of historical loss thinking is influenced by traumatic events experienced, PTSD, cultural identification, percent Native American Heritage, and mental health disorders among AIs recruited from reservations. Roughly one-third of participants indicated that they thought about historical losses “yearly or at special times” and approximately 25% indicated that they thought “daily” about loss of culture, language, and loss of respect for elders” (Ehlers et al., 2013, p. 184). Findings indicate that AIs thinking more often about historical loss, as measured by the Historical Loss Scale and Historical Loss-Associated Symptoms Scale, were associated with higher degrees of Native American Heritage, cultural identification, and higher rates of anxiety/affective disorder and substance dependence (Ehlers et al., 2013). This study provides evidence of an association of higher levels of historical loss thinking and negative mental health outcomes and captures that enculturation is an important factor when looking at these constructs.

Tucker, Wingate, O’Keefe, Hollingsworth, and Cole (2015) continued exploring the concept of historical loss, evaluating the impact of historical loss and historical loss thinking (frequency of thinking about historical loss), specifically linking historical loss to depressive symptoms Tucker et al. (2015) specifically investigated the relationship between historical loss thinking, suicidal ideation, brooding, and reflection, hypothesizing that higher frequencies of historical loss thinking increase brooding and increase suicidal ideation. Participants were self-identified AI students recruited online at a Midwestern university.

Findings indicated positive, small correlations between historical loss thinking, brooding and reflection (Tucker et al., 2015). Results suggest that higher frequency of historical loss thinking, as measured by the Adolescent Historical Loss Scale, was associated with higher instances of brooding on reflection on current levels of distress. In other words, AIs thinking and ruminating about historical loss are focusing on distressing feelings and/or events, which are linked to negative mental health outcomes such as depressive symptoms (Tucker et al., 2015). Tucker et al. encourage more research on AI enculturation factors as related to historical loss and psychological well-being.

Historical loss and historical loss thinking are associated with negative mental health outcomes such as alcohol abuse, depressive symptoms, and suicide ideation (Ehlers et al., 2013; Tucker et al., 2015; Whitbeck et al., 2004b). Furthermore, higher levels of historical loss thinking are associated with higher levels of cultural identification or enculturation among AIs along with increased likelihood of experiencing negative mental health outcomes (Ehlers et al., 2013). These findings suggest that AIs identifying more with their Native culture tend to think more often about historical loss possibly leading to distress and subsequently, negative mental outcomes.

Mental Health Disparities

AI historical loss, or historical trauma, can be used to further explain subsequent generations of AI behavioral health disparities, or responses to historical trauma, including higher rates of alcohol/substance abuse, depression, anxiety, and guilt (Brave Heart & DeBruyn, 1998; Hartmann & Gone, 2016). AIs face mental health disparities with a disproportionate number suffering from mental health disorders compared to the general population of the United States (Gone & Trimble, 2012; McFarland, Gabriel, Bigelow, &

Walker, 2006). AIs suffer from suicide or suicidal behaviors, PTSD, and substance abuse at a much higher rate than other ethnoracial groups within the U.S. (Gone & Trimble, 2012). Seventy per cent of AI and Alaska Native men and 63% of AI and Alaska Native women met criteria for at least one lifetime DSM-IV disorder, compared to 62% and 53% of non-Hispanic white men and women, respectively (Brave Heart et al., 2016). AIs are two to three times more likely to meet criteria for PTSD and 1.5 to 2.5 times more likely to suffer from alcohol dependence compared to the majority U.S. population (Gone & Trimble, 2012).

Despite these mental health disparities, research focusing on trauma and mental health outcomes of AIs is limited, with the majority focusing on male AI Veterans suffering from post-combat related PTSD. AIs reporting both one-month and lifetime prevalence of PTSD was found to be significantly higher for AIs than for White Veterans when controlling for differential war-zone exposure during the Vietnam War (Beals et al., 2002). Furthermore, AI women have been shown to have a heightened risk of experiencing sexual and physical assault in relation to PTSD diagnosis (Walters & Simoni, 2002). Overall, AIs are twice as likely to develop PTSD symptoms as the majority population, arguably due to AIs heightened risk for experiencing traumatic events (Bassett et al., 2014; Manson et al., 2005).

Enculturation

Given the exceedingly high rates of mental health disparities and trauma exposure within the AI community, understanding and incorporation of coping strategies is crucial for this population. When evaluating coping strategies for AIs exposed to trauma, enculturation can be a key factor. Enculturation and acculturation are two of the main cultural absorption processes. Enculturation refers to the process in which an individual identifies with their

traditional culture by practicing and adhering to cultural values, beliefs, and/or behaviors in the context of the majority culture; whereas, acculturation refers to the degree in which an individual identifying as an ethnic minority assimilates into the majority culture (Whitbeck et al., 2004a; Wolsko et al., 2007). Living a more acculturated way of life has been associated with less happiness, heightened substance use, and greater psychosocial stress for AIs (Wolsko et al., 2007). Alternatively, AI belief in and use of traditional Native customs has been shown to be a protective factor against meeting the diagnostic criteria for alcohol abuse, PTSD, and other mental health disorders (Bassett et al., 2014; Lawrence, 2012; Scurfield, 1995; Whitbeck et al., 2004b).

The frequency and engagement in traditional cultural activities, norms, and values determines one's level of enculturation (Wolsko et al., 2007). AIs endorsing higher levels of cultural identification (enculturation) subscribe to the use of old or traditional Native practices such as using Sweatlodges, prayer, and burning cedar, sage, or sweet grass in order to help heal the self. AIs engaging more in tribal culture values and practices are more likely to achieve a sense of balance, making enculturation "essential to the harmony and spirit of tribal people" (Winderowd, Montgomery, Stumblingbear, Harless, & Hicks, 2008, p. 2).

AIs endorsing more enculturated beliefs and values utilize social support as one of their main coping resources (Roh et al., 2015). AIs view social support as collectivistic in nature due to the emphasis placed on the needs of fellow tribal members over the needs of the self. If a community member is struggling mentally, physically, spiritually, emotionally, and/or socially, the other members of the community think that one or more of these areas is out of order, and therefore, equilibrium has been compromised. This concept is part of "Indian Thinking," or seeing all things as related in the universe (Fixico, 2003). Though

tribes and nations carry a variety of beliefs and traditions, AIs raised within or close to their tribal community typically hold more holistic perceptions of their surroundings (Fixico, 2003). When an individual is thought to be off-balance in one or more of these areas, community members may get involved.

Spirituality

An important community-based coping strategy utilized within AI culture is participation in traditional religious or spiritual ceremonies and beliefs. As stated previously, spirituality is one of the essential domains of functioning, an important aspect to traditional AI life needed to maintain equilibrium (Roh et al., 2015). Spirituality is viewed as part of functioning in more traditional AI communities, and is connected to someone's overall well-being (Roh et al., 2015). Practicing more traditional, Native spiritual rituals has been shown to have a protective effect against PTSD, improve life satisfaction, and lower depression symptoms in AIs (Bassett et al., 2014; Holm, 1994; Yoon & Lee, 2004).

An important AI religious event is the Sundance, taking up to nine days, with weeks of preparation (Prue & Rathbone-McCuan, 2012). Leaders, helpers, and Sundancers commit to physical, mental, emotional, and spiritual challenges of the Sundance. Participants engage in indigenous practices, such as Sweatlodge ceremonies to prepare for this annual event (Prue & Rathbone-McCuan, 2012). The Sweatlodge ceremony is used as a mechanism for healing or treatment, taking place in an enclosure like that of a sauna (Prue & Rathbone-McCuan, 2012). A small dome-shaped structure covered in saplings, protected by rugs or blankets is constructed with heated rocks in the center. The rocks are sprinkled with water, as is done in a sauna, increasing the temperature of the enclosure. Within this enclosure, participants of

the ceremony sing and pray, and sometimes incorporate storytelling or herbal remedies to help aid the healing process (Prue & Rathbone-McCuan, 2012).

The Native American Church (NAC) also plays a role in the healing process. The NAC originated in spiritual practice based in indigenous healing, but is considered a religious movement (Prue, 2008; Prue & Rathbone-McCuan, 2012). Services at the NAC include drumming, singing, and consumption of sacramental peyote. Peyote is a small cactus plant that is consumed to better “facilitate the direct experience of spiritual forces that then heal or cure the person” (Prue, 2008, p. 4). The NAC service is used to gain spiritual awareness and enhance overall well-being (Prue & Rathbone-McCuan, 2012).

Villanueva (2003) conducted a study to investigate the effect of practicing traditional religion on mental health outcomes. This study specifically looked at male, Vietnam Veterans from the Hopi tribe and found some interesting results. Hopi Vietnam Veterans initiated into the highest order of their tribe’s religious society reported lower PTSD scores than those less active in traditional religious rituals or roles (Villanueva, 2003). These findings support the idea of cultural factors (religion and spirituality) moderating the relationship between traumatic stress and subsequently PTSD symptomology among AI Veterans. Villanueva (2003) went on to discuss noteworthy differences in the conceptualization of change in AI versus Western cultures. Whereas Western cultures implement behavioral treatment and symptom reduction, AIs focus more on “restoration, renewal, transformation, and rebirth,” more in line with the concept of healing as opposed to treatment (Villanueva, 2003, p. 1378). Through cultural components such as attendance in Native Indian Church services and ceremonies, AIs seek to restore balance of the self and community.

The impact of participation in traditional AI religious ceremonies on mental health was further explored by Csordas, Storck, and Strauss (2008) who analyzed data from the Navajo Health Project (NHP), a ten-year study looking at the therapeutic process among AI healers in three different forms of religious healing: traditional Navajo ceremonies, Native American Church peyote meetings, and Navajo Christian faith healing prayers. The most common diagnoses found in this Navajo sample were alcohol use/abuse, major depression, and PTSD, falling in line with the vast majority of AI psychiatric pathology research (Csordas et al., 2008). However, the occurrence of lifetime PTSD was found to be less recurrent for those who participated in traditional Navajo ceremonies and Native American Church peyote meetings compared to Christian religious practices (Csordas et al., 2008).

AIs participating in traditional cultural activities (e.g., gathered/used traditional medicines, played traditional games, participated in traditional ceremonies, etc.) or reporting strong ethnic identities, endorse higher levels of experienced positive mental health, wellness and overall functioning (Kading et al., 2015; Lardon, Wolsko, Trickett, Henry, & Hopkins, 2016; Smokowski, Evans, Cotter, & Webber, 2014). Based on level of enculturation some AI clients may prefer more traditional methods of healing and others may be rather distrusting of health care providers in general (Winterowd et al., 2008). So, through assessment and measurement of AI enculturation levels, better informed interventions may arise creating more effective healing interventions (Winterowd et al., 2008).

Positive Psychology and Well-Being

The majority of psychology research has focused on negative mental health outcomes or deficits (e.g., depression, anxiety, etc.); however, over the past couple of decades there has been a push to look at positive psychology. Positive psychology is the study of what leads to

human flourishing, or “optimal human functioning” (Grenville-Cleave, 2016, p. 9). Adults with *flourishing* mental health, have high levels of well-being and are filled with positive emotion (Keyes, 2002). There are two main types of well-being: subjective and psychological. Subjective or hedonic well-being focuses on the pursuit of happiness, pleasure attainment, and pain avoidance (Chen, Jing, Hayes, & Lee, 2013; Ryan & Deci, 2001). Psychological or eudaimonic well-being focuses on self-realization, meaning making, and level of functioning (Ryan & Deci, 2001). Psychological well-being is based in eudaimonic theory, stating that happiness is not necessarily equated with well-being (Ryan & Deci, 2001). Eudaimonic well-being comprises an individual’s overall level of functioning and self-realization, falling more in line with the AI concept of holistic wellness and health.

When evaluating wellness, mental health is an important subject matter. Mental health comprises the presence of well-being and the absence of mental illness and/or mental health symptoms (Keyes, 2002). There is evidence that mental health consists of three distinct factors of well-being: emotional, psychological, and social (Keyes, 1998). Emotional well-being comprises an individual’s absence or presence of positive emotions or feelings about life (Keyes, 2002). Psychological well-being is reflected through the presence or absence of self-acceptance, positive interpersonal relationships, intrapersonal betterment, purpose in life, environmental mastery, and self-determination (Keyes, 2002). Finally, social functioning involves the presence or absence of the ability to see society’s potential for growth and a willingness and desire to contribute to one’s community (Keyes, 2002).

A criticism of positive psychology research is its neglect of focus on marginalized populations (Rao & Donaldson, 2015). There is a need for more positive psychology research to focus on diverse populations given that, historically, Whites and Asian Americans

have been overrepresented in the research (Rao & Donaldson, 2015). Rao and Donaldson (2015) conducted a review of theory and literature looking at diversity (i.e., gender, race, and ethnicity) among positive psychology articles, and found only 0.6% of studies reporting indigenous group members as participants. Furthermore, only 2.8% of positive psychology research was focused on issues related to race or ethnicity (Rao & Donaldson, 2015), suggesting a large gap in the literature. A diversification of positive psychology research is needed to further advance the field in terms of inclusiveness of race, ethnicity, and gender (Rao & Donaldson, 2015).

Ryff, Keyes, and Hughes (2003) conducted a study focusing on differences in well-being based on several factors including racial/ethnic status. Specifically, they investigated the relationships between racial/ethnic status, gender, educational standing, and eudaimonic well-being. The sample consisted of participants from the Midlife in the U.S. 1995 national survey, and analyses were based on the 2,485 White, 339 African American/Black, and 235 Mexican American respondents (Ryff et al., 2003, p. 278). Findings suggested that racial/ethnic minority status was a positive predictor for psychological (eudaimonic) well-being (as measured by Ryff's Psychological Well-Being 20-item scale) relative to majority/White status, showing resiliency to race-related adversity; whereas, discrimination was shown to be a negative predictor of psychological well-being (Ryff et al., 2003).

Of the limited AI-based positive psychology and well-being studies, enculturation and positive mental health outcomes showed up multiple times in the literature. AIs participating in traditional cultural activities (e.g., gathered/used traditional medicines, played traditional games, participated in traditional ceremonies, etc.) or reporting strong ethnic identities, endorsed higher levels of experienced positive mental health, wellness and

overall functioning (Kading et al., 2015; Smokowski et al., 2014). Furthermore, Alaska Natives endorsing higher levels of overall wellness indicate greater happiness, health, satisfying social support networks, and are less likely to engage in drug and alcohol use (Lardon et al., 2016). Despite the disproportionate levels of chronic disease, mental illness, discrimination, and historical trauma, AIs remain resilient with a large number experiencing flourishing mental health (Kading et al., 2015).

Indigenist Stress Coping Model

AI perceptions of historical trauma, cultural coping, and positive mental health will be viewed through the lens of the indigenist stress-coping model (ISCM) paradigm (Walters et al., 2002). Walters et al. (2002) proposed the ISCM for research focusing on AIs. They built and expanded upon the work of Dinges and Joos and Krieger to provide a more holistic model (Dinges & Joos, 1988; Krieger, 1999).

Dinges and Joos (1988) evaluated various models of stress, coping, and health and the research implications for AI populations, calling for a model of stress and coping that incorporates buffers of stress in AI populations that go “beyond identification of environmental resources, personal resources, and coping processes” (p. 46). Dinges and Joos (1988) proposed a stress and coping model in which environmental and person factors buffer the effects of stress on health, based on the vulnerability hypothesis. The vulnerability hypothesis argues that internal and external factors moderate the relationship between life events and negative health outcomes (Dinges & Joos, 1988). In addition, the need for examination of positive outcomes post-stress exposure is discussed (Dinges & Joos, 1988).

In relation to studying stress effects on health, Krieger (1999) investigated various study designs and concepts related to the effects of discrimination on health, arguing that the

best approaches address discrimination in relation to social and biological functioning, and that individuals should be evaluated at the historical and societal levels. Krieger (1999) highlighted the importance of identity and self-expression as moderators on the association between discrimination and health.

The ISCM expands on the work of Dinges and Joos (1988) and Krieger (1999), proposing that cultural factors (family/community, spiritual coping, traditional health practices, identity attitudes, and enculturation) moderate the effects of trauma on health outcomes. These traumas, or stressors, can include historical trauma, unresolved grief and mourning, violent crimes, traumatic life events, child abuse/neglect, and discrimination (Walters et al., 2002). The associated health outcomes comprise mental health, alcohol/drug use or abuse, and physical health (Walters et al., 2002; see Appendix A). Furthermore, the ISCM incorporates an indigenist perspective, acknowledging the effects of colonization on AI/ANs (Walters et al., 2002). The majority of stress models reflect Eurocentric values and concepts, which are largely inapplicable to AIs. The use of such models increases the chance of reinforcing majority values on AIs, thereby “unintentionally reenacting colonial processes.” (Walters et al., 2002, p. 105).

Lawrence (2012) examined the relationship between historical trauma, cultural buffers, and negative health outcomes of Choctaw Native American Indians using the ISCM. Respondents included 131 individuals identifying as Choctaw Native American Indian verified by Certificate of Degree of Indian Blood (CDIB), age 21-64, with or without a depression and/or alcohol abuse diagnosis (Lawrence, 2012, p. 50). Historical trauma/loss was found to be moderately, positively correlated with historical loss-associated symptoms, and weakly, positively correlated with culture and spirituality (Lawrence, 2012). Results

indicated significant associations between historical trauma/loss and historical loss-associated symptoms, spirituality and religiosity, and mental health outcomes, showing the moderating effects of cultural factors, as measured by spirituality and religiosity, to negative health outcomes in AIs using the ISCM.

Another study using the ISCM, conducted by Kading et al. (2015), tested the effects of participation in traditional cultural activities on the relationship between discrimination and PMH. Participants included 218 self-identified Ojibwe AI adults with type 2 diabetes mellitus (Kading et al., 2015). Findings indicated that perceived discrimination was negatively associated with PMH ($\beta = -.19$, $p = .02$; as measured by the MHC-SF), and engagement in cultural activities was positively associated with PMH ($\beta = .24$, $p = .00$; Kading et al., 2015). However, they did not find significant moderation effects of cultural activities on discrimination but discuss possible limitations of the study including measurement limitations and limited research and knowledge of the use of positive outcomes in evaluating the effects of stressors and cultural buffers, calling for further research evaluating positive health outcomes in stress process frameworks (Kading et al., 2015).

Given the findings of Lawrence (2012) and Kading et al. (2015) further exploration of the ISCM is needed to evaluate the impact of cultural buffers on the relationship between stressors and health outcomes among AIs. Lawrence (2012) investigated the effects of cultural buffers on the association between historical trauma and negative health outcomes, and Kading et al. (2015) evaluated the effects of cultural buffers on the relationship between perceived discrimination and positive mental health. To this writer's knowledge, the ISCM has yet to be used to investigate the moderating effect of culture on the relationship between historical trauma and positive mental health among AIs.

Summary of Literature Review

In conclusion, AIs have suffered through countless traumas, beginning with European colonization. European colonists forced AIs to shed their cultures, practices, and lands, resulting in an accumulation of stress and trauma (i.e., historical trauma; Brave Heart and DeBruyn, 1998). Use of traditional spiritual practices and heightened levels of enculturation have been found to have a protective effect against stressors such as historical trauma and are linked to more positive mental and behavioral health outcomes for AIs (Bassett et al., 2014; Kading et al., 2015; Whitbeck et al., 2004a). Positive psychology research focused on racial/ethnic minorities is limited, especially with AIs (Rao & Donaldson, 2015). In order to expand existing literature on protective effects of culture and positive psychology related to AIs, this study viewed the relationships between historical trauma, cultural buffers, and PMH using the Indigenist Stress-Coping Model (ISCM; Walters et al., 2002).

Purpose Statement

The ISCM is used as a culturally relevant model when working with and researching AI populations (Walters et al., 2002). The model proposes that the relationship between an individual's level of trauma and health outcomes is moderated by cultural factors (Walters et al., 2002). The ISCM has been used to investigate the effects of cultural buffers on the association between historical trauma and negative health outcomes, and on the relationship between perceived discrimination and positive mental health (Kading et al., 2015; Lawrence, 2012). However, to this writer's knowledge, the ISCM has yet to be used to investigate the moderating effect of culture on the relationship between historical trauma and positive mental health among AIs. There is a need for further evaluation of stressors and potential cultural buffers that moderate mental health outcomes, specifically positive mental health

outcomes, using the ISCM (Lawrence, 2012). Mental health is often evaluated in terms of individual deficits and disparities, which are only half of the full range of mental health outcomes (Aneshensel, 2005). The re-focusing on PMH outcomes can allow for better understanding of individual or community strengths and cultural protective factors to improve our conceptualization and mental health treatment of various groups (Kading et al., 2015). Therefore, the purpose of this study was to expand the evidence of culture as a buffer to AI populations, and further explore cultural buffers in relation to PMH using the ISCM.

CHAPTER 2

MANUSCRIPT

Introduction and Review of the Literature

American Indians (AI) have survived numerous historical tragedies resulting in posttraumatic stress, unresolved historical grief, and historical trauma (Brave Heart & DeBruyn, 1998). Factors such as heightened levels of enculturation and use of traditional coping methods have been linked to more positive mental and behavioral health outcomes. However, positive psychology research focused on racial/ethnic minorities is limited, especially with AIs (Rao & Donaldson, 2015). This study aimed to add to existing research focusing on positive AI psychology, specifically relating to historical trauma and cultural coping examined through the lens of the Indigenist Stress-Coping Model (ISCM; Walters et al., 2002). Given this context, Chapter Two explored historical trauma, cultural coping, and positive mental health (PMH) among AIs, providing a brief literature review followed by the data analyses.

Trauma and Historical Loss

AIs have survived numerous historical tragedies that forever affected their way of living. Christian missionaries and boarding schools, the Indian Removal Act, and the Dawes Allotment Act all damaged AIs' cultural, social, economic, physical, and psychological well-being (BigFoot & Schmidt, 2010). European colonists forced AIs to shed their cultures, land, community members, and overall way of life. Colonists also removed AIs from their lands and forced them to live in restricted, inhumane conditions. European contact not only led to AI disease, death, loss of culture, and forfeiture of homes, but also to negative mental and physical health outcomes passed down from generation to generation. These negative mental

health outcomes have taken form as PTSD, historical trauma, and/or historical unresolved grief (Brave Heart & DeBruyn, 1998).

AIs that faced the colonization process are said to have suffered from posttraumatic stress disorder (PTSD; Brave Heart & DeBruyn, 1998). Succeeding generations of AIs are thought to suffer from historical trauma or historical loss. Historical trauma refers to the pervading sense of pain felt by subsequent generations of AIs based in the atrocities and incomplete mourning of their ancestors (Brave Heart & DeBruyn, 1998). The concept of historical trauma emerged through the study of subsequent generations of Jewish Holocaust survivors (Kellermann, 2001). Many holocaust survivors presented a combination of symptoms (nightmares, sleeplessness, chronic anxiety, flashbacks, continuous depression, and isolation) labeled “survivor syndrome” (Barocas, 1975). The negative mental health outcomes faced by Holocaust survivors is thought to have negatively affected their parenting, and subsequently their children (Barocas, 1975; Kestenberg, 1980, Neiderland, 1981). Children of survivors reported higher levels of depression, rage, and inability to emotionally express themselves. The transmission of negative symptoms from parent to child is thought to be directly linked to parental emotional suffering resulting from the Holocaust (Barocas, 1975).

This intergenerational transmission of trauma, or collective psychological and emotional suffering spanning across generations, is clearly applicable to AIs, beginning with initial European colonization (Brave Heart & DeBruyn, 1998; Hartmann & Gone, 2016). The impact of colonization is faced by succeeding generations of AIs, with daily reminders such as reservation living, loss of religious/spiritual and healing practices, loss of language,

loss of community, health disparities, and continuous discrimination (Brave Heart & DeBruyn, 1998; Whitbeck et al., 2004a).

Historical loss and historical loss thinking (the frequency in which an individual thinks about historical losses) are associated with negative mental health outcomes such as alcohol abuse, depressive symptoms, and suicide ideation for AIs (Ehlers et al., 2013, Tucker et al., 2015; Whitbeck et al., 2004b). Whitbeck et al. (2004b) provided evidence for moderate to strong, positive associations between historical loss and discrimination. Furthermore, higher levels of historical loss thinking are associated with higher levels of cultural identification or enculturation among AIs along with increased likelihood of experiencing negative mental health outcomes (Ehlers et al., 2013). The multivariate regression analyses showed that those endorsing “high identification with the American Indian way of life” also had higher scores on the Historical Loss Scale ($\beta = 0.14$, $t = 2.48$, $p = 0.013$; Ehlers et al., 2013, p. 184). These findings suggest that AIs identifying more with their Native culture tend to think more about historical loss possibly leading to distress and subsequently, negative mental outcomes.

Enculturation

American Indians move forward despite these atrocities, coping through use of traditional Native practices and religious or spiritual customs. When evaluating coping strategies for AIs exposed to trauma, enculturation can be a key factor. Enculturation and acculturation are two of the main cultural absorption processes. Enculturation refers to the process in which an individual identifies with their traditional culture by practicing and adhering to cultural values, beliefs, and/or behaviors in the context of the majority culture; whereas, acculturation refers to the degree in which an individual identifying as an ethnic

minority assimilates into the majority culture (Whitbeck et al., 2004a; Wolsko et al., 2007). Living a more acculturated way of life has been associated with less happiness, heightened substance use, and greater psychosocial stress (Wolsko et al., 2007). Alternatively, belief in and use of traditional Native customs has been shown to be a protective factor against meeting the diagnostic criteria for alcohol abuse, PTSD, and other mental health disorders (Bassett et al., 2014; Lawrence, 2012; Scurfield, 1995; Whitbeck et al., 2004b). Kading et al. (2015) reported that engagement in AI cultural activities was positively associated with positive mental health ($\beta = .24, p = .00$). The frequency and engagement in traditional cultural practices, norms, and values determines one's level of enculturation (Wolsko et al., 2007). AIs living a more enculturated life endorse the use of old or traditional Native practices such as, using Sweatlodges, prayer, and burning cedar, sage, or sweet grass in order to help heal the self.

Spirituality

Spirituality is considered a “private phenomenon” acknowledging an individual's subjective, personal experience with the divine or transcendent (Roberts, 2015, p. 2). A community-based coping strategy utilized within AI culture is spirituality and Native spiritual or religious traditions or ceremonies. Spirituality is viewed as part of functioning in more traditional AI communities; it is an essential component of AI life, and is connected to someone's overall well-being (Roh et al., 2015). Practicing more traditional, Native spiritual rituals has been shown to have a protective effect against PTSD (Bassett et al., 2014). A large majority of AIs believe that tribal ceremonies aid in the healing process and help alleviate PTSD symptoms (Holm, 1994). American Indian and Alaska Native men initiated into the highest order of their tribe's religious society reported lower PTSD scores than those

less active in traditional religious rituals or roles (Villanueva, 2003). Furthermore, the occurrence of lifetime PTSD was found to be less recurrent for those who participated in traditional, non-Christian religious practices (Csordas et al., 2008).

An important AI religious event is the Sundance, which is a ceremony taking up to nine days with weeks of preparation (Prue & Rathbone-McCuan, 2012). Leaders, helpers, and Sundancers commit to physical, mental, emotional, and spiritual challenges of the Sundance. Participants engage in indigenous practices, such as Sweatlodge ceremonies to prepare for this annual event (Prue & Rathbone-McCuan, 2012). The Sweatlodge ceremony is as a mechanism for healing or treatment, taking place in an enclosure similar to that of a sauna (Prue & Rathbone-McCuan, 2012). A small dome-shaped structure covered in saplings, protected by rugs or blankets is constructed with heated rocks in the center. The rocks are sprinkled with water, as is done in a sauna, increasing the temperature of the enclosure. Within this enclosure, participants of the ceremony sing and pray, and sometimes incorporate storytelling or herbal remedies to help aid the healing process (Prue & Rathbone-McCuan, 2012).

The Native American Church (NAC) also plays a role in the healing process. The NAC originated in spiritual practice based in indigenous healing, but is considered a religious movement (Prue, 2008; Prue & Rathbone-McCuan, 2012). Services at the NAC include drumming, singing, and consumption of sacramental peyote. These services are used to gain spiritual awareness and enhance overall well-being (Prue & Rathbone-McCuan, 2012).

AIs participating in traditional cultural activities, such as Sundance ceremonies and the NAC, or reporting strong ethnic identities, endorse higher levels of experienced PMH, wellness and overall functioning (Kading et al., 2015; Lardon et al., 2016; Smokowski et al.,

2014). Based on level of enculturation, some AI clients may prefer more traditional methods of healing and others may be rather distrusting of health care providers in general (Winterowd et al., 2008). Thus, through assessment and measurement of AI enculturation levels, better informed interventions may arise creating more effective healing interventions (Winterowd et al., 2008).

Positive Mental Health and Well-Being

Adults with *flourishing*, or complete mental health have high levels of well-being and are filled with positive emotion (Keyes, 2002). There are two main types of well-being: subjective and psychological. Subjective, or hedonic, well-being focuses on the pursuit of happiness, pleasure attainment, and pain avoidance (Chen, Jing, Hayes, & Lee, 2013; Ryan & Deci, 2001). Psychological, or eudaimonic, well-being focuses on self-realization, meaning making, and level of functioning (Ryan & Deci, 2001). This study will focus on aspects of psychological well-being, rather than subjective well-being, in that it best encompasses AIs holistic view of health and wellness focusing on meaning making, interpersonal relationships, betterment, and purpose (Keyes, 2002; Ryan & Deci, 2001).

The study of positive mental health (PMH) and well-being falls inside the field of positive psychology. Positive psychology focuses on positive aspects of mental health instead of focusing on pathology or deficits of the human condition (Rao & Donaldson, 2015). A criticism of positive psychology research is its neglect of focus on marginalized populations (Rao & Donaldson, 2015). There is a need for more positive psychology research to focus on diverse populations given that historically, Whites and Asian Americans have been overrepresented in the research (Rao & Donaldson, 2015). Rao and Donaldson (2015) conducted a review of theory and literature looking at diversity (i.e., gender, race, and

ethnicity) among positive psychology articles, and found only 0.6% of studies reporting indigenous group members as participants (p. 275). Furthermore, only 2.8% of positive psychology research was focused on issues related to race or ethnicity (Rao & Donaldson, 2015, p. 277), suggesting a large gap in the literature. A diversification of positive psychology research is needed to further advance the field in terms of inclusiveness of race, ethnicity, and gender (Rao & Donaldson, 2015).

Along with the need for diversification, there is also a call for more studies to focus on the strengths and resiliencies of minority populations (Rao & Donaldson, 2015). Of the limited, AI-based research efforts, enculturation and positive mental health outcomes are primary topics of interest. AIs participating in traditional cultural activities, or reporting strong ethnic identities, endorse high levels of experienced positive mental health and wellness (Kading et al., 2015; Lardon et al., 2016; Smokowski et al., 2014). Despite the disproportionate levels of chronic diseases, mental illness, high levels of discrimination, and historical trauma, AIs remain resilient with a large number experiencing flourishing mental health (Kading et al., 2015).

Indigenist Stress-Coping Model

Dinges and Joos (1988) proposed a stress and coping model in which environmental and person factors buffer the effects of stress on health, based on the vulnerability hypothesis, which argues that internal and external factors moderate the relationship between life events and negative health outcomes (Dinges & Joos, 1988). In relation to studying stress effects on health, Krieger (1999) investigated various study designs and concepts related to the effects of discrimination on health, arguing that the best approaches will address discrimination in relation to social and biological functioning, and that individuals

should be evaluated at the historical and societal levels. Walters et al. (2002) built and expanded on the work of Dinges and Joos (1988) and Krieger (1999) to provide a more holistic model, the Indigenist Stress-Coping Model (ISCM). The ISCM proposes that cultural factors (family/community, spiritual coping, traditional health practices, identity attitudes, and enculturation) moderate the effects of trauma on health outcomes. These traumas, or stressors, can include historical trauma, unresolved grief and mourning, violent crimes, traumatic life events, child abuse/neglect, and discrimination (Walters et al., 2002). The associated health outcomes comprise mental health, alcohol/drug use or abuse, and physical health (Walters et al., 2002; see Appendix A). The ISCM was used to evaluate well-being outcomes, historical trauma, and cultural coping among AIs.

Present Study

Mental health is often evaluated in terms of individual deficits and disparities, which are only half of the full range of mental health outcomes (Aneshensel, 2005). The re-focusing on positive mental health (PMH) outcomes can allow for better understanding of individual or community strengths and cultural protective factors to improve our conceptualization and mental health treatment of various groups (Kading et al., 2015). To examine how AIs cope with historical trauma-related stress, historical trauma, cultural coping (level of enculturation and behavioral and global belief in spirituality), and PMH outcomes were viewed through the ISCM (Walters et al., 2002). Given that moderate to strong, positive associations have been made between historical loss and enculturation (Whitbeck et al., 2004b), and engagement in cultural activities has been shown to be significantly, positively associated with positive mental health ($\beta = .24, p = .00$; Kading et al., 2015), this study aimed to bridge the gap in research between historical trauma, cultural

coping mechanisms, and positive mental health. The purpose of this study was to expand the evidence of culture as a buffer to AI populations and further explore cultural buffers in relation to PMH using the ISCM. The overall hypothesis was that the data will fit the model.

Specific hypotheses included:

Hypotheses

1. Historical trauma/loss and historical loss-associated symptoms are expected to be inversely correlated with PMH.
2. Level of enculturation is expected to moderate the effect of historical trauma/loss and historical loss-associated symptoms on PMH, such that higher level of enculturation will lessen the effects of historical trauma/loss and historical loss-associated symptoms on PMH.
3. Behavioral practice and global belief in traditional spirituality are expected to moderate the effect of historical trauma/loss and historical loss-associated symptoms on PMH, such that greater use of behavioral practice and increased global belief in traditional spirituality will lessen the effects of historical trauma/loss and historical loss-associated symptoms on PMH.
4. Level of enculturation is expected to moderate the effect of historical trauma/loss and historical loss-associated symptoms on emotional, psychological, and social well-being (i.e., the facets of PMH), such that higher level of enculturation will lessen the effects of historical trauma/loss and historical loss-associated symptoms on emotional, psychological, and social well-being.
5. Behavioral practice and global belief in traditional spirituality are expected to moderate the effect of historical trauma/loss and historical loss-associated

symptoms on emotional, psychological, and social well-being, such that greater use of behavioral practice and increased global belief in traditional spirituality will lessen the effects of historical trauma/loss and historical loss-associated symptoms on emotional, psychological, and social well-being.

Method

Participants

The sample included individuals self-identifying as American Indian/Indigenous or as having American Indian/Indigenous heritage, age 18 and over, that were residing in the United States. A power analysis using the G*Power tool available online was conducted in order to determine an appropriate sample size for this study. The resulting sample size recommendation was approximately 200 participants to achieve power of .80 for a .05 significance level, assuming weak to moderate effect size (i.e., $R^2 = .01 - .09$). It is noted that this sample did not achieve power of .80 (see Discussion).

A total of 156 individuals responded to the survey. Of those, 106 (87.6%) completed the survey online, and 15 (12.4%) completed the survey in-person. One participant was removed from the data due to not meeting the eligibility requirements. Furthermore, cases with more than 20% missing data were deleted resulting in a total of 121 cases that were analyzed (Parent, 2013). Two respondents did not report age, and the remaining 119 participants ranged in age from 18 to 71 ($M = 38.60$ years, $SD = 12.93$). Additionally, four individuals declined to report gender, of the remaining participants, 78 (64.5%) identified as women and 39 (32.2%) identified as men (see Table 1).

All 121 participants indicated identifying as Indigenous/American Indian or as having Indigenous/American Indian heritage. Participants were asked to fill in their racial/ethnic

identity in their own words. Race/ethnicity data were available for 121 respondents with a wide variety of American Indian and multi-racial identities reported: 59 participants (48.8%) identified solely as American Indian/Native American or a member of a tribe, 59 participants (48.8%) indicated multiple racial/ethnic identities, and three participants (2.5%) reported other or declined to fill out their racial/ethnic identities. Tribal affiliation and/or membership also varied greatly with 49 reported tribes. The largest number of individuals from a particular tribe was 29 (24.0%) reporting membership with the Choctaw Nation of Oklahoma (see Table 2).

The majority of participants reported living in an urban ($N = 40$; 33.1%) or suburban area ($N = 37$; 30.6%). When asked to identify relationship status, the majority of participants reported being married ($N = 56$, 46.3%) or single ($N = 36$; 29.8%). Religious/Spiritual affiliation varied greatly across participants, with a large number of individuals identifying as Native/Traditional ($N = 23$; 19.0%; see Table 3).

All 121 participants indicated employment status. The majority reported being employed full-time ($N = 68$; 56.2%). Participants reported highest degree completed with larger numbers indicated completion of a bachelor's degree ($N = 33$; 27.3%) or master's degree ($N = 24$; 19.8%). The majority of participants reported overall household income as less than \$80,000 ($N = 91$; 75.2%; see Table 4).

Procedure

A non-experimental descriptive design was utilized. Participants were recruited online using American Indian (AI) and Native listservs (e.g., American Indian and Alaska Native Society of Indian Psychologists), social media outlets (i.e., sub-Reddit pages), and snowball sampling. In-person recruitment efforts occurred at a local American Indian Center

that provides services and promotes traditional and cultural values to the American Indian community. Participants were informed of the inclusion criteria (i.e., age 18 years or older, U.S. resident, and self-reported AI heritage) on the first page of the online and in-person informed consent sheet. The purpose, methods, and potential risks of the study to the participants were explained, and informed consent from all participants was obtained. In-person participants completed survey materials in packet format. Once survey materials were completed, this researcher then picked up all survey packets and manually entered data into Qualtrics Survey Software. Online participants completed survey materials through the use of Qualtrics Survey Software. The confidentiality of participant data were safeguarded through the use of electronic, password protected storage, and storage of physical information in a locked cabinet to which only my advisor and I had access. Participants filled out survey material anonymously to ensure privacy and confidentiality.

Participants completed a short demographic questionnaire, the Historical Loss Scale (HLS), Historical Loss-Associated Symptoms Scale (HLAS), American Indian Enculturation Scale (AIES), Native American Spirituality Scale (NASS), and the Mental Health Continuum–Short Form (MHC-SF). Total completion time took approximately 10 – 20 minutes for participants. Prior to starting the survey, participants were instructed of the purpose and estimated time for completion. Standard instructions were provided before beginning the survey materials, and participants were encouraged to complete each item and to read carefully, and reassured that their responses would remain completely confidential, that participation was completely voluntary, and that they could exit the study at any time. Participants were each assigned an identification number used in a random number generator online to select 15 participants that were each awarded a \$20 Amazon e-gift card.

Measures

Demographics. Participants were asked to answer basic demographic questions related to the following: age, tribal/nation affiliation, gender, race/ethnicity, relationship status, employment status, level of education, income, and area of living (see Appendix B).

Historical trauma or historical loss. Historical trauma or historical loss refers to the transgenerational transference of American Indian culture-based trauma (Tucker et al., 2015). Historical loss was assessed using a two-part approach: The Historical Loss Scale and the Historical Loss-Associated Symptoms Scale (Whitbeck et al., 2004a). The Historical Loss Scale (HLS) was created through the use of Native elder focus groups. Multiple focus groups were conducted with a total of 8 Native elders age 55 and over in order to establish content validity of the scale. The finalized HLS consists of 12 items. Each item represents a type of loss (e.g., loss of land, language, trust, self-respect, culture, etc.). The items are rated on how often the participant experiences the loss on a scale from one (several times a day) to six (never). The items were recoded so that a high value indicates high historical loss (see Appendix C).

The Historical Loss-Associated Symptom Scale (HLASS) is made up of an additional 12 items, with each item representing a potential symptom of historical loss identified by tribal elders. The symptoms include anger, anxiety, shame, isolation, rage, feeling uncomfortable around white people, etc. Participants rate the frequency of these symptoms on a scale ranging from 1 (never) to 5 (always). Higher scores indicate higher frequency of experienced emotional responses to losses. The HLS and the HLASS show excellent reliability evidence with reported Cronbach's alpha coefficients of .94 for the HLS and .90 for the HLASS (Whitbeck et al., 2004a; see Appendix D).

Enculturation. The American Indian Enculturation Scale (AIES) consists of 17 self-report items that reflect “common experiences of traditional AI people across a variety of tribes” (Winderowd et al., 2008, p. 6). Participants indicate how much they have participated in the given item or activity, using a five-point scale ranging from 1 (not at all) to 5 (a great deal) (Winderowd et al., 2008), with higher scores indicating higher frequency in participation in traditional AI activities. The AIES was administered across three samples: clinical sample from tribal counseling center, non-clinical sample from university and community members, and an additional non-clinical sample consisting of university students and community members. All participants indicated a deep connection to tribal ways and were from over 20 tribes (Winderowd et al., 2008). The AIES demonstrated high internal consistency across all three samples, with Cronbach alphas over .90. A principal components analysis was conducted on the AIES items, demonstrating item loadings of .40 or higher showing evidence for construct validity (Winderowd et al., 2008). Pearson correlational analyses assessing the relationship between the AIES and measures of acculturation provided evidence for convergent and discriminant validity. AIES scores were significantly related to behavioral and spiritual practices of acculturation showing evidence for convergent validity, and the AIES correlated negatively with the Native American Acculturation Scale showing evidence for discriminant validity (Winderowd et al., 2008). The AIES was used in this study to evaluate participants’ levels of enculturation (see Appendix E).

Spirituality. The Native American Spirituality Scale (NASS) was used to measure behavioral spiritual practices and global tribal worldviews and beliefs (Greenfield et al., 2015). The NASS was created through modification of the Daily Spiritual Experience Scale (DSES), which measures “day to day spiritual experiences for many people” (Underwood &

Teresi, 2002, p. 23). The DSES was presented to AI Southwestern, tribal members who felt the measure was not reflective of traditional spirituality. The DSES was then modified based on Tribal Council recommendation and consultation into the NASS (Greenfield et al., 2015). NASS consists of 12 items assessing current experiences of tribal-specific spirituality (Greenfield et al., 2015). Items are ranked on a scale ranging from 0 to 5 (0 = never or almost never, 1 = once in a while, 2 = some days, 3 = most days, 4 = every day, 5 = many times a day). Factor analysis showed improved fit for a two-factor structure, with eight items falling under Factor 1 (behavioral spiritual practices; items 4, 5, 6, 7, 8, 9, 11, and 12) and four items falling under Factor 2 (global worldviews and beliefs; items 1, 2, 3, and 10; Greenfield et al., 2015). The NASS showed evidence for construct validity through demonstrated associations of the two NASS factors (behavioral and global beliefs) (Greenfield et al., 2015). The NASS also demonstrated decent reliability with Cronbach's alpha of .86 for the Behavioral Spiritual Practices subscale and .79 for the Global Worldviews and Beliefs subscale. Both subscales were used to calculate participant behavioral spiritual practices and global beliefs. Additionally, one item was added, after the NASS, intended to measure participant frequency of engaging in traditional spiritual/religious activities compared to other tribal members (i.e., spiritual frequency). Participants were asked to rate their participation on a five-point scale (i.e., much more, somewhat more, about the same, somewhat less, and much less). The purpose of this item was to allow participants a chance to indicate potential differences in how frequently they participate in spiritual/religious practices compared to other tribal members (see Appendix F).

Positive mental health. Keyes' (2009) Mental Health Continuum – Short Form (MHC-SF) was used to assess emotional, psychological, and social well-being. The MHC-SF has been used to examine positive mental health functioning within AI communities (Kading et al., 2015). The MHC-SF consists of 14 items representing facets of well-being. Participants are asked to indicate how often in the past month they have felt a particular facet of well-being on a scale ranging from 0 to 5 (0 = never, 1 = once or twice, 2 = about once a week, 3 = about 2 or 3 times a week, 4 = almost every day, 5 = every day). Three items (happy, interested in life, and satisfied) are used to measure emotional well-being (i.e., hedonic well-being). Six items, one from each of Ryff and Keyes (1995) psychological well-being measure (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance), are used to assess psychological well-being. Finally, five items, one from each of the five dimensions of Keyes' (1998) measure of social well-being (social-acceptance, social actualization, social contribution, social coherence, and social integration), are used to assess social well-being. The psychological and social well-being items measure positive functioning symptoms. According to Keyes (2002), adults with *flourishing*, or complete mental health have high levels of well-being and are filled with positive emotion. In order to score at the flourishing level, participants must indicate experiencing one of the three emotional well-being items 'every day' or 'almost every day,' and at least six of the eleven items representing psychological and social positive functioning 'every day' or 'almost every day' (Keyes, 2009). Participants reporting 'never' or 'once or twice' in the past month (i.e., low levels) on at least one item of emotional well-being and indicating low levels on at least six items of psychological and/or social well-being are categorized as languishing mental health. Participants that do not fall within the flourishing

nor languishing categories are categorized as having moderate mental health (Keyes, 2009). The MHC-SF shows evidence for excellent internal consistency and discriminant validity in adolescents and adults (Keyes, 2009). Furthermore, the three-factor structure of the MHC-SF has been confirmed in a variety of samples: US adults (Gallagher, Lopez, & Preacher, 2009), college students (Robitschek & Keyes, 2009), and adolescents (Keyes, 2009). Additionally, the MHC-SF, as measured by the three facets of well-being, demonstrates decent reliability with Cronbach's alpha over .80 (Keyes, 2009; see Appendix G). For the purpose of this study, PMH will be evaluated in terms of a single, continuous score for Hypothesis 1 and as categorical scores (i.e., emotional, psychological, and social well-being) for Hypotheses 2, 3, 4, and 5.

Data Analyses

Preliminary Analyses

Missing data. Missing data were assessed at the scale-level. Of the participants with missing data, one was missing data on a second measure. Across all measures, there were 14 (11.6%) participants missing data. Across all items (69) and participants (69 items X 121 participants = 8,349 data points), there were 17 missing data points (0.2%). These 17 data points were missing completely at random, Little's MCAR test: $\chi^2 = 557.119$, $df = 541$, $p = .307$. Expectation maximization was used to impute the data, resulting in 121 complete cases (see Table 5 in the Appendix).

Reliability. Next, I examined the internal reliability of the scales and their corresponding subscales. All scales demonstrated excellent reliability with Cronbach's alpha estimates over .90 (i.e., HLS = .92 HLASS = .91, AIES = .93, NASS = .90, MHC-SF = .93). The NASS behavioral spirituality subscale demonstrated good internal reliability with a

Cronbach's alpha of .88; however, the NASS spirituality beliefs subscale was lower, but still adequate, at .74. The MHC-SF subscales all demonstrated good reliability estimates (i.e., emotional well-being = .88, social well-being = .87, and psychological well-being = .89).

Normality. In order to assess the normality of distributions of the quantitative variables, histograms for the HLS, HLASS, AIES, NASS, and MHC-SF were examined separately. All appeared normal in distribution. Univariate descriptives and normality were then assessed. Skewness and kurtosis values fell within acceptable limits ($< |3.00|$ and $< |10.00|$; Kline, 2016). Z-scores were then calculated for composite scale scores in order to assess for univariate outliers (i.e., scores falling outside of 3.3 standard deviations from the mean; Warner, 2012). No participants were identified as univariate outliers.

Assumptions of multiple regression. Next, Pearson's correlations were evaluated to assess for collinearity. Using the absolute value of .90 as a guideline, there was no collinearity detected between variables (Tabachnick & Fidell, 2007). Multivariate outliers were assessed using Mahalanobis distance at $p < .001$. The Mahalanobis distance is evaluated at asymptotic chi-squared (asc^2) (5) = 20.515 (Tabachnick & Fidell, 2007) for five predictor variables (HLS, HLASS, AIES, NASS behavioral spirituality, NASS spirituality beliefs). No participants were identified as multivariate outliers. Bivariate scatterplots were then created in order to assess linearity. All independent variables, except for historical loss (very weak $R^2 = .004$), appeared to have linear relationships with the dependent variable (i.e., positive mental health as measured by the MHC-SF). Next, the bivariate scatterplots were examined to determine homoscedasticity of residuals. It appeared the assumption of homoscedasticity of variance was met across standardized predicted values of the dependent variable (PMH).

Factor Structures

Exploratory factor analysis (EFA) was used to explore the theoretical structure of the constructs (i.e., historical loss, historical loss-associated symptoms, enculturation, behavioral spirituality, spiritual beliefs, and positive mental health), and to investigate the structure with the present sample instead of assuming scales would perform the same as they have in previous research. The factor structure for each scale was examined through observing a principal axis factoring (PAF) EFA with promax rotations and examination of each factor's Cronbach's alpha.

HLS. Historical loss items produced an alpha coefficient of .92, suggesting the items have high internal consistency. Item-total correlations were examined to be above .3 for all items of the Historical Loss Scale (HLS). KMO's Measure of Sampling Adequacy and Bartlett's Test of Sphericity were analyzed before interpreting PAF results to assure that EFA was appropriate. KMO's Measure of Sampling Adequacy was excellent at .90, and Bartlett's Test of Sphericity was significant ($\chi^2 = 902.990$, $df = 66$, $p < .001$). All 12 items produced factor loadings above the minimum guideline of .32 (Tabachnick & Fidell, 2007). A one-factor structure was supported by the Kaiser criterion and examination of a scree plot. Using the guideline of .32 for factor loadings, all factors loaded, ranging from .40 to .82.

HLASS. Historical loss-associated symptoms (i.e., HLASS) produced an alpha coefficient of .84 for Factor 1 items and .85 for Factor 2 items, both suggesting adequate internal consistency. Item-total correlations were examined to be above .30 for all items of the HLASS. KMO's Measure of Sampling Adequacy and Bartlett's Test of Sphericity were analyzed before interpreting PAF results to assure that EFA was appropriate. KMO's Measure of Sampling Adequacy was excellent at .89, and Bartlett's Test of Sphericity was

significant ($\chi^2 = 752.409$, $df = 66$, $p < .001$). All 12 items produced factor loadings above the minimum guideline .32 (Tabachnick & Fidell, 2007). A two-factor structure was detected using the Kaiser Eigenvalue criterion, with two factors accounting for 60.02% of the variance in the data, with the first rotated factor accounting for 50.61%, and the second 9.41%. Using the guideline of .32 for factor loadings, Items 1, 2, 4, 9, 10, 11, and 12 loaded onto the first factor with factor loadings ranging from .38 to .96. Items 3, 5, 6, 7, and 8 loaded onto a second factor with factor loadings ranging from .57 to .86. The correlation between Factors 1 and 2 was .72.

These results are similar to those obtained by Whitbeck et al. (2004a). Whitbeck et al. (2004a) demonstrated a two-factor structure for the HLASS, in which Factor 1 (i.e., anxiety/depression) consisted of items related to the following historical loss-associated symptoms: depression, anxiety, loss of concentration, isolated, and loss of sleep. Factor 2 (i.e., anger/avoidance) consisted of items related to the symptoms of: anger, uncomfortable around White people, shame, rage, fearful and distrust, like it's happening again, and avoiding places (Whitbeck et al., 2004a). The factor loadings in the present study correspond to the finding of Whitbeck et al. (2004a), with the only difference being that Item 5 (i.e., shame) and Item 1 (i.e., depression) loaded onto the opposite factors.

AIES. American Indian Enculturation Scale (i.e., AIES) items produced an alpha coefficient of .93 signifying the items had excellent internal consistency. Item-total correlations were examined to be above .30 for all items of the American Indian Enculturation Scale (AIES). KMO's Measure of Sampling Adequacy and Bartlett's Test of Sphericity were analyzed before interpreting PAF results to assure that the use of EFA was appropriate. KMO's Measure of Sampling Adequacy was excellent at .91, and Bartlett's

Test of Sphericity was significant ($\chi^2 = 1148.564$, $df = 136$, $p < .001$). All 17 items produced factor loadings above the minimum guideline .32 (Tabachnick & Fidell, 2007). A one-factor structure was detected using the Kaiser criterion and .32 factor loading minimum guideline, with one factor accounting for 47.60% of the variance in the data. Using the guideline of .32 for factor loadings, all factors loaded, ranging from .51 to .79.

NASS. Next, reliability estimates were calculated for the two factors of the spirituality measure (i.e., Native American Spirituality Scale; NASS). Factor 1, behavioral spirituality, produced an alpha coefficient of .88 signifying the corresponding items have good internal consistency. Factor 2, spirituality belief, produced an alpha coefficient of .74, signifying an adequate internal consistency. Item-total correlations were examined to be above .30 for all items of the NASS. KMO's Measure of Sampling Adequacy and Bartlett's Test of Sphericity were analyzed before interpreting PAF results to assure that EFA was appropriate. KMO's Measure of Sampling Adequacy was satisfactory at .89, and Bartlett's Test of Sphericity was significant ($\chi^2 = 754.634$, $df = 66$, $p < .001$). All 12 items produced factor loadings above the minimum guideline .32 (Tabachnick & Fidell, 2007). Under the guidelines of Greenfield et al. (2015), a two-factor pre-determined structure was utilized, with two factors accounting for 59.77% of the variance in the data. Using the guideline of .32 for factor loadings, Items 4, 5, 6, 7, 8, 9, 10, 11 loading onto Factor 1 with factor loadings ranging from .64 to .88. Items 1, 2, 3, and 12 loaded onto a second factor with factor loadings ranging from .38 to .76. The correlation between Factors 1 and 2 was .60. This pre-determined factor EFA produced results consistent with the two-factor structure demonstrated previously for the NASS, which showed Factor 1 (i.e., behavioral spirituality) consisting of Items 4, 5, 6, 7, 8, 9, 11, and 12, and Factor 2 (i.e., belief and view of

spirituality) comprised of Items 1, 2, 3, and 10 (Greenfield et al., 2015). The difference being that this EFA resulted in the switching of Item 10 to Factor 1 and Item 12 to Factor 2. Given that Items 10 and 12 cross-loaded onto both factors in this EFA, they will be used as indicated in the original two-factor structure (i.e., Item 10 will be included in Factor 2 and Item 12 will be included in Factor 1).

MHC-SF. The Mental Health Continuum – Short Form (MHC-SF) emotional subscale produced an alpha coefficient of .88, the social subscale produced an alpha coefficient of .82, and the psychological subscale produced an alpha coefficient of .89, all suggesting the subscales have relatively high internal consistency. Item-total correlations were examined to be above .30 for all items of the MHC-SF. KMO's Measure of Sampling Adequacy and Bartlett's Test of Sphericity were analyzed before interpreting PAF results to assure that EFA was appropriate. KMO's Measure of Sampling Adequacy was excellent at .92, and Bartlett's Test of Sphericity was significant ($\chi^2 = 1196.398$, $df = 105$, $p < .001$). All 15 items produced factor loadings above the minimum guideline .32 (Tabachnick & Fidell, 2007). A two-factor structure was detected without using pre-determined factors using the Kaiser Eigenvalue criterion, with two factors accounting for 64.03% of the variance in the data, with the first rotated factor accounting for 52.53% and the second 11.50%. Using the guideline of .32 for factor loadings, Items 1, 2, 3, 4, 5, 9, 10, 11, 12, 13, and 14 loaded onto the first factor; and Items 6, 7, 8 and 15 loaded onto the second factor. A three-factor pre-determined structure (i.e., emotional, social, and psychological well-being; Keyes, 2009) was found using the Kaiser Eigenvalue criterion with three factors accounting for 70.10% of the variance in the data, with the first factor accounting for 52.53%, the second 11.50%, and the third 6.07%. Items 9, 11, 12, 13, and 14 loaded onto Factor 1; Items 6, 7, 8 and 15 loaded

onto Factor 2; and Items 1, 2, 3, 4, 5, and 10 loaded onto Factor 3. These results were not fully consistent with Keyes's (2009) MHC-SF three-factor structure: Factor 1 (i.e., emotional well-being) is comprised of Items 1, 2, and 3; Factor 2 (i.e., social well-being) includes Items 4, 5, 6, 7, 8, and 15; and Factor 3 (i.e., psychological well-being) includes Items 9, 10, 11, 12, 13, and 14. Previous findings have demonstrated excellent internal consistency and discriminant validity of the MHC-SF, with the three-factor structure being confirmed in multiple adult samples (Gallagher, Lopez, & Preacher, 2009; Keyes, 2009; Robitschek & Keyes, 2009). However, the MHC-SF has not been validated specifically with American Indian/Indigenous samples, so differences were to be expected. This sample produced similar results to previous studies for the psychological well-being subscale with all items loading appropriately, except for Item 10 which loaded onto another factor. However, the other two subscales, social and emotional well-being, did not load as precisely. The MHC-SF social well-being factor is comprised of Items 4, 5, 6, 7, 8, and 15; this EFA produced Items 6, 7, 8, and 15 on Factor 2, not loading items 4 and 5. The MHC-SF emotional well-being factor is comprised of Items 1-3; this EFA loaded Items 1, 2, 3, 4, 5, and 10 onto one factor. Given these EFA results, the original two-factor structure found will be used with this sample, as it is more representative of AI mental health continuum constructs.

Additionally, both Items 6 and 15 were used in this study based on Keyes's (2009) recommendation for use of the MHC-SF. Item 6 states, "That our society is a good place, or is becoming a better place, for all people," and Item 15 states, "That our society is becoming a better place for people like you." These items are essentially the same, both measuring the eudaimonic, social well-being construct of social actualization. It is recommended to test both items to see which version works best for your sample (Keyes, 2009). Based on factor

loadings, both items were well over the .32 minimum guideline; however, Item 6 was higher (.895) when viewing the pattern matrix compared to Item 15 (.878), so Item 6 was retained, and Item 15 dropped from the MHC-SF for further analyses.

Primary Analyses

Potential control variables were evaluated by looking at the correlations table, seeing if any demographic variables were significantly and moderately (r above .3) or strongly (r above .5) correlated with main effect variables (see Table 6). Age and the one item measuring frequency of participation in spiritual activities compared to other tribal members (i.e., spirituality frequency) were both moderately or strongly correlated with both predictor and outcome variables; therefore, they were used as control variables in the regression analyses.

Table 1. Means, Standard Deviations, and Intercorrelations of Demographic and Main Effect Variables (N = 121)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	38.60	12.93	-												
2. Gender	1.39	.55	-.16	-											
3. Education	8.43	1.80	.12	-.04	-										
4. Income	5.87	3.17	.26†	-.07	.43‡	-									
5. Spirituality frequency	2.40	1.19	.35‡	-.09	.01	.06	-								
6. Historical loss	4.52	1.07	-.07	.03	.02	-.08	.15	-							
7. Historical loss symptoms 1	3.80	.88	-.07	.02	-.06	-.29‡	.02	.55‡	-						
8. Historical loss symptoms 2	3.36	.92	.25†	.17	-.18	-.39‡	.02	.45‡	.71‡	-					
9. Enculturation	2.74	.92	.26†	-.09	.06	.02	.66‡	.33‡	.18	.06	-				
10. Spiritual behavior	2.58	1.16	.39‡	-.20*	.00	.02	.33‡	.35‡	.16	.02	.61‡	-			
11. Spiritual belief	3.80	.88	.27†	-.18*	.01	-.03	.11	.33‡	.22*	.08	.32‡	.70‡	-		
12. PMH Factor 1	3.41	1.05	.37‡	-.17	.09	.23*	.35‡	-.06	-.28‡	-.39‡	.35‡	.38‡	.27†	-	
13. PMH Factor 2	2.11	1.25	.25†	-.07	.01	.17	.36‡	-.07	-.43‡	-.38‡	.18*	.19*	.13	.55‡	-

Note. * $p < .05$. † $p < .01$. ‡ $p < .00$

Independent samples t-tests. Independent samples t-tests were conducted to compare historical loss, historical loss-associated symptoms, enculturation, behavioral spirituality, spirituality beliefs, positive mental health Factor 1 (i.e., PMH Factor 1), and positive mental health Factor 2 (i.e., PMH Factor 2) for online participants ($N = 106$) and in-person participants ($N = 15$; see Table 7). The significance level for the t-tests were adjusted using the Bonferroni correction dividing alpha (.05) by the number of tests (9) resulting in a new significance level of .0056.

Using the Bonferroni correction there were significant differences in the scores of online versus in-person participants for behavioral spirituality. Given these differences found between the in-person and online participants, correlations were rerun between variables of interest leaving the in-person participants ($N = 15$) out. There were no significant differences found between correlations containing both groups and those without the in-person participants, so all 121 participants were kept in the analyses.

Table 2. *Independent Group t-Tests of Online or In-Person on Main Effect Variables*

	Online ($N = 106$)		In-Person ($N = 15$)		$t(119)$	p
	M	SD	M	SD		
Historical loss	4.50	1.04	4.87	1.25	-1.351	.18
Historical loss symptoms	3.62	.86	3.61	.59	.047	.96
Enculturation	2.70	.93	3.02	.85	-1.285	.20
Spirituality behavior	2.44	1.13	3.58	.89	-3.759	.00
Spirituality belief	3.75	.90	4.12	.71	-1.497	.14
PMH Factor 1	3.33	1.06	3.94	.83	-2.119	.04
PMH Factor 2	2.05	1.22	2.49	1.46	-1.264	.21

Pearson correlations and Hypothesis 1. To address the first hypothesis, “Historical loss and historical loss-associated symptoms are expected to be correlated with positive mental health (PMH),” Pearson correlation coefficients were computed to determine the relationship between historical loss, historical loss-associated symptoms, PMH Factor 1, and PMH Factor 2. Historical loss and historical loss-associated symptoms (HLASS) Factors 1 and 2 demonstrated significant strong, positive correlations (HLASS Factor 1: $r = .55, p < .001$; HLASS Factor 2: $r = .45, p < .001$). Surprisingly, historical loss revealed non-significant, negative, weak correlations with PMH Factors 1 and 2 (PMH Factor 1: $r = -.02, p = .79$; PMH Factor 2: $r = -.12, p = .18$). On the other hand, HLASS Factor 1 demonstrated a significant weak, negative correlation with PMH Factor 1 ($r = -.28, p = .002$) and a significant moderate, negative correlation with PMH Factor 2 ($r = -.43, p < .001$). HLASS Factor 2 also proved to have significant, moderate, negative correlations with PMH Factor 1 ($r = -.39, p < .001$) and with PMH Factor 2 ($r = -.38, p < .001$; see Table 6). These findings partially confirm the first hypothesis in that historical loss-associated symptoms were found to be significantly, inversely correlated with PMH as expected. However, these findings also partially disconfirm the first hypothesis in that historical loss was not significantly correlated with PMH.

Multivariate Multiple Regression. Multivariate multiple regression was used to evaluate Hypotheses 2, 3, 4, and 5. All variables of interest were centered prior to calculating interaction terms and running the multivariate multiple regressions.

Hypotheses 2 and 4. Hypothesis 2 stated the level of enculturation was expected to moderate the effect of historical loss and historical loss-associated symptoms on positive mental health (PMH), such that higher levels of enculturation would lessen the effects of

historical loss and historical loss-associated symptoms on PMH. The original Hypothesis 4 stated that level of enculturation is expected to moderate the effect of historical loss and historical loss-associated symptoms on emotional, psychological, and social well-being, such that higher level of enculturation will lessen the effects of historical loss and historical loss-associated symptoms on emotional, psychological, and social well-being.

Given that the EFA results demonstrated a two-factor structure for PMH instead of the original three-factor structure (e.g., emotional, psychological, and social well-being), this hypothesis was modified. The modified Hypothesis 4 stated that level of enculturation is expected to moderate the effect of historical loss and historical loss-associated symptoms on PMH Factor 1 and PMH Factor 2, such that higher level of enculturation will lessen the effects of historical loss and historical loss-associated symptoms on PMH Factor 1 and PMH Factor 2. With the modification of Hypothesis 4, and the two-factor structure for PMH, both Hypothesis 2 and Hypothesis 4 were tested with the same multivariate multiple regression. The General Linear Model-Multivariate (GLMM) procedure in SPSS 25 was conducted with the dependent variables set as PMH Factors 1 and 2; the covariates were set as enculturation (AIES), age, spiritual frequency, historical loss (HLS), historical loss-associated symptoms (HLASS) Factors 1 and 2, and the interaction terms (i.e., HLS x AIES, HLASS 1 x AIES, HLASS 2 x AIES, HLS x age, HLASS 1 x age, HLASS 2 x age, HLS x spiritual frequency, HLASS 1 x spiritual frequency, and HLASS 2 x spiritual frequency) which were entered one at a time.

Multivariate tests with no interactions. Multivariate tests were nonsignificant for PMH factors on enculturation, age, spiritual frequency, and historical loss. On the other hand, there were main effects found for PMH factors on HLASS Factor 1 – $F(2, 111) =$

4.184, $p = .02$; Pillai's Trace = .07; partial $\eta^2 = .07$, and on HLASS Factor 2– $F = (2, 111) = 3.266$, $p = .04$; Pillai's Trace = .06; partial $\eta^2 = .06$ (see Table 8).

Table 3. *Multivariate Tests for Simultaneous Multiple Regressions of the PMH Factors on Enculturation, Age, Spiritual Frequency, Historical Loss, and Historical Loss-Associated Symptoms (N = 121)*

Effect	Pillai's trace	F^a	p	Partial η^2	Observed Power
Intercept	.00	.01	.99	.00	.05
AIES ^b	.03	1.83	.17	.03	.38
Age	.05	2.80	.07	.05	.54
Spiritual Frequency	.02	1.32	.27	.02	.28
HLS ^c	.02	.88	.42	.02	.20
HLASS ^d Factor 1	.07	4.18	.02	.07	.73
HLASS Factor 2	.06	3.27	.04	.06	.61

Note. a. Hypothesis $df = 2$, error $df = 111$. b. American Indian Enculturation Scale. c. Historical Loss Scale. d. Historical Loss-Associated Symptoms Scale.

When looking at the effects found for each of the PMH factors on HLASS Factor 1 and HLASS Factor 2, significant differences were found. HLASS Factor 1 was significant for PMH Factor 2 but not for PMH Factor 1. HLASS Factor 2 was significant for PMH Factor 1 but not for PMH Factor 2.

Parameter estimates indicated HLASS Factor 1 was significantly associated with a decrease in PMH Factor 2, explaining 7.0% of the variance in PMH Factor 2. Additionally, HLASS Factor 2 was significantly associated with a decrease in PMH Factor 1, explaining 5.4% of the variance in PMH Factor 1 (see Table 9).

Table 4. *Parameter Estimates of Multiple Regressions of PMH Factors on Enculturation, Age, Spiritual Frequency, Historical Loss, and Historical Loss-Associated Symptoms (N = 121)*

Dependent Var.	PMH Factor 1		PMH Factor 2	
	<i>B(SE)</i>	η^2	<i>B(SE)</i>	η^2
Parameter Est.				
Intercept	-.01 (.08)	.00	-.00 (.10)	.00
AIES ^a	.23 (.12)	.03	.16 (.15)	.01
Age	.02 (.01) *	.05	.00 (.01)	.01
Spiritual Frequency	.14 (.09)	.02	.15 (.12)	.01
HLS ^b	.12 (.09)	.01	.11 (.12)	.01
HLASS ^c Factor 1	-.20 (.14)	.02	-.52 (.18) †	.07
HLASS Factor 2	-.33 (.13) *	.05	-.24 (.16)	.02

Note. a. American Indian Enculturation Scale. b. Historical Loss Scale. c. Historical Loss-Associated Symptoms Scale.

* $p < .05$. † $p < .01$

Multivariate tests with interactions. Multivariate tests were then run with one interaction at time (i.e., HLS x AIES, HLASS 1 x AIES, HLASS 2 x AIES, HLS x age, HLASS 1 x age, HLASS 2 x age, HLS x spiritual frequency, HLASS 1 x spiritual frequency, and HLASS 2 x spiritual frequency). Multivariate tests were nonsignificant for PMH factors on all nine interaction terms (see Table 10).

Table 5. *Multivariate Tests for Nine Two-Way Interactions Entered One at a Time (N = 121)*

Effect	Pillai's trace	F^a	p	Partial η^2	Observed Power
HLS x AIES	.00	.10	.91	.00	.195
HLASS 1 x AIES	.01	.29	.75	.01	.095
HLASS 2 x AIES	.01	.37	.69	.01	.108
HLS x Age	.04	2.11	.13	.04	.425
HLASS 1 x Age	.03	1.50	.23	.03	.314
HLASS 2 x Age	.03	1.41	.25	.03	.296
HLS x Spiritual Frequency	.00	.09	.92	.00	.063
HLASS 1 x Spiritual Frequency	.00	.11	.90	.00	.066
HLASS 2 x Spiritual Frequency	.03	1.65	.20	.03	.342

Note. a. Hypothesis $df = 2$, error $df = 110$. b. American Indian Enculturation Scale. c. Historical Loss Scale. d. Historical Loss-Associated Symptoms Scale.

Univariate tests. Univariate tests were conducted for PMH Factor 1 and PMH Factor 2 on Enculturation, Age, Spiritual Frequency, HLS, HLASS Factor 1, and HLASS Factor 2. The significance level for the univariate tests were adjusted using the Bonferroni correction dividing alpha (.05) by the number of tests (6) resulting in a new significance level of .0083. Using the Bonferroni correction there were no significant univariate tests found (see Table 11).

Table 6. *Univariate Tests for the Effects of Positive Mental Health Factors on Covariates (N = 121)*

Effect	F^a	p	Partial η^2	Observed Power
PMH Factor 1				
Intercept	.02	.89	.00	.05
AIES ^b	3.57	.06	.03	.47
Age	5.24	.02	.05	.62
Spiritual Frequency	2.15	.15	.02	.31
HLS ^c	1.60	.21	.01	.24
HLASS ^d Factor 1	1.84	.18	.02	.27
HLASS Factor 2	6.36	.01	.05	.71
PMH Factor 2				
Intercept	.00	1.0	.00	.05
AIES	1.15	.29	.01	.19
Age	.10	.75	.00	.06
Spiritual Frequency	1.54	.22	.01	.23
HLS	.80	.38	.01	.14
HLASS Factor 1	8.38	.01	.07	.82
HLASS Factor 2	2.05	.16	.02	.30

Note. a. Hypothesis $df = 1$, error $df = 112$. b. American Indian Enculturation Scale. c. Historical Loss Scale. d. Historical Loss-Associated Symptoms Scale.

Summary of findings for Hypotheses 2 and 4. Hypotheses 2 and 4 were not supported by these results. Enculturation did not moderate the effect of historical loss and historical loss-associated symptoms on PMH Factors 1 and 2. There were however main effects found for PMH factors on HLASS Factors 1 and 2. Additionally, significant differences were found for each of the PMH factors on HLASS Factor 1 and HLASS Factor 2. Specifically, HLASS Factor 1 was associated with a decrease in PMH Factor 2, and HLASS Factor 2 was associated with a decrease in PMH Factor 1.

Hypotheses 3 and 5. Hypothesis 3 stated behavioral practice and global belief in traditional spirituality are expected to moderate the effect of historical loss and historical loss-associated symptoms on PMH, such that greater use of behavioral practice and increased global belief in traditional spirituality will lessen the effects of historical loss and historical loss-associated symptoms on PMH. The original Hypothesis 5 stated, behavioral practice and global belief in traditional spirituality are expected to moderate the effect of historical loss and historical loss-associated symptoms on emotional, psychological, and social well-being, such that greater use of behavioral practice and increased global belief in traditional spirituality will lessen the effects of historical loss and historical loss-associated symptoms on emotional, psychological, and social well-being.

Given the EFA results demonstrated a two-factor structure for PMH instead of the original three-factor structure (e.g., emotional, psychological, and social well-being), this hypothesis was modified. The modified Hypothesis 5 stated, behavioral practice and global belief in traditional spirituality are expected to moderate the effect of historical loss and historical loss-associated symptoms on PMH Factor 1 and PMH Factor 2, such that greater use of behavioral practice and increased global belief in traditional spirituality will lessen the effects of historical loss and historical loss-associated symptoms on PMH Factor 1 and PMH Factor 2. With the modification of Hypothesis 5 and the two-factor structure found for PMH, both Hypothesis 3 and Hypothesis 5 were tested using the same multivariate multiple regression.

The General Linear Model-Multivariate (GLMM) procedure in SPSS 25 was conducted with the dependent variables set as PMH Factors 1 and 2; the covariates were set as behavioral spirituality, spirituality belief, age, spiritual frequency, historical loss (HLS),

historical loss-associated symptoms (HLASS) Factors 1 and 2; and the interaction terms (i.e., HLS x behavioral spirituality, HLASS 1 x behavioral spirituality, HLASS 2 x behavioral spirituality, HLS x spirituality belief, HLASS 1 x spirituality belief, HLASS 2 x spirituality belief, HLS x age, HLASS 1 x age, HLASS 2 x age, HLS x spiritual frequency, HLASS 1 x spiritual frequency, and HLASS 2 x spiritual frequency) which were entered one at a time.

Multivariate tests without interactions. Multivariate tests were nonsignificant for PMH factors on behavioral spirituality, spirituality belief, age, and historical loss. On the other hand, there were main effects found for PMH factors on spiritual frequency - $F(2, 110) = 5.50, p = .01$; Pillai's Trace = .09; partial $\eta^2 = .09$, on HLASS Factor 1 - $F(2, 110) = 4.31, p = .02$; Pillai's Trace = .07; partial $\eta^2 = .07$, and on HLASS Factor 2 - $F(2, 110) = 3.48, p = .03$; Pillai's Trace = .06; partial $\eta^2 = .06$ (see Table 12).

Table 7. *Multivariate Tests for Simultaneous Multiple Regressions of the PMH Factors on Behavioral Spirituality, Spirituality Belief, Age, Spiritual Frequency, Historical Loss, and Historical Loss-Associated Symptoms (N = 121)*

Effect	Pillai's trace	F^a	p	Partial η^2	Observed Power
Intercept	.00	.01	.99	.00	.05
Behavioral Spirituality	.02	.87	.42	.02	.20
Spirituality Belief	.02	.87	.42	.02	.20
Age	.02	1.07	.35	.02	.23
Spiritual Frequency	.09	5.50	.01	.09	.84
HLS ^b	.01	.27	.77	.01	.09
HLASS ^c Factor 1	.07	4.31	.02	.07	.74
HLASS Factor 2	.06	3.48	.03	.06	.64

Note. a. Hypothesis $df = 1$, error $df = 111$. b. Historical Loss Scale. c. Historical Loss-Associated Symptoms Scale

Multivariate tests with interactions. Multivariate tests were then run with one interaction at a time (i.e., HLS x behavioral spirituality, HLASS 1 x behavioral spirituality, HLASS 2 x behavioral spirituality, HLS x spirituality belief, HLASS 1 x spirituality belief,

HLASS 2 x spirituality belief, HLS x age, HLASS 1 x age, HLASS 2 x age, HLS x spiritual frequency, HLASS 1 x spiritual frequency, and HLASS 2 x spiritual frequency).

Multivariate tests were significant for PMH factors on three interaction terms: HLASS Factor 2 x behavioral spirituality - $F(2, 109) = 3.81, p = .03$; Pillai's Trace = .07; partial $\eta^2 = .07$, HLASS Factor 1 x spirituality belief - $F(2, 109) = 3.55, p = .03$; Pillai's Trace = .06, partial $\eta^2 = .06$, and HLASS Factor 2 x spirituality belief - $F(2, 109) = 3.31, p = .04$; Pillai's Trace = .06; partial $\eta^2 = .06$ (see Table 13). It is noted that the interaction between HLS and spirituality belief was almost significant at alpha .05 ($p = .054$).

Table 8. *Multivariate Tests for 12 Two-Way Interactions Entered One at a Time (N = 121)*

Effect	Pillai's trace	F^a	p	Partial η^2	Observed Power
HLS x Behavioral Spirituality	.03	1.87	.16	.03	.38
HLASS 1 x Behavioral Spirituality	.04	2.20	.12	.04	.44
HLASS 2 x Behavioral Spirituality	.07	3.81	.03	.07	.68
HLS x Spirituality Belief	.05	3.00	.05	.05	.57
HLASS 1 x Spirituality Belief	.06	3.55	.03	.06	.65
HLASS 2 x Spirituality Belief	.06	3.31	.04	.06	.62
HLS x Age	.04	2.31	.10	.04	.46
HLASS 1 x Age	.02	1.32	.27	.02	.28
HLASS 2 x Age	.03	1.44	.24	.03	.30
HLS x Spiritual Frequency	.00	.10	.91	.00	.07
HLASS 1 x Spiritual Frequency	.00	.18	.83	.00	.08
HLASS 2 x Spiritual Frequency	.03	1.87	.16	.03	.38

Note. a. Hypothesis $df = 2$, error $df = 109$. b. American Indian Enculturation Scale. c. Historical Loss Scale. d. Historical Loss-Associated Symptoms Scale.

Final Three Moderation Models for Hypotheses 3 and 5

HLASS 2 x behavioral spirituality. Multivariate tests run with the interaction term HLASS 2 x behavioral spirituality proved significant - $F(2, 109) = 3.81, p = .03$; Pillai's Trace = .07; partial $\eta^2 = .07$. However, between subjects tests and parameter estimates indicated HLASS 2 x behavioral spirituality was not significant for either PMH Factor 1 ($B = .14; SE = .08; p = .09$) or PMH Factor 2 ($B = -.13; SE = .10; p = .20$; see Table 14 and Figure 1 below). The interaction term HLASS 2 x behavioral spirituality is likely no longer significant in this model because the model is no longer controlling for PMH Factor 2, indicating PMH Factor 1 or PMH Factor 2 have a significant interaction effect when the other is controlled.

Table 9. *Parameter Estimates for Multivariate Tests of PMH Factors on HCLASS 2 x Behavioral Spirituality Interaction and Other Covariates (N = 121)*

PMH Factor 1					
Effect	<i>B(SE)</i>	<i>t^a</i>	<i>p</i>	Partial η^2	Observed Power
Intercept	-.02 (.08)	-.20	.84	.00	.05
Behavioral Spirituality	.10 (.11)	.96	.34	.01	.15
Spirituality Belief	.19 (.13)	1.46	.15	.02	.30
Age	.01 (.01)	1.40	.16	.02	.28
Spiritual Frequency	.25 (.08)	3.34	.00	.09	.91
HLS ^b	.06 (.10)	.67	.51	.00	.10
HCLASS ^c Factor 1	-.18 (.14)	-1.26	.21	.01	.24
HCLASS Factor 2	-.34 (.13)	-2.72	.01	.06	.76
HCLASS 2 x Behavioral Spirituality	.14 (.08)	1.72	.09	.03	.40
PMH Factor 2					
Effect	<i>B(SE)</i>	<i>t^a</i>	<i>p</i>	Partial η^2	Observed Power
Intercept	.00 (.10)	.04	.97	.00	.05
Behavioral Spirituality	.14 (.14)	1.04	.30	.01	.17
Spirituality Belief	.11 (.17)	.64	.53	.00	.09
Age	-.00 (.01)	-.45	.66	.00	.07
Spiritual Frequency	.20 (.10)	2.07	.04	.04	.53
HLS ^b	.06 (.12)	.51	.61	.00	.08
HCLASS ^c Factor 1	-.54 (.18)	-3.03	.00	.08	.85
HCLASS Factor 2	-.22 (.16)	-1.37	.17	.02	.27
HCLASS 2 x Behavioral Spirituality	-.13 (.10)	-1.30	.20	.02	.25

Note. a. Hypothesis *df* = 2, error *df* = 109. b. Historical Loss Scale. c. Historical Loss-Associated Symptoms Scale.

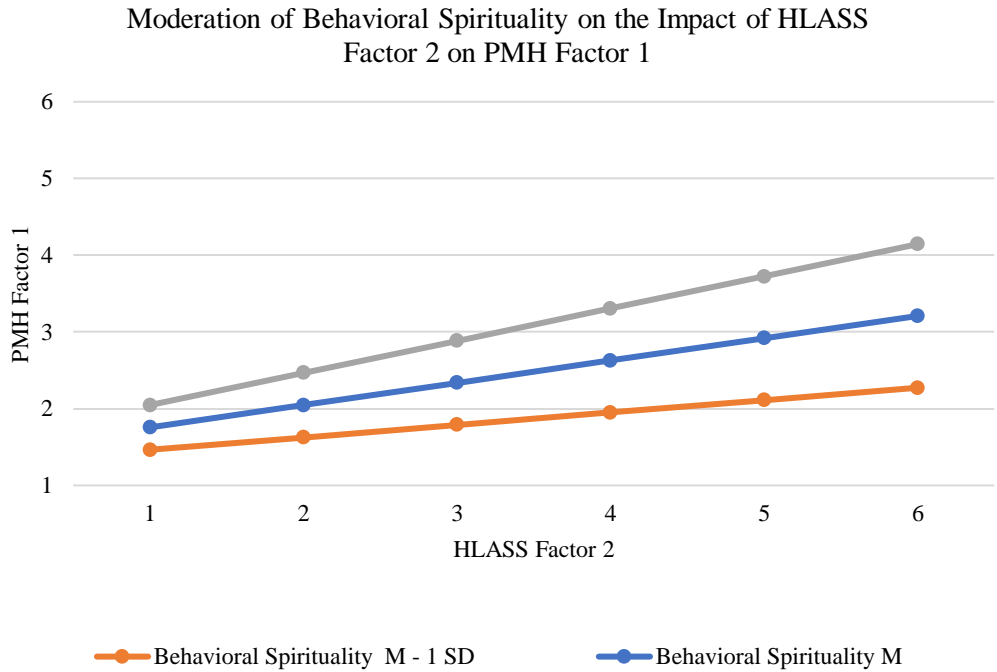


Figure 1. Moderation of Spiritual Behavior on the Impact of Historical Loss-Associated Symptoms Factor 2 on Positive Mental Health Factor 1.

HLASS 1 x spirituality belief. Multivariate tests run with the interaction term HLASS 1 x spirituality belief were significant - $F(2, 109) = 3.55, p = .03$; Pillai's Trace = .06, partial $\eta^2 = .06$. Parameter estimates indicated HLASS 1 x spirituality belief was significant for PMH Factor 1 - $B = .21; SE = .09; p = .02$, but not for PMH Factor 2 - $B = -.02; SE = .11; p = .90$ (see Table 15). The moderating effect of spirituality belief on the relationship between HLASS Factor 1 and PMH Factor 1 is demonstrated in Figure 2 below.

Table 10. *Parameter Estimates for Multivariate Tests of PMH Factors on HLASS 1 x Spirituality Belief Interaction and Other Covariates (N = 121)*

PMH Factor 1					
Effect	<i>B(SE)</i>	<i>t^a</i>	<i>p</i>	Partial η^2	Observed Power
Intercept	-.05 (.08)	-.63	.53	.00	.10
Behavioral Spirituality	.15 (.10)	1.41	.16	.02	.29
Spirituality Belief	.15 (.13)	1.17	.24	.01	.21
Age	.01 (.01)	1.26	.21	.01	.24
Spiritual Frequency	.23 (.07)	3.17	.00	.08	.88
HLS ^b	.08 (.09)	.85	.40	.01	.13
HLASS ^c Factor 1	-.15 (.14)	-1.05	.29	.01	.18
HLASS Factor 2	-.36 (.13)	-2.87	.01	.07	.81
HLASS 1 x Spirituality Belief	.21 (.09)	2.42	.02	.05	.67
PMH Factor 2					
Effect	<i>B(SE)</i>	<i>t^a</i>	<i>p</i>	Partial η^2	Observed Power
Intercept	.00 (.10)	.02	.98	.00	.05
Behavioral Spirituality	.11 (.14)	.81	.42	.01	.13
Spirituality Belief	.13 (.17)	.77	.45	.01	.12
Age	-.00 (.01)	-.31	.76	.00	.06
Spiritual Frequency	.21 (.10)	2.23	.03	.04	.60
HLS ^b	.06 (.12)	.48	.63	.00	.08
HLASS ^c Factor 1	-.53 (.18)	-2.91	.00	.07	.82
HLASS Factor 2	-.23 (.16)	-1.42	.16	.02	.29
HLASS 1 x Spirituality Belief	-.02 (.11)	-.13	.90	.00	.05

Note. a. Hypothesis *df* = 2, error *df* = 109. b. Historical Loss Scale. c. Historical Loss-Associated Symptoms Scale.

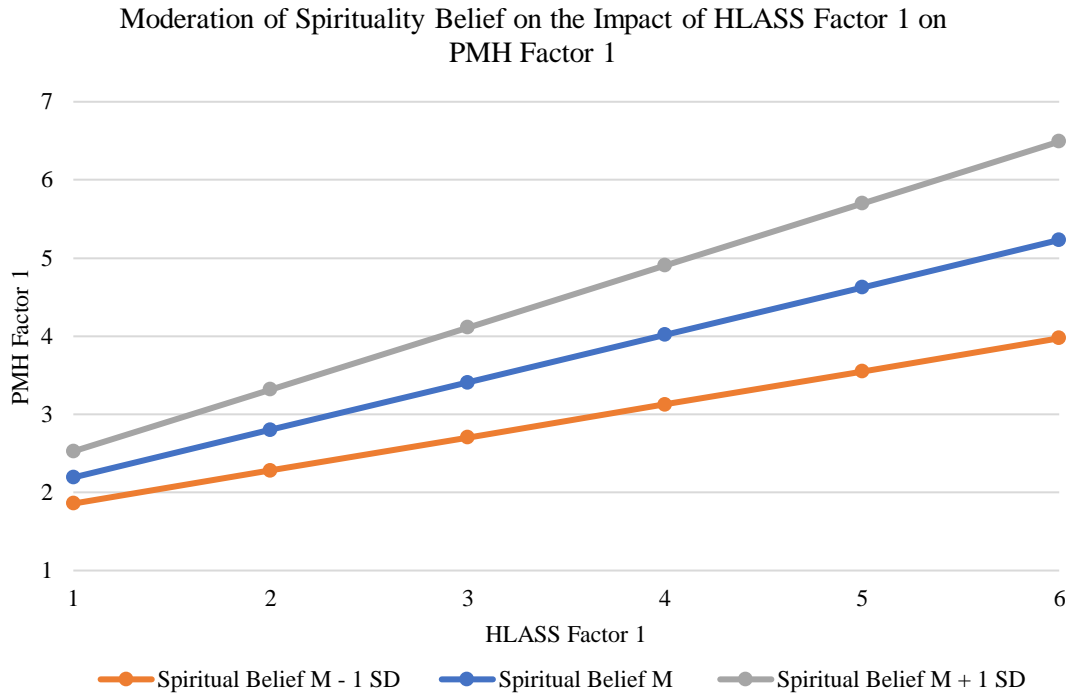


Figure 2. Moderation of Spirituality Belief on the Impact of Historical Loss-Associated Symptoms Factor 1 on Positive Mental Health Factor 1.

HLASS 2 x spirituality belief. Multivariate tests run with the interaction term HLASS Factor 2 x spirituality belief were significant- $F(2, 109) = 3.31, p = .04$; Pillai's Trace = .06; partial $\eta^2 = .06$. Parameter estimates indicated HLASS 2 x spirituality belief was significant for PMH Factor 1 - $B = .21; SE = .09; p = .02$, but not for PMH Factor 2 - $B = -.02; SE = .11; p = .90$ (see Table 16). The moderating effect of spirituality belief on the relationship between HLASS Factor 2 and PMH Factor 1 is shown in Figure 3 below.

Table 11. *Parameter Estimates for Multivariate Tests of PMH Factors on HLASS 2 x Spirituality Belief Interaction and Other Covariates (N = 121)*

PMH Factor 1					
Effect	<i>B(SE)</i>	<i>t^a</i>	<i>p</i>	Partial η^2	Observed Power
Intercept	-.02 (.08)	-.26	.79	.00	.06
Behavioral Spirituality	.13 (.11)	1.21	.23	.01	.22
Spirituality Belief	.17 (.13)	1.27	.21	.01	.24
Age	.01 (.01)	1.35	.18	.02	.27
Spiritual Frequency	.24 (.07)	3.22	.00	.09	.89
HLS ^b	.07 (.09)	.78	.44	.01	.12
HLASS ^c Factor 1	-.15 (.14)	-1.10	.27	.01	.19
HLASS Factor 2	-.38 (.13)	-2.95	.00	.07	.83
HLASS 2 x Spirituality Belief	.18 (.09)	2.06	.04	.04	.53
PMH Factor 2					
Effect	<i>B(SE)</i>	<i>t^a</i>	<i>p</i>	Partial η^2	Observed Power
Intercept	.00 (.10)	.03	.97	.00	.05
Behavioral Spirituality	.11 (.14)	.85	.40	.01	.13
Spirituality Belief	.13 (.17)	.77	.44	.01	.12
Age	-.00 (.01)	-.35	.73	.00	.06
Spiritual Frequency	.21 (.10)	2.21	.03	.04	.60
HLS ^b	.06 (.12)	.46	.65	.00	.07
HLASS ^c Factor 1	-.54 (.18)	-2.98	.00	.08	.84
HLASS Factor 2	-.22 (.17)	-1.31	.19	.02	.26
HLASS 2 x Spirituality Belief	-.07 (.11)	-.63	.53	.00	.10

Note. a. Hypothesis *df* = 2, error *df* = 109. b. Historical Loss Scale. c. Historical Loss-Associated Symptoms Scale.

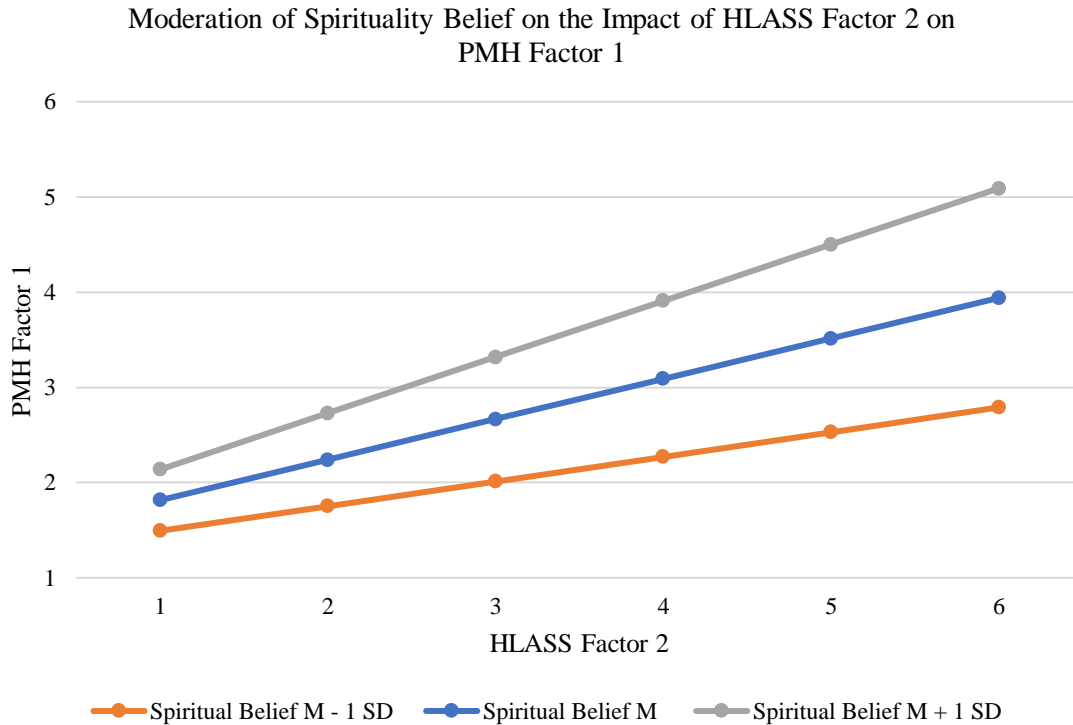


Figure 3. Moderation of Spirituality Belief on the Impact of Historical Loss-Associated Symptoms Factor 2 on Positive Mental Health Factor 1.

Univariate follow-up tests. Univariate tests for PMH Factor 1 and Factor 2 were run for each of the three significant interaction terms (i.e., HLASS 2 x behavioral spirituality, HLASS 1 x spirituality belief, and HLASS 2 x spirituality belief). Each interaction was run in its own univariate regression analysis. Univariate tests were not significant for PMH Factors on HLASS 2 x behavioral spirituality. On the other hand univariate tests were significant for PMH Factor 1 on HLASS 1 x spirituality belief - $F(1, 110) = 5.85, p = .02$; partial $\eta^2 = .05$; observed power = .67, and HLASS 2 x spirituality belief - $F(1, 110) = 4.23, p = .04$; partial $\eta^2 = .04$; observed power = .53.

Summary of findings for Hypotheses 3 and 5. Regarding the relationship between covariates and PMH factors, spiritual frequency was significantly associated with an increase in PMH Factor 1; whereas, HLASS Factor 2 was associated with a decrease in PMH Factor

1, and HLASS Factor 1 was significantly associated with a decrease in PMH Factor 2. Multivariate tests run with the interaction term HLASS 2 x behavioral spirituality proved significant, but the parameter estimates indicated this interaction was not significant for either PMH Factor 1 or Factor 2. On the other hand, the interaction terms HLASS Factor 1 x spirituality belief and HLASS Factor 2 x spirituality belief were significant for PMH Factor 1. Specifically, the interactions between HLASS factors and spirituality belief were significantly associated with an increase in PMH Factor 1, suggesting a moderating effect for spirituality belief on the relationship between HLASS factors and PMH Factor 1, controlling for other variables. Additionally, a three-way interaction (HLASS1 x HLASS2 x Spiritual Belief) was tested and found nonsignificant, confirming the maintenance of both interactions (i.e., HLASS Factor 1 x spirituality belief and HLASS Factor 2 x spirituality belief) in the final regression model.

Discussion

The purpose of this study was to expand the evidence of culture as a buffer to American Indian (AI) populations, and to further explore cultural buffers in relation to positive mental health (PMH) using the Indigenist Stress Coping Model (ISCM). Specifically, the present study extends the current research on the Indigenist Stress Coping model (ISCM; Walters, et al., 2002) and positive mental health (PMH) by exploring the role of enculturation and traditional spirituality on the relationship between historical trauma and positive mental health among American Indians (AI). The inclusion of cultural buffers and PMH addresses limitations of previous studies that have discussed the effects of historical trauma on American Indian individuals in the context of the ISCM. Although, both enculturation and traditional Native spirituality were predictive of decreased impact of

historical loss and historical loss-associated symptoms on positive mental health through the moderation process proposed in the ISCM, mixed-support was collected regarding whether enculturation and spirituality have protective effects against the impacts of historical trauma on mental health. Specifically, enculturation was not found to moderate the relationship between historical loss and/or historical loss-associated symptoms and PMH. Additionally, spiritual behavior did not prove to have a significant impact on the effects of historical loss on mental health; however, spiritual belief did moderate the effects of historical loss-associated symptoms on positive mental health in a counterintuitive fashion.

Demographic Results

The majority of the participant sample identified as women (64.5%) with an overall mean age of 38.60. There were 49 reported tribal affiliations, with eight participants (6.6%) identifying with more than one tribal affiliation. The largest group of participants identified as members of the Choctaw Nation of Oklahoma ($N = 29$, 24.0%). One-third of the participants reported living in an urban area and 56.2% reported full-time employment status, which was comparable to the national sample of AI/Alaska Natives. Almost half of the participants (46.3%) indicated they were married compared to the national sample of 36.2% (United States Census Bureau, 2015). Additionally, this sample of AI individuals indicated a higher percentage, 27.3%, having received a bachelor's degree, compared to the national sample, 10% (United States Census Bureau, 2015), and almost 20% (19.8%) indicated receiving a master's degree compared to the national sample of 4.7% obtaining a graduate or professional degree, indicating this sample had an overall higher level of educational achievement compared to the national sample of AI/Alaska Native individuals (United States

Census Bureau, 2015). Household income demonstrated a relatively uniform distribution (see Table 4).

Correlations and T-tests

Pearson's correlations were computed and evaluated for possible control variables. Age and the one item measuring frequency of participation in spiritual activities compared to other tribal members (i.e., spirituality frequency) were either moderately or strongly correlated with both predictor and outcome variables; therefore, they were used as control variables in the regression analyses. Age had a moderate negative association with Historical Loss-Associated Symptoms Factor 2 (i.e., HLASS Factor 2; $r = -.25, p < .01$) and moderate, positive associations with Positive Mental Health Factor 1 (i.e., PMH Factor 1; $r = .37, p < .001$) and PMH Factor 2 ($r = .25, p < .01$). Indicating that for this sample, some historical loss symptoms associated with anger/avoidance (i.e., HLASS Factor 2) decreased with age; whereas, overall well-being, or positive mental health, increased with age. Spirituality frequency was also moderately, positively correlated with PMH Factor 1 ($r = .35, p < .001$) and PMH Factor 2 ($r = .36, p < .001$), indicating that for this sample increased positive mental health was associated with a higher frequency of participating in traditional spiritual activities.

Exploratory Factor Analyses Results

Exploratory Factor Analyses (EFA) results of the present study overall corresponded to factor loadings demonstrated in previous studies using the same measures; however, there were some exceptions. This sample produced a two-factor structure for the Historical Loss-Associated Symptoms Scale (HLASS), as previously produced by Whitbeck et al. (2004a); however, Item 5 (i.e., shame) and Item 1 (i.e., depression) loaded onto the opposite factor in

the present study. Whitbeck et al. (2004a) demonstrated a two-factor structure for the HLASS, in which Factor 1 comprised items related to anxiety and depression and Factor 2 included items related to anger and avoidance. In the present study, “shame” loaded onto Factor 1 instead of Factor 2, and “depression” loaded onto Factor 2 instead of Factor 1. One possible reason for these results could be small sample size ($N = 121$). This sample size falls between Comrey and Lee’s (1992) poor ($N = 100$) and fair ($N = 200$) sample size recommendations for conducted EFAs, which might explain the differing factor loading of items compared to previous studies.

Additionally, EFA results from the present study were inconsistent with previous findings for the Mental Health Continuum-Short Form (MHC-SF; Keyes, 2009). Keyes’s (2009) MHC-SF proposes a three-factor structure: Factor 1 – emotional well-being, Factor 2 – social well-being, and Factor 3 – psychological well-being. Previous findings have demonstrated excellent internal consistency and discriminant validity of the MHC-SF, with the three-factor structure being confirmed in multiple adult samples (Gallagher et al., 2009; Keyes, 2009; Robitschek & Keyes, 2009). However, the MHC-SF has not been validated specifically with American Indian/Indigenous samples.

This sample produced a two-factor structure for the MHC-SF. Emotional well-being (Items 1, 2, and 3) and psychological well-being items (Items 9, 10, 11, 12, 13, and 14) loaded onto the same factor along with two social well-being items (Items 4 and 5). These items initially made up PMH Factor 1 and were later relabeled as integrated well-being. This label derived from the items loading onto Factor 1 being pulled from all three sub-categories of well-being (i.e., emotional, psychological, and social), linking them together. The additional three social well-being items (Items 6, 7, and 8) loaded onto a separate factor,

PMH Factor 2, and were relabeled as societal well-being. When evaluating all five items within the social well-being subscale, Item 4 (that you had something important to contribute to society) and Item 5 (that you belonged to a community) arguably place emphasis on an individual's sense of belonging or contribution to the community/society. The additional three social well-being items (i.e., that our society is a good place, or is becoming a better place, for all people; that people are basically good; and that the way our society works makes sense to you), that loaded onto a separate factor, appear to evaluate society as a whole, instead of at the individual's community level (i.e., societal well-being). Once again, these factor-loadings may be in-part due to the small size of this study's sample. On the other hand, traditional Native worldview consists of "noncompartmentalization of experience" (Duran & Duran, 1995, p. 15). Western worldview commonly separates the mind, body, and spirit; whereas, traditional AI worldview understands these constructs to be connected with all living life functioning as one system, not as separate systems (Duran & Duran, 1995). Thus, explaining yet another reason for this sample of AIs to have included items from psychological, social, and emotional well-being onto one factor (i.e., integrated well-being).

Hypothesis 1

To address the first hypothesis, "Historical loss and historical loss-associated symptoms are expected to be inversely correlated with positive mental health (PMH)," Pearson correlation coefficients were computed to determine the relationship between historical loss (HLS), historical loss-associated symptoms (HLASS Factor 1 and HLASS Factor 2), integrated well-being (i.e., PMH Factor 1), and societal well-being (i.e., PMH Factor 2). HLS and HLASS Factors 1 and 2 were strongly, positively correlated, as previous studies have indicated (Whitbeck et al., 2004b). HLS was predicted to be correlated with

integrated and societal well-being; however, this correlation did not reach statistical significance. This study's findings reflect a lack of a significant association between HLS and PMH for this sample of AIs, which might be due to small sample size. The correlation found was weak for both HLS and integrated well-being ($r = -.06$) and HLS and societal well-being ($r = -.07$). Additionally, higher levels of historical loss or historical loss thinking have been linked to negative mental health outcomes or emotional distress, such as alcohol abuse, depressive symptoms, and suicidal ideation (Ehlers et al., 2013; Tucker et al., 2015; Whitbeck et al., 2004b); however, the association between historical loss and positive mental health outcomes has yet to be established. Gone et al. (2019) conducted a systematic review of the health impacts of Indigenous historical trauma (IHT) advising of the difficulties synthesizing results from various studies looking at historical loss and historical loss symptoms, concluding that "inferences about these relationships are not currently possible" (p. 25). It is also noted that nearly all studies utilizing the Whitbeck measures (i.e., the HLS and HLASS) evaluated them in terms of adverse health outcomes (e.g., alcohol abuse, depression, etc.). So, this study's results might indicate a genuine lack of association between historical loss and positive mental health.

Considering Hypothesis 1, HLASS Factor 1 was weakly, negatively correlated with integrated well-being and moderately, negatively correlated with societal well-being. Additionally, HLASS Factor 2 proved to have significant, moderate, negative correlations with both PMH factors. This study further supports the notion that as AIs experience greater levels of historical loss symptoms (i.e., anger/avoidance and anxiety/depression), their overall positive mental health decreases. These relationships make sense given evidence that

higher levels of historical loss-thinking and symptoms are attributed to adverse mental health outcomes (Ehlers et al., 2013; Tucker et al., 2015; Whitbeck et al., 2004b).

Hypotheses 2 and 4

Hypothesis 2 stated that level of enculturation was expected to moderate the effect of historical loss (HLS) and historical loss-associated symptoms on positive mental health (PMH), such that higher levels of enculturation would lessen the effects of historical loss and historical loss-associated symptoms on PMH. The original Hypothesis 4 stated that level of enculturation is expected to moderate the effect of historical loss and historical loss-associated symptoms on emotional, psychological, and social well-being, such that higher level of enculturation will lessen the effects of historical loss and historical loss-associated symptoms on emotional, psychological, and social well-being.

Given that the EFA results demonstrated a two-factor structure for PMH instead of the original three-factor structure (e.g., emotional, psychological, and social well-being), Hypothesis 4 was modified. The modified Hypothesis 4 stated that level of enculturation is expected to moderate the effect of historical loss and historical loss-associated symptoms on integrated well-being (i.e., PMH Factor 1) and societal well-being (i.e., PMH Factor 2), such that higher level of enculturation will lessen the effects of historical loss and historical loss-associated symptoms on integrated and societal well-being.

Hypotheses 2 and 4 were not supported by this study's findings. Enculturation did not moderate the effect of historical loss and historical loss symptoms on integrated or societal well-being. Enculturation was however significantly, positively correlated with both PMH factors, consistent with previous studies (Kading et al., 2015); on the other hand, enculturation was not shown to influence the relationship between historical loss and

historical loss symptoms on positive mental health. In line with current research, Kading et al. (2015) found a similar result, in that practice of traditional cultural activities did not buffer the impact of perceived discrimination on positive mental health.

Main effects were found for PMH factors on historical loss-associated symptoms (HLASS) Factors 1 and 2, showing HLASS Factors 1 and 2 are significantly related to at least one of the PMH factors. Specifically, HLASS Factor 1 (i.e., anxiety/depression) was associated with a decrease in societal well-being, and HLASS Factor 2 (i.e., anger/avoidance) was associated with a decrease in integrated well-being. This is the first known association made between these two factors given that this is the first study, to this writer's knowledge, evaluating the relationship between historical loss and historical loss symptoms and positive mental health outcomes.

Hypotheses 3 and 5

Hypothesis 3 stated, behavioral practice and global belief in traditional spirituality are expected to moderate the effect of historical loss and historical loss-associated symptoms on PMH, such that greater use of behavioral practice and increased global belief in traditional spirituality will lessen the effects of historical loss and historical loss-associated symptoms on PMH. The original Hypothesis 5 stated behavioral practice and global belief in traditional spirituality are expected to moderate the effect of historical loss and historical loss-associated symptoms on emotional, psychological, and social well-being, such that greater use of behavioral practice and increased global belief in traditional spirituality will lessen the effects of historical loss and historical loss-associated symptoms on emotional, psychological, and social well-being.

Given the two-factor structure for PMH used in this study, Hypothesis 5 was modified. The new hypothesis stated behavioral practice and global belief in traditional spirituality are expected to moderate the effect of historical loss and historical loss-associated symptoms on integrated well-being (i.e., PMH Factor 1) and societal well-being (i.e., PMH Factor 2), such that greater use of behavioral practice and increased global belief in traditional spirituality will lessen the effects of historical loss and historical loss-associated symptoms on integrated and societal well-being.

Two interaction terms were significant for integrated well-being (i.e., PMH Factor 1) but not for societal well-being (i.e., PMH Factor 2). The parameter estimates for the interaction terms HLASS 1 x spirituality belief and HLASS 2 x spirituality belief indicated that spirituality belief impacts the relationship between historical loss-associated symptoms and integrated well-being, such that increased spirituality belief strengthened the effects of historical loss-associated symptoms on integrated well-being. In other words, the effect of historical loss-associated symptoms was more robust among individuals with higher levels of spirituality belief and less robust among participants with lower levels of spirituality belief. It is also noted that similar results were found for the interaction term HLASS 2 x behavioral spirituality. Though the interaction term did not prove significant in the model, results were closer to significance for integrated well-being than societal well-being.

These results are counterintuitive to the proposed hypotheses that predicted increased spirituality belief and/or behavioral spirituality would lessen the effects of historical loss-associated symptoms on positive mental health. In this sample, those endorsing high levels of historical loss symptoms and high levels of tribal spirituality belief demonstrated enhanced integrated well-being. Perhaps, traditional spirituality belief allows these individuals to make

meaning of historical loss symptoms and improve their well-being. On the other hand, participants with lower levels of traditional spirituality belief did not demonstrate as much of a connectedness between historical loss symptoms and integrated well-being, indicating this link between these variables is not as important. Though this finding was opposite of what was originally predicted, other studies have also developed a link between historical trauma and positive psychology variables, such as resilience. Reinschmidt, Attakai, Kahn, Whitewater, and Teufel-Shone (2016) conducted a qualitative study with a group of AI Elders and discovered an interconnectedness between historical trauma and resilience. Multiple Elders spoke to resiliency as the continued strength demonstrated by AIs despite the persisting negative impacts of colonialism, and spirituality was listed as one of the resiliency coping strategies for combating the effects of historical trauma (Reinschmidt et al., 2016). The point being that it is difficult to determine the exact nature of the associations between these constructs; however, it is obvious that an interconnectedness does exist. Additionally, given this study is in solidarity in regard to evaluating the effects of historical trauma/loss on positive mental health outcomes, these results might indicate that the association between these variables is positive instead of the assumed negative relationship proposed in the hypotheses.

Strengths

The present study makes a unique contribution to the literature regarding the importance of considering the function of the use and practice of traditional, American Indian culture when examining the relationship between historical loss and well-being. A review of theory and literature looking at diversity (i.e., gender, race, and ethnicity) among positive psychology articles found only 0.6% of studies reporting indigenous group members as

participants (Rao & Donaldson, 2015). This study expanded the limited research evaluating positive mental health and racial/ethnic minorities, specifically focusing on AI individuals. Previous studies have incorporated adverse mental health outcomes focusing on disorders such as depression and alcoholism (Lawrence, 2012; Whitbeck et al., 2004b), but have not incorporated the effects of traumas and cultural buffers on positive mental health.

Additionally, this study further expanded the literature on the Indigenist Stress Coping Model (ISCM), including positive mental health as an outcome variable. The ISCM proposes that cultural factors buffer the relationship between trauma/stress and health outcomes (Walters et al., 2002; see Figure 3 in the Appendix). This model was originally proposed to look at adverse health outcomes; however, given the limited number of studies evaluating positive health outcomes, this study incorporated well-being within the model.

Limitations

One limitation of the present study is limited sample size. While conducting data collection, it was difficult for this researcher to obtain a larger sample size despite use of both in-person and online recruitment efforts. This sample size ($N = 121$) was less than the recommended number of participants ($N = 200$) suggested to achieve power of .80 for a .05 significance level and a moderate effect size, and thus the analyses did not obtain adequate observed power for some effects (see Table 8). The lower level of power reduced the probability of detecting some small or even moderate effects (if they existed). Also, the sample size was significantly lower than the recommended number of participants suggested to conduct Exploratory Factor Analysis (EFA). This study utilized non-random convenience and snowball sampling methods, both online and in-person, limiting the generalizability of the study.

Additionally, recruitment efforts proved difficult. American Indians (AI) have historically suffered at the hands of unethical research practices and medical abuses since European colonialism (Hodge, 2012), and are therefore justifiably cautious when asked to participate in psychological studies, particularly when the subject matter is a deep topic such as historical trauma. Some participants wrote very heartfelt emails to this researcher stating that a survey could never grasp the true pain of what makes up historical loss, further demonstrating the strength of this topic and its ongoing negative impact on the AI population.

Another limitation of this study was the use of survey materials as the primary means for data collection. Self-report measures are inherently biased, and this study used monetary incentives for participation (i.e., gift card raffle). Though undue influence was unlikely given the arguably small incentive offered and minimal risk of participation (Singer & Couper, 2008). Additionally, participants filled out survey materials both in-person and online. These two groups did not prove to differ significantly; however, results might have proven significantly different if a larger in-person sample was collected given that only 15 participants completed the survey in-person compared to 106 online participants.

Future Directions

Future directions for this study include further exploration of historical trauma/loss and historical loss symptoms, specifically in terms of the Whitbeck et al. (2004a) historical trauma measures (i.e., the HLS and the HLASS). As stated previously, participants sent responses stating that survey materials could never grasp all that goes into historical loss and its associated symptoms and the continued impact colonialism has on the AI population, suggesting there is a continued need to better understand and measure these constructs to

potentially help aid those suffering from the impacts of historical trauma. Gone et al. (2019) further supported this future direction, noting that researchers are not consistent in scoring or interpreting these historical loss measures, which makes it difficult to accurately state possible associations or impacts of historical trauma as measured by these scales.

Additionally, further research needs to be conducted exploring the relationship between historical loss and well-being through the use of the Indigenist Stress Coping Model (ISCM). This study proved mixed results regarding whether there is a true relationship between historical loss and well-being or just historical loss symptoms and integrated well-being, and additional research might prove beneficial in clearing up these associations. Furthermore, though this study obtained participant data from almost 50 AI tribes, there are over 560 recognized AI tribes in the United States. Future studies incorporating the ISCM should aim to gather larger numbers of AIs from a variety of tribal affiliations.

Implications for Practice

In regard to clinical implications of this study, the primary focus is to address and reduce the overall impact of historical trauma on AI clients. When considering variables associated with increasing positive mental health outcomes for AIs, results were consistent with previous research further establishing the positive association between higher levels of enculturation and overall well-being. Though a moderating effect was not found for enculturation on the impact of historical loss on positive mental health, the positive correlations reported between use of traditional spirituality practices, overall level of enculturation, and positive mental health indicate the importance of acknowledging the incorporation of traditional Native practices in daily living for AI clients. Prior to this acknowledgement, it is important for the therapist and AI client to identify where the client

falls on a continuum of identity and culture ranging from traditionally enculturated to acculturated (Gray & Rose, 2012). Therefore, measures such as the NASS and AIES could prove beneficial in a therapeutic setting in gauging where a client lands on this cultural continuum. Additionally, given that generalizability of the impacts of historical trauma at the individual level is impossible, providing the HLS and HLASS to AI clients could allow for better understanding of an individual's presenting symptoms and specific losses to better aid treatment.

Other possible clinical implications revolve around the moderation effects found for spirituality belief, such that participants endorsing higher levels of traditional spirituality belief indicated an enhanced effect of historical loss symptoms on their integrated well-being. As mentioned previously, this finding was opposite of what was originally predicted; however, other studies have also developed a link, or interconnectedness, between historical trauma and positive psychology variables such as resilience and resilience coping strategies (Reinschmidt et al., 2016). The present study's findings, along with research examining similar variables, suggest that exploration of resiliency strategies, such as spirituality belief, and other enculturation-related factors for AI clients could prove beneficial in aiding and developing integrated well-being. Specifically, AI clients identifying strongly with traditional spirituality belief might strengthen their well-being through further exploration of their spirituality and global beliefs. This could involve collaborating with the client to gather resources and/or contact information from tribal community leaders on traditional spiritual belief and practice. For those AI clients endorsing lower levels of spirituality belief, it might prove beneficial to help them navigate historical loss symptoms in different ways to promote integrated well-being, such as other positive coping strategies.

This study also provides evidence for the need to support AI spiritual practices and beliefs, including, but not limited to, advocating for those individuals unable to advocate for themselves (e.g., incarcerated AIs). Mental health practitioners working with AIs in oppressive systems must do whatever is in their power to supply AI clients identifying strongly with traditional spirituality belief with time, space, and materials needed to engage in traditional Native spiritual practices (i.e., participating in Sweatlodges, Native American Church, etc.) in an attempt to positively contribute to their well-being.

Summary of Findings

The present study expands on previous research surrounding historical loss, cultural coping, and positive mental health among AIs, while also raising questions in regard to the complex relationships between these variables of interest. First, prior to the primary analyses, EFA results indicated a potential need for further evaluation of the use of the MHC-SF with AIs given that this sample produced unique factor loadings of items. Second, this study established an initial inverse association between historical loss symptoms and well-being; however, a significant correlation was not found between historical loss and well-being. Of note, historical loss and historical loss symptoms have been previously linked to negative mental health outcomes, but the association between these constructs and positive mental health outcomes as yet to be established. So, this study further confirms that the relationship between these constructs is complex and needs additional exploration. Third, a moderation effect for enculturation was not found for this sample on the relationship between historical loss and historical loss symptoms; nevertheless, enculturation was found to be positively correlated with both factors of positive mental health. This finding strengthens

previous research establishing a positive association between enculturation and well-being. Finally, moderation effects were found for spirituality belief on the relationship between historical loss symptoms and integrated well-being, specifically noting the effect of historical loss symptoms was more robust among participants with higher levels of spirituality belief and less robust among those with lower levels of spirituality belief. Despite this finding being counterintuitive to the proposed hypotheses, it expands on previous research demonstrating a link between historical loss and positive psychology constructs and it further validates the need to continue evaluating the relationships between these variables.

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Appendix A

Tables

A1. *Sample Demographics: Age, Gender, and Racial/Ethnic Identity (N = 121)*

	<i>Mean (SD)</i>	<i>N</i>
Age	38.60 (12.93)	119
	<i>N</i>	<i>%</i>
Gender		
Woman	78	64.5%
Man	39	32.2%
Declined/not listed	4	3.3%
Racial/Ethnic Identity		
AI/Native or member of tribe	59	48.8%
Bi- or multi-racial	59	48.8%
Declined	3	2.5%

A2. Sample Demographics: Tribal Affiliation (N = 121)

Tribal Affiliation	N	%
Apache	2	1.7%
Blackfeet Nation of Montana	1	0.8%
Caddo Nation of Oklahoma	1	0.8%
Cheroenhaka Nottoway	1	0.8%
Cherokee	11	9.1%
Chickasaw	2	1.7%
Chippewa Leach Lake Tribe	1	0.8%
Choctaw Nation of Oklahoma	29	24.0%
Curve Lake First Nation	1	0.8%
Dine	2	1.7%
Eastern Band of Cherokee Indians	3	2.5%
Gros Ventre	1	0.8%
Ho-Chunk Nation	1	0.8%
Iowa of KS/NE	1	0.8%
Keweenaw Bay Indian Community	6	5.0%
Kiowa	1	0.8%
Lakota Sioux	2	1.7%
Loyal Shawnee	1	0.8%
Mashpee Wampanoag	1	0.8%
Meskwaki	1	0.8%
Mississippi Choctaw	2	1.7%
Mohawk Nation of Kahnawake	1	0.8%
Muscogee Creek	1	0.8%
Navajo	7	5.8%
Nez Perce	1	0.8%
Oglala Lakota Sioux or Oglala Sioux	2	1.7%
Ojibwa	1	0.8%
Oneida	1	0.8%
Osage	1	0.8%
Pamunkey Indian Tribe	1	0.8%
Passamaquoddy	1	0.8%
Potawatomi	1	0.8%
Prairie Band Pottawatomie	1	0.8%
Red Lake Band of Chippewa Indians	1	0.8%
Red Lake Nation	1	0.8%
Roseau River Tribe	1	0.8%
Santee Sioux Tribe of NE	1	0.8%

A2 Continued. *Sample Demographics: Tribal Affiliation (N = 121)*

Tribal Affiliation	N	%
Sappony	1	0.8%
Sault Tribe of Chippewa Indians	1	0.8%
Seneca	1	0.8%
Sisseton Wahpeton Oyate	1	0.8%
Standing Rock Sioux	2	1.7%
Stockbridge Munsee Band of Mohican Indians	1	0.8%
Tigua	1	0.8%
Tlingit	1	0.8%
Turtle Mountain Band of Chippewa Indians	1	0.8%
White Earth	1	0.8%
Wyandotte of Oklahoma	1	0.8%
Yuhaviatam Band of Serrano Indians	1	0.8%
More than one tribal affiliation	8	6.6%
Declined	6	5.0%

A3. Sample Demographics: Living Area, Relationship Status, and Religious/Spiritual Affiliation (N = 121)

	<i>N</i>	<i>%</i>
Living Area		
Tribal affiliated or Reservation Lands	15	12.4%
Urban	40	33.1%
Suburban	37	30.6%
Rural	28	23.1%
Declined	1	0.8%
Relationship Status		
Married	56	46.3%
Partnered	13	10.7%
Divorced	9	7.4%
Separated	3	2.5%
Single	36	29.8%
Declined	1	0.8%
Not listed	3	2.5%
Religious/Spiritual Affiliation		
Agnostic	6	5.0%
Atheist	4	3.3%
Baptist	6	5.0%
Buddhist	1	0.8%
Catholic	7	5.8%
Christian	19	15.7%
Native/Traditional	23	19.0%
Episcopal	1	0.8%
Heathen	1	0.8%
Hindu	1	0.8%
Jewish	1	0.8%
Spiritual	5	4.1%
Methodist	2	1.7%
Non-denominational	2	1.7%
Other	5	4.1%
Pentecostal	1	0.8%
Protestant	1	0.8%
WELS	1	0.8%
Declined	17	14.0%
Multiple religions/spiritualities	4	3.3%
Unsure/not religious or spiritual	13	10.7%

A4. *Sample Demographics: Employment Status, Highest Degree, and Household Income*
(*N* = 121)

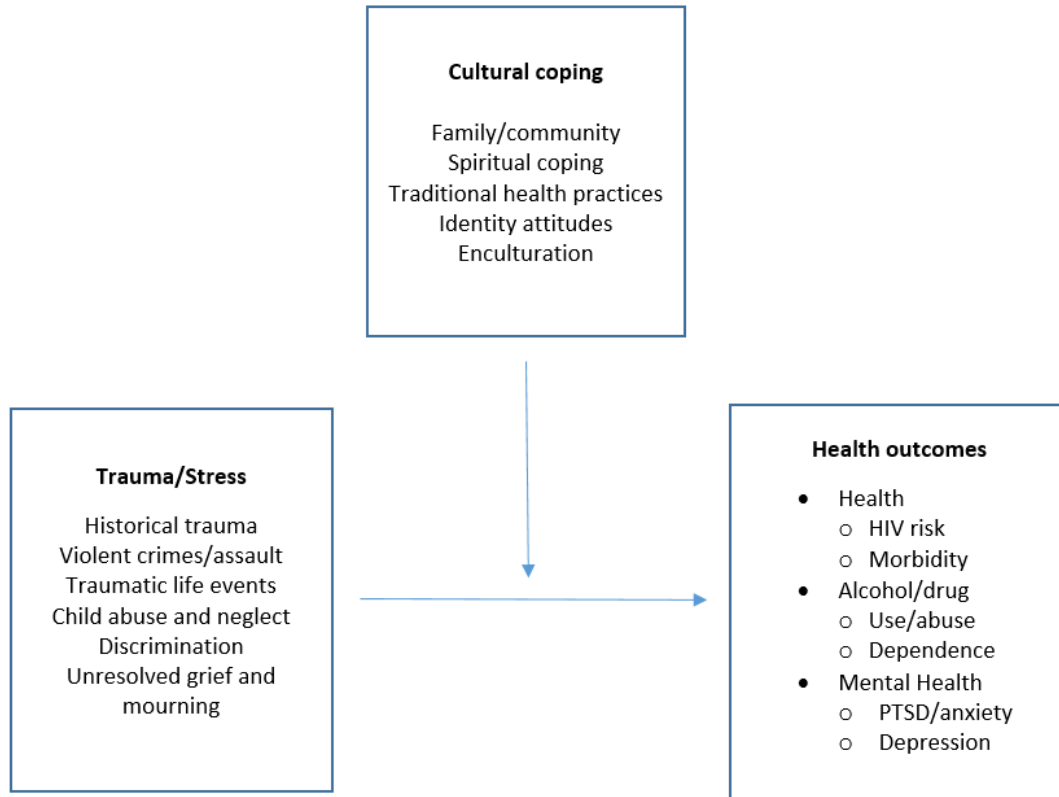
	<i>N</i>	%
Employment Status		
Employed full-time	68	56.2%
Employed part-time	13	10.7%
Out of work and looking for work	5	4.1%
Out of work but not currently looking for work	2	1.7%
Homemaker	2	1.7%
Student	19	15.7%
Retired	6	5.0%
Unable to work	6	5.0%
Highest Degree Completed		
High school/GED	10	8.3%
Some college, less than 1 year	8	6.6%
One or more years of college, no degree	20	16.5%
Associate's degree	16	13.2%
Bachelor's degree	33	27.3%
Master's degree	24	19.8%
Professional degree	3	2.5%
Doctorate degree	7	5.8%
Household Income		
Less than \$10,000	8	6.6%
\$10,000 – 19,999	11	9.1%
\$20,000 – 29,999	15	12.4%
\$30,000 – 39,999	12	9.9%
\$40,000 – 49,999	14	11.6%
\$50,000 – 59,999	12	9.9%
\$60,000 – 69,999	8	6.6%
\$70,000 – 79,999	11	9.1%
\$80,000 – 89,999	9	7.4%
\$90,000 – 99,999	7	5.8%
\$100,000 – 149,999	6	5.0%
More than \$150,000	6	5.0%

A5. Missing Data at the Scale-Level (N = 121)

	<i>Number of Items Missing</i>	<i>%</i>
Historical Loss Scale	4	0.2%
Historical Loss Associated Symptoms Scale	0	0.0%
American Indian Enculturation Scale	5	0.2%
Native American Spirituality Scale	1	0.1%
Mental Health Continuum-Short Form	2	0.1%

Appendix B

Indigenist Stress Coping Model (Walters et al., 2002)



Appendix C

Demographic Questionnaire

1. Please indicate your age: _____
2. Do you identify as Indigenous/American Indian or as having Indigenous/American Indian heritage?
 - a. Yes
 - b. No
3. Use this area to describe your racial/ethnic background in your own words: _____
4. Please indicate your tribal/nation affiliation: _____
5. Please indicate your gender: _____
6. Which of the following best describes the area you live in?
 - a. Reservation or tribal-affiliated lands
 - b. Urban
 - c. Suburban
 - d. Rural
7. Please indicate your spiritual/religious affiliation (if applicable): _____
8. Please indicate your current relationship status:
 - a. Married
 - b. Partnered
 - c. Widowed/Widower
 - d. Divorced
 - e. Single
 - f. Separated
 - g. If relationship status is not listed, please describe: _____
9. What is your employment status?
 - a. Employed – Full time
 - b. Employed – Part time
 - c. Out of work and looking for work
 - d. Out of work but not currently looking for work
 - e. A homemaker
 - f. A student
 - g. Retired
 - h. Unable to work
10. What is the highest degree or level of school you have completed? (If currently enrolled, mark the previous grade or highest degree received)
 - a. No schooling completed
 - b. Nursery school to 8th grade
 - c. 9th, 10th, or 11th grade
 - d. 12th grade, no diploma
 - e. High school graduate – high school diploma or equivalent (for example: GED)
 - f. Some college credit, but less than 1 year
 - g. 1 or more years of college, no degree
 - h. Associate's degree (for example: AA, AS)

- i. Bachelor's degree (for example: BA, BS)
 - j. Master's degree (for example: MA, MS, Med, MSW, MBA)
 - k. Professional degree (for example: MD, DDS, DVM, LLB, JD)
 - l. Doctorate degree (for example: PhD, EdD)
11. Please indicate your total household income:
- a. Less than \$10,000
 - b. \$10,000 - \$19,999
 - c. \$20,000 - \$29,999
 - d. \$30,000 - \$39,999
 - e. \$40,000 - \$49,999
 - f. \$50,000 - \$59,999
 - g. \$60,000 - \$69,999
 - h. \$70,000 - \$79,999
 - i. \$80,000 - \$89,999
 - j. \$90,000 - \$99,999
 - k. \$100,000 - \$149,999
 - l. \$150,000 or more

Appendix D

The Historical Loss Scale (Whitbeck et al., 2004a)

Our people have experienced many losses since we came into contact with Europeans (Whites). Please indicate the number of times you think about the below listed Historical Losses.

Historical Loss	Several times a day	Daily	Weekly	Monthly	Yearly or only at special times	Never	Do not know/Refuse
1. Loss of our land							
2. Loss of our language							
3. Losing our traditional spiritual ways							
4. The loss of our family ties because of boarding schools							
5. The loss of families from the reservation to government relocation							
6. The loss of self-respect from poor treatment by government officials							
7. The loss of trust in Whites from broken treaties							
8. Losing our culture							
9. The losses from the effects of alcoholism on our people							
10. Loss of respect by our children and grandchildren for elders							
11. Loss of our people through early death							
12. Loss of respect by our children for traditional ways							

Appendix E

Historical Loss - Associated Symptoms Scale (Whitbeck et al., 2004a)

Now, please indicate the number of times you experience the below listed Historical Loss-Associated Symptoms when you think about these losses.

	Never	Seldom	Sometimes	Often	Always	Do not know/Refuse
1. Sadness or depression						
2. Anger						
3. Anxiety or nervousness						
4. Uncomfortable around White people when you think of these losses						
5. Shame when you think of these losses						
6. Loss of concentration						
7. Feel isolated or distant from other people when you think of these losses						
8. A loss of sleep						
9. Rage						
10. Fearful or distrust the intentions of White people						
11. Like it is happening again						
12. Like avoiding places or people that remind you of these losses						

Appendix F

American Indian Enculturation Scale (Winderowd et al., 2008)

Please indicate how often you participate in the following activities.

	1 Not at all	2	3	4	5 A great deal
1. Attend Indian church					
2. Attend Indian ceremony					
3. Choose Indian activity before others					
4. Socialize with Indians or have Indian friends					
5. Use Indian medicine					
6. Seek help from Elders					
7. Attend pow-wows					
8. Sing Indian songs					
9. Participate in Indian prayers					
10. Write Indian stories					
11. Eat or cook Indian food					
12. Do Indian art					
13. Use or know the Indian language					
14. Attend Indian dances					
15. Know or participate in tribal policies					
16. Know or share Indian history					
17. Work in Indian Communities and/or Populations					

Appendix G

The Native American Spirituality Scale (Greenfield et al., 2015)

Each of the items below may be something you have or have not experienced. Think about how often you have had each experience rather than whether you should or should not have had these experiences. A number of items use the word “Creator.” If there is another word that calls to mind the divine or holy for you, please use that word instead.

	Many times a day	Every day	Most days	Some days	Once in a while	Never or almost never
1. I believe life is sacred.						
2. I value my life and everyone’s around me.						
3. All things are related to one another.						
4. I wake up early and pray to Creator/ancestors.						
5. In the evening, I express thanks.						
6. I find strength in my faith and spirituality.						
7. I watch the [your tribe/nation] dances and I feel a better sense of well-being.						
8. I participate in cultural/faith related activities.						
9. I am spiritually touched by participating in my faith.						
10. I believe everything is alive with a spirit.						
11. I feel thankful for my understanding of my faith and beliefs.						
12. I want to learn more about [your tribe/nation] protocol and way of life.						

1. My frequency of participation in traditional spiritual/religious activities compared to other tribal members is:

Much more-----Somewhat more-----About the same-----Somewhat less-----Much less

Appendix H

Adult Mental Health Continuum – Short Form (Keyes, 2009)

Please answer the following questions about how you have been feeling during the past month. Place a check mark in the box that best represents how often you have experienced or felt the following:

During the past month, how often did you feel...?	Never	Once or Twice	About Once a Week	About 2 or 3 Times a Week	Almost Every Day	Every Day
1. Happy						
2. Interested in life						
3. Satisfied with life						
4. That you had something important to contribute to society						
5. That you belonged to a community (like a social group, or your neighborhood)						
6. That our society is a good place, or is becoming a better place, for all people						
7. That people are basically good						
8. That the way our society works makes sense to you						
9. That you liked most parts of your personality						
10. Good at managing the responsibilities of your daily life						
11. That you had warm and trusting relationships with others						
12. That you had experiences that challenged you to grow and become a better person						
13. Confident to think or express your own ideas and opinions						
14. That your life has a sense of direction or meaning to it						
15. That our society is becoming a better place for people like you						

VITA

Amanda Estelle McLarty was born on February 12, 1989 in Claremore, Oklahoma. She earned her high school diploma at Fayetteville High School in 2007. She then received her Bachelor of Arts in 2011 from the University of Arkansas in Fayetteville, Arkansas, where she majored in psychology. In August of 2012, she began studying for her M.S. in Counseling at Indiana University (IU) in Bloomington, Indiana. For her clinical internship while at IU, she trained as a therapist at Wabash Valley Correctional Facility. She obtained her M.S. in May 2014.

Ms. McLarty then went on to pursue her Ph.D. in Counseling Psychology at the University of Missouri-Kansas City (UMKC). During her doctoral career she trained as a therapist at several clinical practicum sites to include the United States Penitentiary Leavenworth and the Dwight D. Eisenhower Leavenworth VA Medical Center. Her predoctoral internship was at the Federal Correctional Complex in Allenwood, Pennsylvania.