THE RELATIONSHIP BETWEEN HOPE, OPTIMISM,

AND SUICIDAL IDEATION AND BEHAVIOR AMONG

AMERICAN INDIAN/ALASKA NATIVE COLLEGE

STUDENTS

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Abstract: American Indians/Alaska Natives (AI/AN) exhibit extremely high suicide prevalence rates in comparison to other ethnic groups in the United States. Although epidemiological data continues to provide alarming statistics, there is a dearth of research investigating the underlying factors associated with AI/AN suicidal behavior. Such investigation can aid in investigating why AI/AN populations are overrepresented in suicidal behavior and suicide mortality rates. Furthermore, the extant literature on AI/AN suicide has focused on risk factors, and little attention is paid to protective factors against suicide. A novel approach to the study of protective factors against AI/AN suicide may be in employing positive psychology methods. Research is beginning to shed light on how these positive psychological constructs buffer against psychological disorders. The purpose of the present study was to investigate the relationship between hope and optimism as protective factors against suicidal ideation and suicide attempts amongst AI/AN college students. First, it was hypothesized that hope would be negatively associated with suicidal ideation and suicide attempts, after controlling for symptoms of depression and substance use, among AI/AN college students. Second, it was hypothesized that optimism would be negatively associated with suicidal ideation and suicide attempts, after controlling for symptoms of depression and substance use, among AI/AN college students. Lastly, it was hypothesized that optimism would have a stronger negative relationship than hope with suicidal ideation and suicide attempts, after controlling for symptoms of depression and substance use, for AI/AN college students. Results did not support the hypotheses, as hope and optimism did not negatively predict suicidal ideation and suicide attempts. Hope and optimism should continue to be examined within the context of suicidal ideation and behavior for AI/AN to see if they are protective factors against suicidal ideation and behavior.

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CHAPTER I

INTRODUCTION

Suicide is a major public health problem that negatively impacts the lives of individuals

and communities throughout the United States (Centers for Disease Control and Prevention,

2011). Although suicide deaths among all races and ethnicities in the United States are

concerning, it is important to address that there are higher rates of suicide among certain

races/ethnicities. American Indians/Alaska Natives (AI/AN) exhibit extremely high suicide

prevalence rates in comparison to other ethnic groups in the United States. To help elucidate this

large disparity, AI/AN mortality rates due to suicide are 82% higher than other racial and ethnic

groups (Indian Health Service, 2011). Amongst all AI/AN, the largest risk group for suicidal

behavior is AI/AN individuals between the ages of 10-24 (Indian Health Service, 2011). There

are 565 federally recognized tribes and nations throughout the United States, which complicates

the ability to adequately represent different tribes and nations in research. Furthermore, cultural

heterogeneity and geographic location of different tribes and nations means that rates of suicide

will vary depending on tribe and nation and whether the community is located on a reservation or

in an urban area (Alcántara & Gone, 2008; May & Van Winkle, 1994; Novins, Beals, Roberts, &

Manson, 1999; Olson & Wahab, 2006).

Although epidemiological data continues to provide alarming statistics, there is a dearth

of research investigating the underlying factors associated with AI/AN suicidal behavior. Such

investigation can aid in investigating why AI/AN populations are overrepresented in suicidal

behavior and suicide mortality rates. Much of the existing research on AI/AN suicidal behavior is focused on identification of potential risk and protective factors, especially amongst AI/AN middle school and high school students. The existing literature has identified substance use (LaFramboise, Medoff, Lee, & Harris, 2007; LeMaster, Beals, Novins, Manson, & the AI-SUPERPFP Team, 2004; May et al., 2002), depression or other psychiatric disorders (LaFramboise et al. 2007; LeMaster et al., 2004), and cultural identity or level of acculturation (Novins et al., 1999; Range et al., 1999) as possible risk factors for AI/AN suicidal behavior. Potential protective factors against suicidal behavior amongst AI/AN include spirituality (Alcántara & Gone, 2008; Garroutte et al., 2003) and social support or belongingness (Hill, 2009; Pharris, Resnick, & Blum, 1997; Strickland, Walsh, & Cooper, 2006).

Despite research efforts to identify risk and protective factors for AI/AN suicidal behavior, suicide deaths continue to plague AI/AN communities. Without sound empirical evidence to inform prevention and intervention efforts, the devastation of suicide will continue to persist within AI/AN communities. Due to the unchanging rates of suicidal behavior and deaths amongst AI/AN, it may be imminent to modify current research practice. A novel approach to the study of AI/AN suicidal behavior may be in employing positive psychology methods. The positive psychology approach investigates strengths, including, but not limited to hope, self-determination, and optimism (Seligman, 2005). Research is beginning to shed light on how these positive psychological constructs buffer against psychological disorders. Recently, empirical research has investigated the relationship between positive psychology constructs with promising findings that hope and/or optimism are negatively associated with suicidal ideation, suicidal behavior, and interpersonal risk factors for suicide (Hirsch, Conner, & Duberstein, 2007; Davidson, Wingate, Rasmussen, & Slish, 2009; Davidson, Wingate, Slish, & Rasmussen, 2010; Meadows, Kaslow, Thompson, & Jurkovic, 2005; Range & Penton, 1994). To date, there have been no empirical research investigations of the relationship between positive psychology

constructs and suicidal behavior amongst AI/AN. Although they have not focused on suicide, there have been preliminary studies demonstrating the usefulness of positive psychology constructs, such as hope, among AI/AN populations (Hammond, Watson, O'Leary, & Cothran, 2009; Mashunkashey-Shadlow, 2008). These studies highlight the relevance of hope among certain groups of AI/AN; however, no studies have examined the relationship between hope or other positive psychological constructs and suicide for AI/AN.

The purpose of the present study was to investigate the relationship between hope and optimism as protective factors against suicidal ideation and suicide attempts amongst AI/AN college students. Past AI/AN suicide research has tended to focus on AI/AN adolescents and teenagers in middle school and high school. It is important to include AI/AN between the ages of 18-24, as this age group is included within the highest risk group for suicide (i.e., 10-24; Indian Health Service, 2011). First, it was hypothesized that hope would be negatively associated with suicidal ideation and suicide attempts, after controlling for symptoms of depression and substance use, among AI/AN college students. Second, it was hypothesized that optimism would be negatively associated with suicidal ideation and suicide attempts, after controlling for symptoms of depression and substance use, among AI/AN college students. Lastly, it was hypothesized that optimism would have a stronger negative relationship than hope with suicidal ideation and suicide attempts, after controlling for symptoms of depression and substance use, for AI/AN college students.

CHAPTER II

LITERATURE REVIEW

American Indian/Alaska Native Demographic and Health Background

In the United States (U.S.) today, there are more than 4 million self-identified American Indians/Alaska Natives (AI/AN), representing 565 federally recognized tribes (Ogunwole, 2006; U.S. Department of Interior Indian Affairs, 2011). It is important to distinguish between those who self-identify as AI/AN, and those who are enrolled with a tribe/nation and possess a Certificate Degree of Indian Blood card issued from the federal government, as epidemiological data is separated between those who self-identify as AI/AN versus those who are considered federally recognized. Census data includes those who self-identify as AI/AN, regardless of whether an individual has been issued a Certificate Degree of Indian Blood card or not. On the other hand, Indian Health Service (IHS) data only includes those who have access to an IHS facility, and only AI/AN who possess a Certificate Degree of Indian Blood card are permitted to use IHS facilities. Therefore, Census data will tend to include larger numbers of AI/AN than IHS data. Approximately one-third of the AI/AN populations in the United States are under the age of 18, creating a larger proportion of younger to older AI/AN peoples when compared to the age group compositions of the general population (Ogunwole, 2006). Contrary to popular belief, nearly two-thirds of all AI/AN live in urban areas and do not reside on reservations or land designated by the U.S. Federal Government specifically for AI/AN (Ogunwole, 2006).

The IHS is the U.S. federal governmental agency responsible for providing health services and acting as a health advocate for approximately 1.9 AI/AN who are enrolled with a tribe/nation in 35 states (Indian Health Service, 2011). The U.S. federal government and tribes/nations have a unique government-to-government relationship, which is documented in the U.S. Constitution in Article I, Section 8. The IHS was established based on this U.S. Constitution Article and has been further guided by a number of laws, treaties with tribes/nations, Supreme Court decisions, and Executive Orders (Indian Health Service, 2011). The mission of the IHS is to substantially improve the mental, social, physical, and spiritual health of all federally recognized AI/AN throughout the U.S. Additionally, the overarching goal of IHS is to assure the availability and accessibility of culturally sensitive and comprehensive health care services to AI/AN (Indian Health Service, 2011).

Although the IHS has these seemingly impassioned mission and goals, the sad reality is that the IHS is severely underfunded (Gone, 2004). Furthermore, very little of the total money allocated to the IHS by the federal government is devoted to mental health services (Gone, 2004). The National Health Interview Surveys collected in 2004-2008 resulted in dismal data regarding AI/AN adult physical and mental health status. When compared to Caucasian, African American, and Asian adult populations, AI/AN adults were more likely to have overall poorer health, were more likely to not receive needed medical services because of associated costs, were more likely to have higher rates of diabetes, and were more likely to have experienced psychological distress in the past month (Barnes, Adams, & Powell-Griner 2010). Mortality rates comparing AI/AN to the general U.S. population are also of great concern. According to the Indian Health Service (2011), in 2004-2006 in comparison to all races/ethnicities in the U.S., AI/AN were 6.1 times more likely to die from alcohol, 6 times more likely to die from tuberclosis, 2.8 times more likely to die from diabetes, 2.4 times more likely to die by unintentional injuries, 1.9 more times likely to die by homicide/assault, and 1.8 times more likely to die by suicide.

American Indian/Alaska Native Suicide

Although AI/AN only make up approximately 1% of the total U.S. population (Ogunwole, 2006), they are overrepresented in the number of suicide deaths occurring each year. According to the Indian Health Service (2011), AI/AN have mortality rates from suicide that are 82% higher than their non-AI/AN counterparts. Among AI/AN across all ages, suicide is the eighth leading cause of death. Further, among AI/AN ages 10-24 years old, suicide is the second leading cause of death (Indian Health Service, 2011). This statistic corresponds to a suicide rate that is nearly 2 times larger than the equivalent age cohort in the general U.S. population (Centers for Disease Control and Prevention, 2009). In a recent article, U.S. Senator Byron L. Dorgan (2010) stated, "Federal policymakers and health care providers urgently need to develop an effective response to repair the broken health care system that allows this epidemic [AI/AN suicide] to persist year after year." Although legislative and health care efforts have commenced, there has been no observable decrease in suicide deaths within AI/AN communities (Dorgan, 2010).

Although epidemiology data yield high rates of suicide among AI/AN people, it is important to keep in mind that AI/AN cannot be categorized into one homogeneous group. Given the vast heterogeneity of AI/AN tribes and cultures, research efforts are warranted to help understand the influence of culture on mental health outcomes (Beals, Manson, Mitchell, Spicer, & the AI-SUPERPFP Team, 2003). Suicide rates of individual tribes and communities will vary based on factors such as family patterns, political organization, and social structure (May & Van Winkle, 1994). Additionally, suicide rates will differ based on the meaning of suicide to a specific tribal culture, historical background, whether a community is located on a reservation or in an urban area, and region of the U.S. (Alcántara & Gone, 2008; Novins, Beals, Roberts & Manson, 1999; Olson & Wahab, 2006). It is erroneous to believe all AI/AN are in need of suicide prevention and intervention when rates of suicidal behavior are extremely variable – one

tribe may have a suicide rate of zero per 100,000 compared to another that has a rate of 150 per 100,000 (Range et al. 1999). For example, the White Mountain Apache tribe has a suicide rate that is seven times higher than all other tribes that make up the Indian Health Service area (Mullany et al., 2009). Due to the high suicide rates of some AI/AN communities; however, identification of risk and protective factors will help inform sound, culturally appropriate prevention and intervention programs.

The majority of past research on suicidal behavior amongst AI/AN has tended to focus on AI/AN adolescents and teenagers in middle school and high school (Freedenthal & Stiffman, 2004; Howard-Pitney, LaFramboise, Basil, September, & Johnson, 1992; LaFramboise, Medoff, Lee, & Harris, 2007; LaFramboise & Bigfoot, 1988; Novins et al., 1999; Pettingell et al., 2008; Pharris, Resnick, & Blum, 1997; Strickland, Walsh, & Cooper, 2006). Such research practice has tended to exclude AI/AN young adults (i.e. ages 18-24), who are included in the highest risk group according to Indian Health Service (2011) data. Numerous risk factors beyond basic demographic variables (e.g., age), have been identified for AI/AN suicidal ideation, suicide attempts, and suicide enactments. One of the most widely recognized risk factors for AI/AN suicidal behavior is substance use. Past research has continued to link suicide death with alcohol use among AI/AN (May et al., 2002). One research team investigated levels of alcohol use among decedents from Navajo, Apache, and Pueblo tribes in New Mexico by obtaining death certificates and medical examiner reports (May et al., 2002). Results suggested that among all three southwest tribal groups, a higher rate of alcohol use was associated with suicide death in comparison to similar studies of suicide in the general population. Average blood alcohol concentration demonstrated levels that were more than two times the legal intoxication cut-off point for operating a motor vehicle in the state of New Mexico. Additionally, results found that more male suicide deaths were associated with alcohol use than females. Although alcohol was not involved in as many female suicide deaths, female blood alcohol concentration levels were

similar to the males, indicating high alcohol intoxication levels for those females at the time of suicide death.

In another study, one in five AI adolescents from a Northern Plains reservation stated they had made at least one suicide attempt in the past (LaFramboise et al., 2007). When the researchers created a multivariate model, only substance use and depression were significant predictors of suicidal ideation. In a similar study, approximately 30% of adolescents from the Zuni Pueblo were found to have ever attempted suicide (Howard-Pitney et al., 1992). When characteristics of lifetime suicide attempters and non-attempters were compared, it was found that past suicide attempters had significantly higher alcohol and marijuana use rates. Additionally, approximately 35% of the suicide non-attempters reported getting drunk at least once a month, compared to 65% of the suicide attempters. In another study that focused on AI adolescents from an urban area, almost one in five had thought about completing suicide in the past month and approximately 15% of the adolescents had attempted suicide at some point in their lives (Pettingell et al., 2008). For both genders, substance use was a significantly associated with an increased risk of attempting suicide. An additional study investigated suicidal ideation and attempts among Northern Plains AI ages 15-54 (LeMaster, Beals, Novins, Manson, & The AI-SUPERPFP Team, 2004). In addition to finding significantly related psychiatric disorders such as depressive disorders, violent aggression, and posttraumatic stress disorder, substance abuse/dependence was a significant risk factor for both suicidal ideation and suicide attempts for this group of Northern Plains AI adolescents and adults. Specifically, AI who reported substance abuse/dependence in the study were more than 3 times likely to exhibit suicidal ideation and were more than 2 times likely to have past suicide attempts.

Another risk factor associated with AI/AN suicidal behavior is cultural disintegration or acculturation (Range et al., 1999). When adolescents and young adults from the Zuni Pueblo began to exhibit increased suicidal behavior, tribal leaders speculated the increased rates were due

to the loss of traditional Zuni culture (LaFramboise & Howard-Pitney, 1995). Cultural identity has yielded mixed results in past empirical research related to suicidal behavior. One study investigated suicidal ideation among 1,378 AI adolescents from three different cultures – Pueblo, Southwest, and Northern Plains (Novins et al., 1999). Among all three groups of AI adolescents, cultural identity was not associated with suicidal ideation.

Residential pattern – reservation versus urban – has also been investigated to see if there are differences in suicidal ideation, attempts, and completions. Most of the past research examining AI/AN suicidal behaviors has focused on AI/AN residing on reservations (Alcántara & Gone, 2008). This leaves a tremendous gap in knowledge regarding the majority of AI/AN today, who reside in urban areas. The first study to investigate risk and protective factors of suicidal behavior in urban AI youth and compare them to reservation AI youth had interesting findings (Freedenthal & Stiffman, 2004). The AI youth who grew up in an urban area had less suicidal ideation and lower rates of problematic behavior related to suicidal behavior, such as substance abuse/dependence. However, the AI urban and reservation youth did not differ on rates of depression, exposure to suicidal behavior by family or friends, and suicide attempts.

As previously stated, numerous risk factors have been identified for AI/AN suicidal ideation, attempts, and deaths. AI/AN populations are dismayed by research emphasizing negativity and problems in their communities (Stiffman et al., 2007). Instead of pointing out risk factors for suicidal behavior, an alternative approach is to study protective factors that buffer against engaging in suicidal behavior. Native researchers have stressed the importance of dedicating more time to identifying and investigating protective factors against suicidal ideation and attempts among AI/AN (Alcántara & Gone, 2008). Furthermore, the majority of prevention and intervention programs targeting AI/AN suicide are continuing to provide services without proper evaluation – this fact that means we do not know what really helps in AI/AN communities (Middlebrook, LeMaster, Beals, Novins, & Manson, 2001). Research can identify protective

factors against suicidal ideation and attempts, thereby informing sound prevention and intervention programs within AI/AN communities.

One potential protective factor against suicidal behavior is spirituality. Spirituality has repeatedly been cited as a protective factor for AI/AN (Alcántara & Gone, 2008). In a study of 1,456 enrolled tribal members from a Northern Plains reservation, commitment to Christian beliefs and traditional tribal beliefs were assessed, as well as a cultural spirituality measure developed specifically for this group of AI; Christian beliefs, traditional tribal beliefs, and cultural spirituality were examined to see if they were associated with suicide attempts (Garroutte et al., 2003). Previously identified risk factors of AI/AN suicidal behavior from the literature, including age, gender, substance abuse, education, and current emotional distress, were controlled. Results showed no significant associations between Christian beliefs or traditional tribal beliefs as protective factors from suicide attempts. The cultural spirituality measure; however, did yield a significant association to suicide attempts – AI participants who had higher scores on the cultural spirituality measure were half as likely to attempt suicide in their lifetime than those who scored lower on the cultural spirituality measure.

Another protective factor against suicidal behavior for AI/AN is the presence of social support. In one study, attention and caring from family, school authorities, and tribal leaders were found to be significant protective factors against suicidal ideation and suicide attempts among nearly 14,000 AI/AN reservation youth throughout the United States (Pharris et al., 1997). In another study, focus groups consisting of Northwest tribal parents and elders expressed the fundamental importance of family support; their definition of family also included their community (Strickland et al., 2006). When asked about paths of action to decrease risk of suicidal behavior, the tribal parents and elders offered suggestions, including adult-youth mentoring programs, increasing cultural activities, and family education for communicating with

their children. In yet another study, belongingness was negatively associated with suicidal ideation among AI adults from California (Hill, 2009).

Positive Psychology

It is important that the fields of psychology not only study problems and pathologies, but also focus on positivity and strengths (Seligman & Csikszentmihalyi, 2000). The field of positive psychology includes factors such as hope, optimism, determination, and valor; these positive attributes have been found to protect against various psychological disorders.   To date, there is a larger knowledge base of risk factors for suicide than protective factors and resiliency against suicide (Wingate et al., 2006). There has been less attention on what adaptive strengths a non-suicidal individual possesses and how these life beliefs and factors prevent against suicide (Linehan, Goodstein, Nielsen, & Chiles, 1983). In taking a novel approach to investigate personal and community strengths, the prevalence of suicide may be significantly decreased (Wingate et al., 2006).

Hope

Previous research has focused on the association between hopelessness and suicide; however, hope may be a better predictor of suicide (Grewal & Porter, 2007). Hope is defined as, "a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-directed energy), and (b) pathways (planning to meet goals)" (Snyder, Irving, & Anderson, 1991). An individual who has high levels of hope can be described as having the ability and will to create a number of goals and having a positive mindset while pursuing said goals (Snyder, 2002). On the other hand, an individual who has low levels of hope often engages in negative rumination about goals, experiences distress, and often gets off track in their path towards said goals. Overall, individuals with high hope continue to surpass low hope individuals in physical health, mental health, academics, and athletic activities (Snyder, 2002). Despite the

amount of literature attesting to the positive outcomes of high levels of hope in various domains, there is not a large amount of research investigating the relationship between hope and suicidal behavior (Grewal & Porter, 2007). There is even less empirical research attention given to the study of hope and suicide among ethnic minorities (Davidson, Wingate, Slish, & Rasmussen, 2010).

One study investigated the relationship between hope, hopelessness, and suicidal behavior with 206 undergraduate psychology students (Range & Penton, 1994). Results revealed that scores on hope and coping were more strongly associated with suicidal behavior than hopelessness. In another study, hope was related to the Interpersonal Theory of Suicide (Joiner, 2005), which posits that suicidal behavior is based on three elements: burdensomeness, thwarted belongingness, and ability to enact suicide (Davidson, Wingate, Rasmussen, & Slish, 2009). Results showed that among undergraduates, higher levels of hope were related to lower levels of burdensomeness and thwarted belongingness; however, higher levels of hope were positively related to ability to enact suicide. In a similar study looking at the relationship between hope and the Interpersonal Theory of Suicide (Joiner, 2005) among African American undergraduates, results suggested that hope might prove to be a more important protective factor from suicidal behavior for African American undergraduates than for Caucasian undergraduates (Davidson et al., 2010). In a separate study, hope and other protective factors such as spirituality, coping, social support, and self-efficacy, were found to be negatively related to suicide attempts among African American women who had been victims of interpersonal violence (Meadows Kaslow, Thompson, & Jurkovic, 2005). However, only the factors of hope and familial social support, were found to distinguish between African American women who had attempted suicide in the past and those who had never attempted suicide.

To the author's knowledge, there is only one published study (Hammond, Watson, O'Leary, & Cothran, 2009) related to the construct of hope among AI/AN and a few unpublished

theses/dissertations on this topic. It is important to examine the construct of hope among different ethnic minority groups, as definitions and conceptualizations of hope may differ depending on culture (Mashunkashey-Shadlow, 2008). One published study examined hopefulness among Apache adults from one reservation in Arizona (Hammond et al., 2009). An assessment of hopefulness among the Apache was created based on responses to items pertaining to the following categories: familial connection, community participation, spirituality, education, and work. The Apache Hopefulness scale that was created from the responses was found to be reliable. Furthermore, this scale was negatively associated with hopelessness and positively related to individual, as well as collective self-esteem. Out of the five categories included, the strongest categories based on number of items included in the final assessment appeared to be work, education, and familial connection. This study represents an initial pathway towards introducing positive psychology within one AI community; however, more research needs to take this approach by applying it to understand existing AI/AN health disparities, such as suicide.

In addition to the previously discussed published study of hopefulness among the Apache, an unpublished master's thesis by Mashunkashey-Shadlow (2008) sought to investigate whether AI children from Oklahoma and Kansas define hope in the same manner as European American children and whether Snyder's (1991) Theory of Hope is applicable to AI children. Findings revealed a relatively high mean hope score among the AI children. In this study, hope appeared to be an important construct applicable to AI populations and represents an area of research that can empower AI/AN communities (Mashunkashey-Shadlow, 2008).

In a theoretical article, Graham (2002) suggested that practitioners working with AI/AN populations use the Reasons for Living Inventory (RFL; Linehan et al., 1983), an instrument developed to identify various reasons that safeguard an individual from engaging in suicidal behavior. The RFL (RFL; Linehan et al., 1983) is composed of subscales relating to coping, future hopefulness, family, and community, which can be related to the holistic worldview of

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AI/AN (Graham, 2002). Although the author recommends use of this assessment, no empirical investigation has been undertaken to validate the utility of the Reasons for Living Inventory (RFL; Linehan et al., 1983) with AI/AN. This represents the only study that has sought to relate positive psychology and suicidal behavior amongst AI/AN thus far.

Optimism

Another positive psychology construct that has been utilized in the study of suicidal behavior is optimism. Optimism is related to an individual's future expectations; optimists have positive expectations, while pessimists have negative expectations (Scheier & Carver, 1985). Optimists and pessimists will react differently when encountering daily problems and will employ different coping mechanisms in the face of adversity. For example, an optimist who encounters difficulties in life will confront said difficulties with confidence and perseverance, while a pessimist in the same situation will tend to exhibit uncertainty and avoidance (Carver, Scheier, & Segerstrom, 2010). Individuals who are pessimistic are more likely to give up on goals, and a pessimistic individual who gives up on life may engage in suicidal behaviors.

The theoretical relationship between optimism/pessimism and suicide has been empirically supported – individuals with no previous suicidal behavior were found to have rated life more positively than individuals with suicidal ideation or recent suicide attempts (Wetzel, 1975). Previous research has also resulted in finding a negative relationship between optimism and hopelessness (O'Connor & Cassidy, 2007). Given the empirical support for hopelessness as a robust predictor of suicidal behavior (Beck, Brown, Berchick, Stewart, & Steer, 1990; Beck, Brown, & Steer, 1989; Beck, Steer, Beck, & Newman, 1993), it is logical to also study optimism, independently of hopelessness, as a predictor of suicidal behavior (Rasmussen & Wingate, 2011).

In one study investigating optimism as a protective factor against suicidal ideation, undergraduate students high in optimism were found to have less suicidal ideation, after

accounting for depression and hopelessness (Hirsch, Conner & Duberstein, 2007). Similarly, Rasmussen & Wingate (2011) utilized the Interpersonal Theory of Suicide (Joiner, 2005) and found that optimism was negatively associated with suicidal ideation among undergraduate students. In addition, there have been differences found in optimism toward future life activities between European Americans and Japanese students (Chang, Asakawa, & Sanna, 2001). Given the goals of different cultures emphasizing individualistic values versus collectivistic values, further research is needed to parse apart cultural differences in optimistic expression. Furthermore, given previous research demonstrating optimism as an important predictor to suicidal behavior among college samples, it is important to extend this knowledge to see if it holds for ethnic minority individuals. To my knowledge, there has been no research conducted on AI/AN optimism and more specifically, the relationship between optimism and suicidal behavior.

Although research efforts have not been focused on hope and optimism in relation to AI/AN suicide specifically, there appears to be a growing body of literature on resiliency and general strengths amongst AI/AN. The study of resiliency is a significant area of research when considering the plight of AI/AN relating to violence perpetration, relocation, the creation of reservations, and cultural disruption (LaFramboise, Hoyt, Oliver, & Whitbeck, 2006). One study conducted interviews with approximately 400 AI adolescents and teenagers to investigate whether there is a relationship between individual, family, and collective/community strengths and outcomes such as individual functioning, school achievement, family mental health, and psychological problems (Stiffman et al., 2007). Results showed that AI adolescents and teenagers who had a greater number of individual strengths had higher levels of personal functioning; those who had more family strengths had lower ratings of family mental health problems; and AI adolescents and teenagers who listed more school strengths and tribal-specific strengths had lower levels of substance abuse and depression.

Another study employed qualitative and quantitative method to carry out a needs assessment of 650 AI adults and children in Tulsa, Oklahoma (Johnson, Bartgis, Worley, Hellman, & Burkhart, 2010). One of the aims of the study was to get an idea of what the AI adults and children perceived as strengths of the Tulsa, Oklahoma AI community. The majority of respondents attested to the importance of AI culture, such as heritage and participation in ceremonies, as a community strength. Additional community strengths included family connection, spirituality, religiosity, pride, resilience, and perseverance in encountering difficulties. Inherent in some of these recognized community strengths are positive psychology factors, such as perseverance, determination, and hope.

The Present Study

Given the recent attention in emphasizing strengths among AI/AN communities, it is a logical next step to move towards investigating positive psychology constructs, such as hope and optimism. Previous research has started to move towards this approach by investigating hope among the White Mountain Apache tribe and AI children in Oklahoma and Kansas (Hammond et al., 2009; Mashunkashey-Shadlow, 2008); however, further work is warranted to see how these approaches can help in decreasing mental health disparities amongst AI/AN, and more specifically suicidal behavior. Results in recent studies of suicidal behavior amongst college students and African American populations have yielded valuable information that supports the utilization of hope and optimism as important factors in predicting suicidal behavior (Davidson et al., 2009; Davidson et al., 2010; Hirsch et al., 2007; Meadows et al., 2005; Range & Penton, 1994; Rasmussen & Wingate, 2011).

To the author's knowledge, there have been no studies investigating the role of hope and optimism in suicidal ideation and suicide attempts amongst AI/AN. Therefore, the present study seeks to understand whether hope and optimism are protective factors against suicidal ideation

and attempts in one group of AI/AN college students. My hypotheses were threefold: (1) AI/AN college students who have higher levels of hope would exhibit lower levels of suicidal ideation and have less suicide attempts, after controlling for symptoms of depression and substance use; (2) AI/AN college students who have higher levels of optimism would endorse lower levels of suicidal ideation and have less suicide attempts, even after controlling for symptoms of depression and substance use; and (3) optimism would be a stronger predictor of suicidal ideation and suicide attempts among AI/AN college students than hope.

CHAPTER III

METHODS

Participants

Participants in the study were 158 AI/AN college students ages 18-24 (*M* = 20.72; *SD* = 1.69) from three Midwestern universities. Participants included 125 women (79.1%) and 33 men (20.9%). Participants were 33 freshmen (20.9%), 37 sophomores (23.4%), 36 juniors (22.8%), 42 seniors (26.6%), 8 graduate students (5.1%), and 2 other (1.3%).

All participants self-reported their tribal affiliation and there were 26 different tribes represented in the sample. To ensure anonymity of participants and tribal communities, specific tribal affiliation data will not be reported, as recommended by Norton and Manson (1996). Ninety-eight participants (62.0%) grew up in a rural area, 52 participants (32.9%) grew up in an urban area, 4 participants (2.5%) grew up in a suburban area, 2 participants (1.3%) reported growing up in both urban and rural areas, and 2 participants (1.3%) did not report where they grew up.

Measures

Demographics Form. Demographic information was collected from participants including age, sex, marital status, ethnicity, tribal affiliation, current year in school, what school they attend, family income, highest level of parental education, and involvement in cultural activities. See Appendix A.

Center for Epidemiologic Studies-Depression Scale. The Center for Epidemiologic Studies-Depression Scale (CES-D; Radloff, 1977) is a self-report measure with 20 items that assess for depressive symptomatology in the past week. Responses are based on a 4-point Likert-type scale ranging from 0 (*rarely or none of the time*) to 3 (*most or all of the time*). Internal consistency has been found to be good among the general population ($\alpha = .85$; Radloff, 1977) as well as among AI/AN high school aged students ($\alpha = .82$; Manson, Ackerson, Dick, Baron, & Fleming, 1990). Internal consistency in the present study was excellent ($\alpha = .93$). See Appendix B.

The Hope Scale. The Hope Scale (Snyder et al., 1991) is composed of 8 items assessing hope and four filler items. Four of the items assessing hope relate to an individual's sense of agency – past, present, and future determination to achieve goals. The remaining four items assessing hope relate to pathways, namely cognitive appraisals of their capability towards meeting desired goals. Items are rated on a 4-point Likert-type scale with responses ranging from 1 (*definitely false*) to 4 (*definitely true*). Previous research utilizing the Hope Scale with ethnic minority undergraduate students has yielded good internal consistency for the agency subscale ($\alpha = .83$) and the pathways subscale ($\alpha = .79$; Roesch & Vaughn, 2006). Internal consistency in the present study was good for both the agency subscale ($\alpha = .88$) and pathways subscale ($\alpha = .85$). See Appendix B.

Revised Life Orientation Test. The Revised Life Orientation Test (LOT-R; Scheier, Carver, & Bridges, 1994) is a self-report 10-item scale that measures dispositional optimism. Three items are keyed in the negative direction, three items are keyed in the positive direction, and the remaining four items are filler statements that are not scored. Responses are based on a 5-point Likert-type scale ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). Internal consistency has been found to be acceptable ($\alpha = .78$; Scheier, Carver, & Bridges, 1994). Internal consistency in the present study was good ($\alpha = .82$). See Appendix B.

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Hopelessness Depressive Symptom Questionnaire-Suicidality Subscale. The

Hopelessness Depressive Symptom Questionnaire-Suicidality Subscale (HDSQ-SS; Metalsky &

Joiner, 1997) is a 4-item self-report measure used to assess suicidal ideation in the past two

weeks. The HDSQ-SS is a subscale of the Hopelessness Depression Symptom Questionnaire

(Metalsky & Joiner, 1997). Items are rated on a scale from 0 to 3, with each response varying

depending on the individual item. Overall higher scores indicate higher levels of suicidal

ideation. Metalsky and Joiner (1997) found internal consistency for the HDSQ-SS subscale to be

good (α = .86). Internal consistency in the present study was excellent (α = .93). See Appendix

B.

Substance Use Questionnaire. Participants were asked 5 questions about alcohol and

drug use. Two questions inquired about frequency of past month alcohol and drug use rated on a

6-point Likert-type scale with responses ranging from 0 (*I do not drink at all*; *I do not use drugs

at all*) to 5 (*once a day or more*). One item inquired about the most alcohol consumed in the past

month in one sitting rated on a 10-point Likert-type scale with responses ranging from 0 (*no

drinks*) to 9 (*19 or more*). Another item inquired about how often an individual has six or more

drinks in one sitting rated on a 6-point Likert-type scale with responses ranging from 0 (*never*) to

5 (*daily or almost daily*). Lastly, an item listed a number of drugs and participants were to check

which of the drugs they have used in the past month. This item was scored as 1 point for each

drug checked. The total substance use score was calculated by summing all items. Higher scores

indicate higher levels of alcohol and/or drug use. Internal consistency in the present study was

acceptable (α = .69). See Appendix B.

Procedure

Participants were recruited through all of the following mediums: AI/AN student email list servs, online Sona system, flyers, announcements at AI/AN student organizations, or classroom announcements. Participants were directed to an online website, which hosted the 45-60 minute survey. All participants who completed the online study were eligible to enter into a raffle for one of four $25 dollar gift cards. The current study was conducted in compliance with the Institutional Review Boards at each of the three universities.

CHAPTER IV

RESULTS

Means, standard deviations, and correlation coefficients of the study variables are

provided in Table 1. Zero-order correlations revealed that hope was significantly negatively

correlated with depression (r = -.572, p < .001) and suicidal ideation (r = -.236, p < .001), while

hope was significantly positively correlated with optimism (r = .674, p < .001). Furthermore,

optimism was significantly negatively correlated with depression (r = -.695, p < .001) and

suicidal ideation (r = -.374, p < .001). Depression was significantly positively correlated with

suicidal ideation (r = .451, p < .001) and suicide attempts (r = .227, p < .01). Lastly, suicidal

ideation and suicide attempts were significantly positively correlated (r = .194, p < .05). Hope,

optimism, depression, suicidal ideation, nor suicide attempts were significantly correlated with

substance use.

A hierarchical regression analysis was conducted to investigate whether hope would

negatively predict suicidal ideation after controlling for substance use and depressive symptoms.

In step 1, depressive symptoms and substance use accounted for 20.3% of the variance in suicidal

ideation (depression β = .450, p < .001; substance use β = -.001, p = .994; see Table 2). In step 2,

hope did not significantly predict suicidal ideation after controlling for depressive symptoms and

substance use (β = .036, p = .687; see Table 2).

An additional hierarchical regression analysis was conducted to investigate whether optimism would negatively predict suicidal ideation after controlling for substance use and depressive symptoms. In step 1, depressive symptoms and substance use accounted for 20.3% of the variance in suicidal ideation (depression β = .450, p < .001; substance use β = -.001, p = .994; see Table 3). In step 2, optimism did not significantly predict suicidal ideation after controlling for depressive symptoms and substance use (β = -.065, p = .526; see Table 3).

A hierarchical logistic regression was conducted to determine whether higher levels of hope predicted suicide attempt status (attempters vs. non-attempters), after controlling for depressive symptoms and substance use. Regression coefficients are provided in Table 4. Depression (odds ratio, OR = 1.052) and substance use (OR = .973) were entered in the first step of the model (-2 Log likelihood = 88.33, χ^2 = 5.87, p = .053) to predict suicide attempt status. Hope (OR = 1.141) was added in the second step of the model (-2 Log likelihood = 79.480, χ^2 = 8.85, p = .003). According to Field (2009), the -2 Log likelihood is a value that evaluates the fit of the model and the larger the value, the more poorly fit the model is. Therefore, a reduction in the -2 Log likelihood value from one step in the model to the next step means the model is better at predicting the dependent variable of interest. In the current results, the -2 Log likelihood value decreased from 88.33 to 79.480, which means the model is better at predicting whether a participant has attempted suicide or not attempted suicide after adding hope to the model. Additionally, the Wald statistic signifies whether the b coefficient for a particular predictor is significantly different from zero; if it is significantly different from zero, the predictor is significantly contributing to the dependent variable (Field, 2009). In the current results, the significant Wald statistic for hope (Wald = 6.24, p = .013) indicates that this variable significantly contributes in predicting whether a participant has attempted suicide or not (see Table 4). Lastly, the odds ratio tells about the change in odds as the predictor changes (Field, 2009). A value of 1 or greater indicates that as the predictor increases, the odds of the dependent variable occurring

also increase. A value of less than 1 means that as the predictor increases, the odds of the dependent variable occurring decrease. In the current results, the odds ratio value for hope (OR = 1.141) means that the odds of attempting suicide are 1.141 times more likely for participants with higher levels of hope.

A hierarchical logistic regression was conducted to determine whether higher levels of optimism predicted suicide attempt status (attempters vs. non-attempters), after controlling for depressive symptoms and substance use. Regression coefficients are provided in Table 5. Depression (odds ratio, OR = 1.052) and substance use (OR = .973) were entered in the first step of the model (-2 Log likelihood = 88.33, χ^2 = 5.87, p = .053) to predict suicide attempt status. Optimism (OR = 1.048) was added in the second step of the model (-2 Log likelihood = 88.01, χ^2 = 8.85, p = .003). The -2 Log likelihood value decreased by very little from 88.33 to 88.01, which means the model is likely not better at predicting whether a participant has attempted suicide or not attempted suicide after adding optimism to the model. Additionally, the Wald statistic for optimism was not significant (Wald = .315, p = .575), which indicates that this variable does not significantly contribute in predicting whether a participant has attempted suicide or not.

As shown in the previously reported results, neither hope nor optimism significantly predicted suicidal ideation after controlling for depressive symptoms and substance use. Similarly, optimism did not significantly predict suicide attempt status. Therefore, the last two hypotheses investigating optimism as a stronger predictor than hope were not statistically examined.

CHAPTER V

DISCUSSION

The aim of the current study was to examine hope and optimism in relation to suicidal

ideation and suicide attempts amongst AI/AN college students. It was hypothesized that hope

and optimism would be negatively related to suicidal ideation, after controlling for depressive

symptoms and substance use. Correlations revealed that hope and optimism were significantly

negatively related to suicidal ideation. However, the hypotheses were not supported.

Hierarchical regression analyses showed that hope did not negatively predict suicidal ideation

after controlling for symptoms of depression and substance use. Likewise, optimism did not

negatively predict suicidal ideation after controlling for symptoms of depression and substance

use. Based on the results of the individual control variables (depression and substance use) it

appears that these variables are accounting for the majority of the variance in predicting suicidal

ideation.

In one study by Hirsch and colleagues (2007), optimism was found to significantly

account for 2% of the variance in suicidal ideation after controlling for symptoms of depression

and hopelessness in a sample of 284 undergraduate students. Similarly, Rasmussen and Wingate

(2011) found that optimism significantly accounted for 1.5% of the variance in suicidal ideation

after controlling for depressive symptoms in a sample of 452 college students.

These two studies found a small, yet significant effect for optimism predicting suicidal ideation above and beyond depressive symptoms and included samples with more than 250 participants (Hirsch et al., 2007; Rasmussen & Wingate, 2011). With regard to hope, one study found hope to negatively predict suicidal ideation and interpersonal risk factors for suicide for African American college students (Davidson et al., 2010). However, in a similar study, hope negatively predicted interpersonal risk factors for suicide, but not suicidal ideation for college students of all races and ethnicities (Davidson et al., 2009). In these two studies investigating hope, neither one controlled for depression or substance use. In the current study, depression and substance use were controlled for, as they are robust predictors of suicidal ideation and behavior. Therefore, the current study provided a more stringent test to examine whether hope and optimism significantly predicted suicidal ideation and suicide attempts.

Additionally, it was hypothesized that hope would predict less suicide attempts, after controlling for depressive symptoms and substance use. These hypotheses were not supported, as results showed that higher levels of hope actually predicted more suicide attempts, after controlling for depressive symptoms and substance use. Hope is related to motivation and is defined as having goal-directed energy and creating plans to achieve goals (Snyder, Irving, & Anderson, 1991). Previous research has found hope to significantly positively predict the capability to enact suicide (Davidson et al., 2010). It has been suggested that individuals with higher levels of hope tend to set difficult goals. Those individuals who are setting difficult goals may be engaging in activities that expose them to pain (Davidson et al., 2010). Individuals who engage in painful activities will experience increased pain tolerance, which has been related to an increased capability to enact suicide (Joiner, 2005). Therefore, it is possible that the current results are related to past research suggesting that the goals and agency components of hope may actually contribute to engaging in suicidal behavior. Additionally, it was hypothesized that optimism would predict less suicide attempts, after controlling for depressive symptoms and

substance use. The results showed that optimism was not a significant contributing variable in predicting those who have attempted suicide versus those who have not, after controlling for depressive symptoms and substance use. Optimism is related to an individual's future expectations; optimists have positive expectations, while pessimists have negative expectations (Scheier & Carver, 1985). Unlike hope, optimism is not specifically defined in terms of goals or ability to follow through with goals. Since optimism is more of a general mindset without specific components related to goals, this may be why optimism did not emerge as a significant predictor of suicide attempts in the current study.

One limitation to the present study was the relatively small sample size and low base rate of suicidality and suicide attempts. If the study was replicated in AI/AN clinical samples with higher levels of suicidality, the relationship between hope, optimism, and suicidal ideation and attempts may be more clearly delineated. Although hope and optimism have been found to be predictive of suicidal ideation and behavior in past research, the variance accounted for by these positive psychological constructs was relatively small. One way to remediate this may be to increase the number of participants, which may aid in finding a statistically significant effect for hope and optimism. An initial power analysis suggested collecting a sample of approximately 125 participants to find a medium effect. A post hoc power analysis suggested collecting a sample of approximately 420 participants to find a small effect, which is analogous to the effect size found in previous studies of optimism predicting suicidal ideation after controlling for depression (Hirsch et al., 2007; Rasmussen & Wingate, 2011). Therefore, future research should continue to investigate whether there is a relationship between hope, optimism and suicidality after controlling for depressive symptoms (a well-known risk factor for suicide) with larger samples of AI/AN.

Another limitation of the current study is that the AI/AN participants were all college students. College students may be a protected group, as they may be busy with schoolwork, have

available peer groups, and counseling resources that are easily accessible. Individuals who are not currently attending college may be more likely to engage in risky behavior, such as suicidal ideation and behavior. Future research should examine hope and optimism in relation to suicidal ideation and behavior in AI/AN ages 18-24 who are not attending college. This research will help in identifying whether hope and optimism are indeed protective factors from suicidality for AI/AN.

One additional limitation includes the fact that this sample of AI/AN all resided in one are of the United States and the results cannot be generalized to AI/AN college students in other geographic regions of the country. Similarly, the results may not be generalizeable to AI/AN college students from tribes outside of those represented in the current sample. Future research should investigate whether there is a relationship between hope, optimism, and suicidal ideation and behavior amongst AI/AN college students residing on reservations, at tribal colleges, in other geographic locations, and from other tribes.

Despite the limitations, the present study is the first to investigate the positive psychological constructs of hope and optimism in relation to suicidal ideation and behavior amongst AI/AN college students. Hope and optimism should continue to be examined within the context of suicidal ideation and behavior to see if they are protective factors against suicidal ideation and behavior. If future research identifies a significant relationship between hope, optimism, and suicidal ideation and behavior, colleges can utilize these positive psychological constructs in suicide prevention and intervention programs for AI/AN college students.

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APPENDICES

APPENDIX A

Demographics Form

Demographics Form

1. Age: _____

2. Sex: _____Male _____Female

3. Ethnicity:

_____Caucasian _____African American/Black

_____ Hispanic/Latino _____Native American (Tribe/Nation :_____)

_____Asian/Asian American _____Biracial

_____Other (describe:_____)

4. Marital Status:

_____Single _____Married _____Cohabiting

_____Divorced _____Separated _____Widowed

5. Name of School You Attend: _____

6. Current year in school:

____ Freshman

____ Sophomore

____ Junior

____ Senior

____ Graduate school

____ Other (describe: _____)

7. Please estimate your family's annual income:

___ $0 - $10,000   ___ $10,000 - $20,000   ___ $20,000 - $30,000

___ $30,000 - $40,00   ___ $40,000 - $50,000   ___ $50,000 - $60,000

___ $60,000 - $70,000   ___ $70,000 - $80,000   ___ $80,000 – 90,000

___ $90,000 - $100,000   ___ Over $100,000   ___ Decline to State

8. Highest level of **Mother's** education:

____ Less than high school (did not graduate)

____ High School Diploma/GED

____ Technical/Professional School

____ College/University (Bachelor of Arts/Bachelor of Science)

____ Graduate Degree (Master's degree, Ph.D., M.D., or J.D.)

9. Highest level of **Father's** education:

____ Less than high school (did not graduate)

____ High School Diploma/GED

____ Technical/Professional School

____ College/University (Bachelor of Arts/Bachelor of Science)

____ Graduate Degree (Master's degree, Ph.D., M.D., or J.D.)

9. How often do you attend church/temple/synagogue/traditional ceremonies or other place of worship?

_____ Every day   _____ 2-3 times per week   _____ Once per week

_____ Every other week   _____ Once per month   _____ Every other month

_____ 2-3 times per year   _____ Once per year

_____ Less than once per year   _____ Never/I don't attend anymore

10. How important are Christian beliefs to you?

_____ Not at all important

_____ Somewhat important

_____ Very important

11. How important are tribal spiritual beliefs to you?

_____Not at all important

_____ Somewhat important

_____ Very important

12. How often do you attend the Native American Church?

_____ Every day   _____ 2-3 times per week   _____ Once per week

_____ Every other week   _____ Once per month   _____ Every other month

_____ 2-3 times per year   _____ Once per year   _____ Less than once per year

_____ Never/I don't attend anymore

13. How often do you attend pow wows?

_____ Every week   _____ Every other week   _____ Once per month

_____ Every other month   _____ 2-3 times per year   _____ Once per year

_____ Less than once per year   _____ Never/I don't attend anymore

14. Do you participate in pow wows?

_____ Yes

_____ No

15. How often do you attend stomp dances?

_____ Every week   _____ Every other week   _____ Once per month

_____ Every other month   _____ 2-3 times per year   _____ Once per year

_____ Less than once per year   _____ Never   _____ Not applicable to me

16. Do you participate in stomp dances?

_____ Yes

_____ No

17. How often do you attend gourd dances?

_____ Every week   _____ Every other week   _____ Once per month

_____ Every other month   _____ 2-3 times per year   _____ Once per year

_____ Less than once per year   _____ Never   _____ Not applicable to me

18. Do you participate in gourd dances?

____ Yes

____ No

19. How often do you attend round dances, honor dances, or other types of social dances?

____ Every week ____ Every other week ____ Once per month

____ Every other month ____ 2-3 times per year ____ Once per year

 ____ Less than once per year ____ Never ____ Not applicable to me

20. Do you participate in round dances, honor dances, or other types of social dances?

____ Yes

____ No

21. Do you speak your Native language?

____ Yes, fluently

____ Somewhat, but not fluently

____ A little, I only know a few words

____ No, not at all

22. Do you cook your traditional Native foods?

____ Yes

____ No

23. Do you vote in your tribal election?

____ Yes

____ No

24. Do you make beadwork, jewelry, pottery, Native American clothing, or baskets?

____ Yes

____ No

25. If yes to the previous question, what do you make?

_____

APPENDIX B

Measures

Center for Epidemiologic Studies – Depression Scale

Below is a list of the ways you might have felt or behaved. Please indicate how often you have felt this way in the past week.

DURING THE PAST WEEK

Rarely or none of the time (less than 1 day)	Some or a little of the time (1 – 2 days)	Occasionally or a moderate amount of time (3 – 4 days)	Most or all of the time (5 – 7 days)
0	**1**	**2**	**3**

_____ 1. I was bothered by things that usually don't bother me.

_____ 2. I did not feel like eating; my appetite was poor.

_____ 3. I felt that I could not shake off the blues even with help from my family or friends.

_____ 4. I felt I was just as good as other people.

_____ 5. I had trouble keeping my mind on what I was doing.

_____ 6. I felt depressed.

_____ 7. I felt that everything I did was an effort.

_____ 8. I felt hopeful about the future.

_____ 9. I thought my life had been a failure.

_____ 10. I felt fearful.

_____ 11. My sleep was restless.

_____ 12. I was happy.

_____ 13. I talked less than usual.

_____ 14. I felt lonely.

_____ 15. People were unfriendly.

_____ 16. I enjoyed life.

_____ 17. I had crying spells.

_____ 18. I felt sad.

_____ 19. I felt that people dislike me.

_____ 20. I could not get "going."

The Hope Scale

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

1	2	3	4	5	6	7	8
Definitely False	Mostly False	Somewhat False	Slightly False	Slightly True	Somewhat True	Mostly True	Definitely True

_____ 1. I can think of many ways to get out of a jam.

_____ 2. I energetically pursue my goals.

_____ 3. I feel tired most of the time.

_____ 4. There are lots of ways around any problem.

_____ 5. I am easily downed in an argument.

_____ 6. I can think of many ways to get the things in life that are important to me.

_____ 7. I worry about my health.

_____ 8. Even when others get discouraged, I know I can find a way to solve the problem.

_____ 9. My past experiences have prepared me well for my future.

_____ 10. I've been pretty successful in life.

_____ 11. I usually find myself worrying about something.

_____ 12. I meet goals that I set for myself.

Revised Life Orientation Test

Please indicate the extent to which you agree with each item according to the following scale:

0	1	2	3	4
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

_____ 1. In uncertain times, I usually expect the best.

_____ 2. It's easy for me to relax.

_____ 3. If something can go wrong for me, it will.

_____ 4. I'm always optimistic about my future.

_____ 5. I enjoy my friends a lot.

_____ 6. It's important for me to keep busy.

_____ 7. I hardly ever expect things to go my way.

_____ 8. I don't get upset too easily.

_____ 9. I rarely count on good things happening to me.

_____ 10. Overall, I expect more good things to happen to me than bad.

Hopelessness Depressive Symptom Questionnaire – Suicidality Subscale

Instructions: on this questionnaire are groups of statements. Please read all of the statements in a given group. Check the one statement in each group that describes you best for the past *two weeks*. If several statements in a group seem to apply to you, pick the one with the higher number. *Be sure to read all of the statements in each group before making your choice.*

(A)   0   I do not have thoughts of killing myself.

           1   Sometimes I have thoughts of killing myself.

           2   Most of the time I have thoughts of killing myself.

           3   I always have thoughts of killing myself.

           4   Decline to State

(B)   0   I am not having thoughts about suicide.

           1   I am having thoughts about suicide but have not formulated any plans.

           2   I am having thoughts about suicide and am considering possible ways of doing it.

           3   I am having thoughts about suicide and have formulated a definite plan.

           4   Decline to State

(C)   0   I am not having thoughts about suicide.

           1   I am having thoughts about suicide but have these thoughts completely under my control.

           2   I am having thoughts about suicide but have these thoughts somewhat under my control.

           3   I am having thoughts about suicide but have little or no control over these thoughts.

           4   Decline to State

(D)   0   I am not having impulses to kill myself.

           1   In some situations I have impulses to kill myself.

           2   In most situations I have impulses to kill myself.

           3   In all situations I have impulses to kill myself.

           4   Decline to State

(E)   Have you ever engaged in intentional self-harming behavior, such as cutting or burning?

        0   No.

        1   Yes, I did this once.

        2   Yes, I have done this 2 - 4 times.

        3   Yes, I have done this 5 or more times.

        4   Decline to State

(F)   Have you ever attempted to take your own life?

        0   No.

        1   Yes, I did this once.

        2   Yes, I have done this 2 or 3 times.

        3   Yes, I have done this 4 or more times.

        4   Decline to State

If you answered "Yes" to the previous question, did you require medical care after your attempt?

        0   No.

        1   Yes, I required minor medical care

        2   Yes, I required major medical care

        3   Decline to State

Substance Use Questionnaire

1. How often in the past month did you drink alcohol?

   □ I do not drink at all.

   □ About once a month.

   □ 2-3 times a month.

   □ 3-4 times a month.

   □ Nearly every day.

   □ Once a day or more.

2. Think of the occasion you drank the most this past month. How much did you drink?

□ No drinks	□ 7-8 drinks	□ 15-16 drinks
□ 1-2 drinks	□ 9-10 drinks	□ 17-18 drinks
□ 3-4 drinks	□11-12 drinks	□ 19 or more
□ 5-6 drinks	□ 13-14 drinks	

3. How often do you have six or more drinks on one occasion?

□ Never	□ Weekly
□ Less than monthly	□ Daily or almost daily
□ Monthly	

4. How often in the past month did you use any kind of drug other than alcohol?

   □ I do not use drugs at all.

   □ About once a month.

   □ 2-3 times a month.

   □ 3-4 times a month.

   □ Nearly every day.

   □ Once a day or more.

5. Which drug(s) on this list have you used in the last month? (check all that apply)

   □ None   □ Non-Prescribed Medications

   □ Marijuana   □ Mushrooms   □ Heroin

   □ PCP   □ Ecstasy   □ Cocaine

   □ LSD   □ Opium   □ Steroids

   □ Methamphetamine   □ Solvents or Inhalants

APPENDIX C

IRB Approval Page

Oklahoma State University Institutional Review Board

Date:	Monday, December 12, 2011
IRB Application No	AS11132
Proposal Title:	American Indian Hope, Optimism and Mental Health

Reviewed and Processed as:	Exempt

Status Recommended by Reviewer(s): Approved   Protocol Expires: 12/11/2012

Principal
Investigator(s):

Victoria O'Keefe
005 N. Murray
Stillwater, OK 74078

LaRicka R. Wingate
116 N. Murray
Stillwater, OK 74070

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,

Shelia M. Kennison

Shelia Kennison, Chair
Institutional Review Board

APPENDIX D

Tables

Table 1

Means, Standard Deviations, and Correlation Coefficients of Study Variables

	Hope	Optimism	Depression	Suicidal Ideation	Substance Use	Suicide Attempt
Hope	—					
Optimism	.674†	—				
Depression	-.572†	-.695†	—			
Suicidal Ideation	-.236†	-.374†	.451†	—		
Substance Use	.010	.036	.107	.048	—	
Suicide Attempt	.075	-.136	.227**	.194*	.010	—
Mean	51.79	15.49	15.61	.49	4.95	.09
SD	8.86	4.80	11.76	1.32	5.04	.32

Note: † $p < .001$; ** $p < .01$; * $p < .05$

Table 2

Hierarchical Regression Analysis of Substance Use, Depressive Symptoms, and Hope as Predictors of Suicidal Ideation

Predictors entered in set	*F* for set	ΔR^2	*df*	*t* for predictors	β	*p*
1	19.43†	.203	2, 153			< .001
Sub. Use				-.01	-.001	.994
Depression				6.20†	.450	< .001
2	12.94†	.001	1, 152			< .001
Hope				.40	.036	.687

Note: † *p* < .001; Sub. Use = substance use

Table 3

Hierarchical Regression Analysis of Substance Use, Depressive Symptoms, and Optimism as Predictors of Suicidal Ideation

Predictors entered in set	*F* for set	ΔR^2	*df*	*t* for predictors	β	*p*
1	19.43†	.203	2, 153			< .001
Sub. Use				-.01	-.001	.994
Depression				6.20†	.450	< .001
2	13.04†	.002	1, 152			< .001
Optimism				-.64	-.065	.526

Note: † *p* < .001; Sub. Use = substance use

Table 4

Hierarchical Logistic Regression Analysis of Substance Use, Depressive Symptoms, and Hope as Predictors of Suicide Attempts

Predictors entered	*B*	*SE*	*Wald*	*Odds Ratio*	*95% C.I. for Odds Ratio*	*p*
Constant	-2.137	.280				
1						
Depression	.050*	.020	6.08	1.052	1.010-1.095	.014
Sub. Use	-.027	.055	.24	.973	.874-1.084	.624
2						
Hope	.132**	.053	6.24	1.141	1.029-1.266	.013

Note: * $p < .05$; ** $p < .01$; Sub. Use = substance use; R^2 = .09 (Cox & Snell), .20 (Nagelkerke); Model $\chi^2(1)$ = 8.85**, p = .003

Table 5

Hierarchical Logistic Regression Analysis of Substance Use, Depressive Symptoms, and Optimism as Predictors of Suicide Attempts

Predictors entered	*B*	*SE*	*Wald*	*Odds Ratio*	*95% C.I. for Odds Ratio*	*p*
Constant	-2.137	.280				
1						
Depression	.050*	.020	6.08	1.052	1.010-1.095	.014
Sub. Use	-.027	.055	.24	.973	.874-1.084	.624
2						
Optimism	.047	.084	.315	1.048	.890-1.235	.575

Note: * $p < .05$; Sub. Use = substance use; $R^2 = .04$ (Cox & Snell), .09 (Nagelkerke); Model $\chi^2(1) = .32$, $p = .571$

VITA

Victoria Michelle O'Keefe

Candidate for the Degree of

Master of Science

Thesis: THE RELATIONSHIP BETWEEN HOPE, OPTIMISM, AND SUICIDAL
IDEATION AND BEHAVIOR AMONG AMERICAN INDIAN/ALASKA
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Experience: Ford Foundation Predoctoral Fellow, August 2012-Present;
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Professional Publications:
O'Keefe, V. M., Tucker, R. P., Wingate, L. R., & Rasmussen, K. A.
(2011). American Indian hope: A potential protective factor against
suicidal ideation. *Journal of Indigenous Research, 1*(2) Article 3.

Venner, K., Greenfield, B., Vicuña, B., Muñoz, R., Bhatt, S., &
O'Keefe, V. (2012). "I'm not one of them": Barriers to help seeking
among American Indians with alcohol dependence. *Cultural Diversity &
Ethnic Minority Psychology, 18*(4), 352-362.

Professional Memberships: American Association of Suicidology, Society of
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