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AN ANALYSIS OF IDENTITY, GENDER, RELIGION AND SPIRITUALITY, AND CURRENT ENDORSEMENT OF DEPRESSIVE SYMPTOMS BY AMERICAN INDIANS LIVING OFF-RESERVATION

By

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B.A., Christian Brothers University, Memphis, Tennessee, 2003

Thesis

presented in partial fulfillment of the requirements
for the degree of

Master of Arts
in Clinical Psychology

The University of Montana
Missoula, MT

Summer 2009

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Ferguson, Georgie, M.A., Summer 2009 Clinical Psychology

An Analysis of Identity, Gender, Religion and Spirituality, and Current Endorsement of Depressive Symptoms by American Indians Living Off-Reservation

Co-Chair: Gyda Swaney, Ph.D.

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Depression is diagnosed at high rates among American Indians (AIs). This study's goal was to explore possible protective factors against depression. This study investigated the impact of: cultural identity, cultural identity and gender, gender, importance of spirituality, and importance of religion, on endorsement of depressive symptoms. This study also investigated whether participants' distinguished between religion and spirituality. Participants in this study were AIs 18 years or older (N = 220, females = 132, males = 88). The data was procured from an archival data set, collected at an urban Indian center in 2004. The study data included a demographic questionnaire; the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) measuring current endorsement of depressive symptoms; The Oetting's Cultural Identification Scale (OCIS; Oetting, 1993) measuring level of identification with AI culture; and the questions: "How important is religion in your life?" and "How important is spirituality in your life?"

A linear regression analysis produced no statistically significant results for main effect of identification as AI on depression scores, or for a gender-by-identification as AI interaction effect. Independent samples *t*-tests also revealed no statistically significant differences between gender and depression scores, "importance of religion" and depression scores, or "importance of spirituality" and depression scores. A Spearman's rank order correlation was carried out between participants' rating of importance of religion and importance of spirituality. A positive correlation was found (rho = .348, N = 220, $p < .0.01$). Post-hoc frequency analyses revealed that 50.5% of the sample endorsed significant depressive symptoms. This may have impacted the predictive aptitude of the independent variables. Post-hoc analyses also revealed that despite the positive correlation between religion and spirituality, there were substantially fewer endorsements of high religion ($n = 108$) than high spirituality ($n = 170$) and that endorsement of high and low religion was almost equally split among participants.

Additional research utilizing different assessment measures of depression, and/or a qualitative method of inquiry might help to distinguish possible causes of the elevated depression scores within this sample. Future research might also focus on clarifying the distinction between religion and spirituality among AI people.

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An Analysis of Identity, Gender, Religion and Spirituality,

and Current Endorsement of Depressive Symptoms by

American Indians Living Off-Reservation

Depression is the most commonly diagnosed psychological disorder among American Indians; in fact, some studies have estimated that American Indians seeking mental health services are diagnosed with depression at a rate between four and six times higher than the national rate (Byron, 1997; Frerichs, Aneshensel, & Clark, 1981; Lester, 1999; Manson, 2000; Novins, Beals, Moore, Spicer, & Manson, 2004). It is imperative that research look to answer some of the questions surrounding American Indian depression rates in an effort to identify variables that may function as either protective or risk factors, such as cultural identity, gender, religiosity, and spirituality. Accurately identifying these variables could help to inform culturally sensitive diagnosis and treatment of Major Depressive Disorder in American Indian clients seeking mental health services. This paper is an effort to examine and identify potential protective and/or risk factors for American Indians.

Depression

The American Psychiatric Association (APA; 2000) defines depression as a psychological disorder. It falls within the category of mood disorders as defined by the DSM-IV-TR. Commonly recognized symptoms of depression include: depressed mood, decreased interest or pleasure in almost all activities, fluctuation in weight and/or appetite, disturbance in sleep patterns, restlessness, fatigue, feelings of excessive worthlessness/guilt which is inappropriate, inability to concentrate, and recurrent thoughts of death.

According to the APA (2000), the prevalence of Major Depressive Disorder, which is the classification of depressive mood disorder that has the most significant impact on functioning and greatest severity of symptomatic features, varies widely. It is expected that the lifetime risk for Major Depressive Disorder may vary from 5% - 12% for men and 10% - 25% for women. The difference in prevalence rates by gender appears to be unrelated to factors such as ethnicity, education, income, or marital status.

In order to meet current criteria for Major Depressive Disorder (APA, 2000) an individual must experience marked symptoms of depression that impact their normal functioning for a period of two weeks or more. It has been acknowledged within the field of psychology that the description of a depressive experience varies widely between cultures, and that understanding the description of depression by ethnic minorities, such as American Indians, may be an issue when it comes to under-diagnosing or over-diagnosing depression. American Indians, as well as other ethnic minorities, have not been widely represented historically within the mainstream body of literature on depression (Allen, 1998; Beals, Manson, Mitchell, & Spicer, 2003; Manson, 2000; Plant & Sachs-Ericsson, 2004).

Depression has been linked to suicide, drinking, promiscuity, and other risky behaviors across populations (Brucker & Perry, 1998). A diagnosis of depression may have significant effects on the individuals experiencing depression as well as their families. In an effort to address these risks and provide adequate and appropriate mental health care, it is important to attempt to identify protective factors, which may serve to decrease the risk for depression and alleviate depressive symptoms (Baetz, Griffin,

Bowen, Koenig, & Marcoux, 2004; Byron, 1997; Caldwell, Zimmerman, Bernat, Sellers, & Notaro, 2002; Plant & Sachs-Ericsson, 2004).

Gender and depression

Research investigating gender differences in rates of major depressive disorder has repeatedly and consistently found female members of the population to endorse depressive symptoms at a higher rate than males. For example, the lifetime risk for Major Depressive Disorder has been reported to vary between 10-25% for females and 5-12% for males (APA, 2000; Kessler et al., 1994; Kuehner, 2003; Nolen-Hoeksema, 1990). According to the APA (2000), depressive episodes are likely to occur twice as often in females than in males.

Rosenfeld (1999) suggests that these gender differences may be due in part to the fact that females may more often internalize their emotional experiences, whereas men may more often externalize their emotional experiences. This distinction is not the focus of the study at hand; however, the idea does warrant consideration when exploring gender differences and depression in other ethnic groups and cultures, where social norms related to expected gender roles may vary greatly.

Mainstream literature suggests women endorse higher rates of depressive symptoms than men (Kessler et al., 1994; Kuehner, 2003; Rosenfeld, 1999). The results of this study may contribute valuable information to the scarce body of American Indian literature investigating apparent gender-based vulnerability to depression across cultures.

American Indians and depression

As of 2002, the United States government officially recognizes 562 Indian Tribes, which have treatied for education and health care services in exchange for ceded land.

Health care for tribal members of federally recognized tribes is now delivered through the Indian Health Service (IHS), which was established in 1955 (Zuckerman, Haley, Roubideaux & Lillie-Blanton, 2008). However, for some 245 additional tribes, with only state recognition, many are currently petitioning the government for federal recognition (U.S. Department of Health and Human Services, 2002; Bureau of Indian Affairs, Department of the Interior, 2002). State recognized tribes are not eligible for health care through IHS. In addition, health care for American Indians living in urban areas was not available until 1976 with the authorization of the Indian Health Care Improvement Act (Kramer, 1992; Witko, 2006). The Indian Health Care Improvement Act funded a few urban centers to establish health clinics, including mental health services. Today, according to the National Council of Urban Indian Health (www.ncuih.org/index.html) there are some 40 urban Indian Centers in the United States.

The US Census 2000 data (Ogunwole, 2006) reveals that 4.3 million people (1.5% of the total U.S. population) indicated that they were American Indian and Alaska Native and that 66% live off reservation. In Montana there are 56,068 American Indians (6.2% of the state's population); of this number about 19,624, or 35%, live off reservation (Montana Indian Education Association, 2008). Again, American Indians living off-reservation may have to return to their reservation or a reservation and establish residency in order to access health care benefits. Walker (2006) reported that the total budget for fiscal year 2006 for urban Indian health programs was $32.7 million (for some 1.2 million urban American Indians). He goes on to indicate that President Bush's proposal to eliminate funding for urban programs would have dire consequences. More importantly, however, is the fact that urban programs have not been eligible for mental

health funding through IHS (U.S. Congress, Office of Technology Assessment, 1990). The consequences are significant for American Indians experiencing depression and living off-reservation.

More importantly, the conceptualization of depression may not be the same across cultures. There are over 200 distinct American Indian languages in the United States alone, and some American Indian languages do not include a word for "depression" (Fleming, 1992; LaFromboise, 1988; Manson, Shore, & Bloom, 1985). Understanding the way in which an individual from a different culture may experience and relate their experience of what is considered depressive symptomology in the mainstream literature is important, especially when considering the mental health needs of American Indians.

It is difficult to generalize the scarce body of literature addressing prevalence data of depression in American Indians, which is often based upon data gained from a single tribe or geographic region, to all American Indian tribes (Manson, Shore, & Bloom, 1985). This is due, in part, to the vast diversity of American Indian tribes, including cultural, religious, linguistic, and geographical differences. However, evidence indicates that depressive symptoms are among the most frequently reported mental health issues among American Indians (U.S. Congress, Office of Technology Assessment, 1990; Whitbeck, McMorris, Hoyt, Stubben, & LaFromboise, 2002).

In fact, Manson, Shore, and Bloom (1985) report that American Indians display disproportionately higher rates of depression in comparison to the general population. According to Manson and colleagues (1985) depression is often the most frequently reported presenting problem by American Indians seeking mental health services. Although there has not been sufficient research conducted to adequately represent

prevalence rates of depression among American Indians, and generalizing to all American Indians would be impossible, the field is beginning to advance in this area of research. At one point, two distinct studies of separate tribal groups both suggested prevalence rates of depression at greater than 25% (Kinzie et al., 1992; Robin, Chester, Rasmussen, Jaranson, & Goldman, 1997). A closer look at these findings revealed that using an adapted measure of depression in the form of a structured interview, designed to be more culturally specific and appropriate for use within American Indian Populations, significantly lowered the prevalence rates to 30% of the previously reported findings for both tribal groups (Beals et al., 2005). Interestingly, another study investigating the validity of the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) with American Indians found that both of the tribes studied reported mean scores within the normal range on scale 3 (depression) of the measure (Pace et al., 2006).

The information presented here highlights the necessity for critical consideration in the selection of screening measures when seeking to identify depressive symptoms in American Indian populations. An issue not to be overlooked when considering the reported prevalence rates of depression in American Indians is how depression is diagnosed and described in American Indian cultures. The most frequently used measures for assessing depressive symptoms were originally designed for use in the majority population, thus cultural complexity should be factored in when considering depression in the many and various American Indian populations (Thrane, Whitbeck, Hoyt, & Shelley, 2004).

Cultural identity and depression

Cultural identity is a concept that includes many factors. More specifically, cultural identity may be defined as how closely an individual feels invested in, or affiliated with a specific ethnic group on the basis of both ethnicity and/or culture (Johnson, Wall, & Guanipa; 2002; Oetting, Swaim, & Chiarella, 1998). The concept of culture is often supported and defined through a variety of commonalities of a particular group, such as shared traditional attitudes, ceremonies, language, behavior, values, and knowledge of the group's beliefs, way of life and history. The concept of cultural identification can be defined as an individual's level of identification with, or strength of relationship with a particular cultural group based upon both the individual's personal involvement with and reinforcement received by being involved in a particular group. Frable (1997) contends that an individuals' identity is their "psychological relationship to particular social category systems" (p. 1). She further describes them as being "fluid, multidimensional, personalized social constructions that reflect the individual's current context and sociohistorical cohort" (p. 1). In the United States today, individuals are often exposed to and interact with more than one cultural group. Oetting (1993) maintains that cultural identification is not necessarily measured along a continuum, and thus identification with one group does not necessarily preclude equal identification with another cultural group.

In the past, there has been a push by government policy, e.g., The Federal Assimilation Policy, the Termination Era, The 1978 American Indian Religious Freedom Act, and the Federal Relocation Policy (see Garrett and Pichette, 2000, for a review) to force or encourage American Indians to assimilate into mainstream European-American

culture. This pressured American Indians to adopt European-American cultural values in place of their own, and for absorption of American Indians into European-American culture (the melting pot ideology). Despite this assimilation scheme, a strong sense of American Indian identity has survived throughout many American Indian tribes in North America (Byron, 1997). As a result of forced assimilation, as well as the impact of the past several centuries of rapid cultural change, adaptation, and exposure to European-American culture both directly and indirectly, American Indian people now experience cultural identification, individually and collectively, on a variety of levels and in a variety of ways. Byron suggested four categories of cultural identification in her study, they include: Traditional, Bicultural, Assimilating, and Marginal Cultural Identification. Byron (1997) has suggested that these types of variations in cultural identity orientation among American Indian people may, in fact, serve as both resilience (protective) as well as vulnerability (risk) factors for depression and alcohol problems.

Smith (1999) argues that assimilation has never been a goal for indigenous people; indeed, she writes that the goals of indigenous people were to resist and survive. As a consequence, this "influential ideology within and without of Indian Country that categorizes Indian people as 'traditionalist' or as 'assimilationist'" (Tall Bear, 2000, p. 5) calls into question the ethics of doing so. Tall Bear goes on to argue that scientific inquiry should "be consistent with tribal cultural and spiritual tenets of tribal communities" (p. 5).

Berlin (1987), along with Whitbeck, McMorris, Hoyt, Stubben, and LaFromboise (2002) have suggested that participation in traditional practices may be negatively correlated to depressive symptoms in American Indians, and serve as a buffer for the

negative effects of discrimination and stress derived from conflict between American Indian cultural values and those of mainstream society. Oetting & Beauvais (1991) further support this idea by suggesting that identifying with a culture can provide a source of personal strength to an individual. Berlin (1987) postulated that young American Indians are more likely to commit suicide if they come from a "nontraditional" tribe or have been adopted by non-American Indian parents. However, Phinney (1990) has asserted that ethnic identity may also be a source of additional stress and conflict in one's life, making unclear the role of culture and cultural identity as it may pertain to risk for depressive symptoms. Another issue to be considered carefully within this context is the swift rate in which cultural, social, economic and linguistic adjustments have been forced to occur within American Indian communities. The disruption, caused by rapid (and unwelcome) change within American Indian communities has had a significant and widespread impact on the lives of American Indians, including the traditional gender roles of tribal members. This area of research has yet to be sufficiently addressed within the psychological literature, leaving us to wonder how the impact of these changes on traditional gender roles may affect American Indian mental health.

Orthogonal Cultural Identification Theory (Oetting & Beauvais, 1991) suggests that high levels of cultural identification involves both cultural needs that must be met by the individual's cultural environment, and the ability of the individual within a culture to meet the demands of their environment.

Religion, spirituality, and depression

Religion and spirituality are constructs which represent similar but distinct ideology. As such, it is important to differentiate between the two. The term religion is

often used to refer to an organized system of beliefs about a higher power shared by a faith-based community (e.g. Christianity, Hindu, Islam, or Judaism). Spirituality on the other hand, often represents an individualized, personal experience, or way of life, that exists independent of what is often recognized as organized religious structure (Hoogestraat & Trammel, 2003).

Beginning in the late 1800s, historical events, such as efforts to force American Indians to assimilate by outlawing traditional American Indian religious and spiritual practices makes drawing the distinction between religion and spirituality even more essential to clarify (Swinomish Tribal Mental Health Program, 1991). It wasn't until the Indian Religious Freedom Act was passed in 1979 that American Indians were finally allowed to again openly practice their traditional religious and spiritual ceremonies (Witko, 2006). Trujillo (2000) stated that the historical effort to force American Indians to convert to Christianity and depriving American Indians of the right to openly participate in traditional American Indian religious and spiritual practices have proven to be a source of intense conflict for American Indians, and thus highlights the necessity to elucidate the difference between American Indian spirituality and organized religions introduced during colonization.

Some of the discussions found in the literature which focused on religion and spirituality within the mainstream culture (e.g. Armentrout, 2003; Baetz, Griffin, Bowen, Koenig, & Marcoux, 2004) fail to draw a clear distinction between "religion" and "spirituality." Hoogestraat and Trammel (2003) attribute the lack of a clear distinction between religion and spirituality that often occurs within the literature to the subjective nature of spiritual and religious experience.

In fact, even Trujillo's (2000) work addressing the role of religion and spirituality within American Indian culture does not draw a clear distinction between American Indian religion and spirituality. This appears to be due in part to the way Trujillo describes American Indian religious practice and American Indian spirituality as deeply integrated into the daily lives of American Indian people.

Religion and spirituality: Protective or risk factors? Armentrout (2003) investigated spirituality and religious involvement within a mainstream Christian population and found a negative correlation between spirituality and/or religious involvement, depressive symptoms, and suicide. Baetz, Griffen, Bowen, Koenig, and Marcoux (2004), however, reported finding a contradictory relationship within their study of a mainstream population: individuals who endorsed high levels of religious involvement (measured by worship-service attendance) demonstrated fewer depressive symptoms, while individuals who perceived themselves as being spiritual/religious or who stated that religion or spiritual values were important to them demonstrated more depressive symptoms, even when confounding factors were controlled. Taking these mixed findings into account, it is then interesting to consider whether or not religion and spirituality would be identified as protective or risk factors within an American Indian population.

In summary, it appears that cultural identity; religion and spirituality have been indicated in some instances to be potential protective/risk factors for depression. It also appears that gender may influence the etiology of depression. In investigating the occurrence of depression in American Indians, it would be interesting to explore the

relationship between these factors and the occurrence of depressive symptoms within an American Indian population.

Hypotheses

1. (1a) In an effort to understand the relationship between cultural identification and depression it is hypothesized that participants endorsing scores representing higher identification with American Indian culture, measured by the Orthogonal Cultural Identification Scale, will exhibit lower depressive symptoms, measured by the Center of Epidemiological Study for Depression (CES-D) scale, than participants endorsing scores representing lower identification with American Indian culture.

   (1b) It is hypothesized that the findings of (1a) will not be consistent across gender. It is expected that males who endorse scores representing higher identification with American Indian Culture will have higher mean CES-D scores than females.

2. Based upon the prevalence rates of depression across cultures represented in the literature, as it pertains to gender, it is hypothesized that American Indian female participants will exhibit more frequent endorsement of depressive symptoms, measured by the CES-D scale, than American Indian male participants.

3. In an effort to understand the relationship between religion and depression it is hypothesized that participants endorsing religion as being important in their life will exhibit lower depressive symptoms, measured by the CES-D scale, than participants indicating religion is not important in their life.

4. In an effort to understand the relationship between spirituality and depression it is hypothesized that participants endorsing spirituality as being important in their life will exhibit lower depressive symptoms, measured by the CES-D scale, than participants indicating that spirituality is not highly important in their life.
5. In an effort to better understand and highlight the complex differences between "spirituality" and "religion", we expect to find that participants who endorse high scores on the question, "How important is spirituality in your life?" will not necessarily endorse high scores on the question, "How important is religion in your life?"

Method

Participants

The data used in this study was procured from an archival data set. The data was collected from a pool of 241 participants who were recruited from an off-reservation Indian Center in Montana by a team of researchers from the Tobacco Use and Prevention Lab, The University of Montana, during the summer of 2004. All of the participants were 18 years of age or older.

Materials

During the data collection process each of the participants completed a 153-item self-administered survey, which had been designed by the Tobacco Use and Prevention Lab, The University of Montana in collaboration with the administrative staff of the Indian Center from which the data was collected. The survey included a demographic questionnaire and the variables of interest to this study; more specifically, the Center for Epidemiologic Studies Depression Scale (CES-D, Radloff, 1977) and the Orthogonal Cultural Identification Scale (OCIS, Oetting & Beauvais, 1991). Additional variables of interest include questions of the questionnaire, "How important is organized religion in your life?" and "How important is spirituality in your life?" Both of these questions were measured using a Likert-type rating scale of 1 = Not Important, 2 = A Little Important, 3 = Pretty Important, and 4 = Very important.

Twenty-one of the original 241 individuals that completed the survey were excluded from the final data set for this study. The exclusion criterion was omission of items on any of the measures. With the exception of the CES-D scale, participants were excluded from the data set if any item was omitted on any measure. Participants' who

failed to answer more than two items on the CES-D were excluded from the data set. Any participant who failed to endorse one or two items was retained and the overall mean for that item was calculated and used in place of the omitted item.

Measures

Demographic Questionnaire. The demographic questionnaire collected information that identified each participant's age, gender, ethnicity, tribal enrollment, marital status, education level, residence, and services received from the Indian Center.

The Center for Epidemiologic Studies Depression Scale (CES-D). The CES-D (Radloff, 1977) is a 20-item self-report measure used to measure levels of current depressive symptomalogy in non-clinical populations and is commonly used as a tool in epidemiologic studies of depression. The responses are scored according to how many days a respondent endorsed experiencing a symptom within the past week, with response choices ranging from 0 (less than one day) to 3 (5 - 7 days). The maximum score possible was 60, with a score of 16 or higher being indicative of significant endorsement of symptoms of depression.

The CES-D was originally developed for use within general adolescent and adult populations. It has been tested repeatedly and the results suggest that the CES-D Scale is a reliable measure, with good construct validity, good concurrent validity, and good internal consistency. Research to date has failed to uncover any significant differences in reliability or validity data based on race or gender. Reliability coefficients have generally fallen between .80 and .90, suggesting that the measure is adequate and acceptable for use (Thrane, Whitbeck, Hoyt, & Shelley, 2004).

The CES-D Scale was designed to measure current symptoms of depression. Moderate correlations were found for test-retest reliability within a 12-month period, for a non-clinical normative population. The CES-D was created using symptomology of depression as observed in clinical populations and thus should distinguish between clinical and non-clinical populations. Testing of reliability and validity across subgroups showed similar patterns suggesting that the reliability and validity may be consistent to some degree across subgroups (Radloff, 1977). According to Weissman, Sholomskas, Pottenger, Prusoff and Locke (1977), the CES-D has demonstrated validity as a tool for screening groups at high risk for depression.

It has been found that the CES-D has displayed good overall internal consistency when used with American Indian people, despite the factor structure differing from that obtained by Radloff's original work in the general population (Allen, 1998). Manson and colleagues (1990) have cautioned that the CES-D should be used with care when assessing American Indians, due to differences in the factor structure found to occur within American Indian populations that differ from Radloff's initial four factor model (e.g., Depressive Affect, Absence of Well Being, Somatic Symptoms, and Interpersonal Affect). Manson et al. (1990) found that collapsing the Somatic and Affective factors, resulting in a three-factor model was a better fit with their sample population of Indian adolescents, suggesting clinical conceptual overlap. This finding was replicated in a study of American Indian college students conducted by Beals, Manson, Keane, and Dick in 1991. There have also been additional studies that have found variance among the goodness of fit of the four factor model with American Indian populations (see Beals, Manson, Keane, & Dick, 1991). In addition, Baron and colleagues (1990), Beals and

colleagues (1991), Manson and colleagues (1990), and Somervel and colleagues (1993) have all cautioned interpretation of the CES-D due to uncertainty pertaining to appropriate cut-off scores for depression within American Indian populations. For this study, individual mean scores were obtained for each of the participants; cut-off scores and factoring-modeling were not utilized.

The Orthogonal Cultural Identification Scale (OCIS). The OCIS (Oetting, 1993) assesses cultural identification and was developed based upon Orthogonal Cultural Identification Theory. Subjects endorse cultural identification from a nonlinear perspective in both an individual and familial context. The OCIS contains 24 items, consisting of six core questions to be answered for four ethnic groups. The ethnic groups represented in the survey were categorized as follows: American Indian, Spanish/Mexican, White-American, and Other. The American Indian category was the only category utilized in this study. The items were rated using a 4-point Likert-type scale, with 3 = A Lot, 2 = Some, 1 = Not Much, and 0 = None. For each participant a total sum score for the American Indian ethnic group was attained.

The OCIS has been designed in such a way that it allows for administration across cultures, including both attitudinal and behavioral items in a content free format. The questions are written in general terms and do not include any cultural content to assure its applicability across cultures (Oetting & Beauvais, 1991, 1998).

The OCIS has been assessed with reliability above .80 for the four-item scales for both Caucasian and American Indian identification (Oetting, Swaim, & Chiarella, 1998).

Religion. The survey question, "How important is religion in your life?" was measured using a Likert-type rating scale of 1 = Not Important, 2 = A Little Important, 3 = Pretty Important, and 4 = Very important.

Spirituality. The survey question, "How important is spirituality in your life?" was measured using a Likert-type rating scale of 1 = Not Important, 2 = A Little Important, 3 = Pretty Important, and 4 = Very Important.

Results

Demographics

Of the 220 participants utilized in this study 132 were female and 88 were male. Additional demographic information for the study sample is presented below in Table 1.

Table 1. Demographics of Participants

Variable	Statistic
Age, Mean (Standard Deviation)	33.44(12.85)
Female, %	60
Ethnicity, %	
American Indian or Alaskan Native	81.4
White	6.4
Black, African American	0
Asian or Pacific Islander	0
Native American & White	6.8
Native American & Black	0.5
Other	12.3
Tribal Enrollment, %	
Enrolled in any Nation	86.3
Blackfeet Nation	31.1
Confederated Salish and Kootenai Tribes	11.9
Crow Nation	.9
Fort Belknap Reservation	5.0
Fort Peck Reservation	6.4
Northern Cheyenne Reservation	4.1
Rocky Boy's Reservation	8.7
Other	18.3
Marital Status, %	
Single, never married	51.2
Married	24.4
Separated	7.4
Divorced	13.4
Widowed	3.7
Education, %	
Non High School Graduate or Equivalent	21.4
High School Graduate or GE	45.5
Some Higher Education	20.9
College Graduate	12.3
Current Residence, %	
In the City	76.3
On a reservation	15.5
Other	8.2

The participants in this study reported seeking the following services and/or participating in the following programs at the urban Indian center where the data was collected: Chemical Dependency (16.6%), Health Program (25.6%), Mental Health Program (6.2%), Health Promotion and Disease Prevention (10%), Food Bank, Computer, Fax, Telephone, Messages, and Job Board (37.4%), and Other (32.2%).

Analyses for Hypothesis 1. Analyses for Hypothesis 1 were carried out using a linear regression model to test for the main effect of depression and cultural identification (1a) and an interaction effect for cultural identification and gender (1b). This study expected to find that individuals who endorsed high American Indian cultural identification scores would have lower CES-D scores, and that there would be differences in the endorsement patterns for male and female participants. The linear regression analysis did not produce statistically significant results for main effect (p = .648; df = 219) or for an interaction effect (p = .757; df = 219), and thus the proposed hypotheses were not supported by the data. Interestingly, in contrast to the hypothesized outcomes, linear regression analysis revealed that high American Indian cultural identification scores did not predict lower CES-D scores (p = .648; Beta = .031; B = .064, SE = .141) within this urban American Indian sample. The analyses also revealed that there was not a statistically significant interaction effect when controlling for gender (p = .426; Beta = -.271; B = -.226, SE = .283).

Analyses for Hypotheses 2. An independent samples t-test was conducted to compare the CES-D scores of male and female participants. There was no statistically significant difference in CES-D scores for male participants (M = 19.06, SD = 9.08) and

female participants [M = 19.86, SD = 10.11; $t(218) = .596$, $p = .552$]. The magnitude of the differences in the means was very small (eta squared = .00163).

Analyses for Hypothesis 3. An independent samples *t*-test was conducted to compare the CES-D scores of participants who endorsed high importance of religion with those who endorsed low importance of religion. There was no statistically significant difference in CES-D scores for participants endorsing high importance of religion (M = 20.29, SD = 10.04) and participants endorsing low importance of religion [M = 18.81, SD = 9.34; $t(218) = -1.129$, $p = .260$]. The magnitude of the differences in the means was very small (eta squared = .0058).

Analysis for Hypothesis 4. An independent samples *t*-test was conducted to compare the CES-D scores of participants who endorsed high importance of spirituality with those who endorsed low importance of spirituality. There was no statistically significant difference in scores for participants endorsing high importance of spirituality (M = 19.34, SD = 9.54) and participants endorsing low importance of spirituality [M = 20.21, SD = 10.28; $t(218) =. 560$, $p = .576$]. The magnitude of the differences in the means was very small (eta squared =.0014).

Analysis for Hypothesis 5. The relationship between importance of spirituality and importance of religion among participants was investigated using Spearman's Rank Order Correlation (rho). This study implemented the non-parametric Spearman's Rank Order Correlation (rho) instead of the parametric Pearson's product moment correlation test because of the type of data being analyzed (nominal/categorical). Spearman's Rank Order Correlation (rho) does not make assumptions about the population and is therefore a distribution-free test. It was also an appropriate analysis for this particular data set

because it was used to analyze non-linear data. Preliminary analyses were conducted to ensure no violations of the assumptions of normality, linearity and homoscedasticity. There was a medium, positive correlation between the two variables (rho = .348, $n = 220$, $p < .0.01$; see table 2a below) with a higher number of participants endorsing importance of spirituality ($n = 170$) than importance of religion ($n = 108$; see Table 2b for frequency distribution).

Table 2a

Spearman's Rank Order Correlation (rho) of Religion and Spirituality

Importance of Religion and Spirituality in Participants' lives			Religion	Spirituality
Spearman's rho	Religion	Correlation Coefficient	1.000	.348**
		Sig. (2-tailed)	.	.000
		N	220	220
	Spirituality	Correlation Coefficient	.348**	1.000
		Sig. (2-tailed)	.000	.
		N	220	220

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

Table 2b

Frequencies of Spirituality and Religion (Grouped)

Spirituality		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	50	22.7	22.7	22.7
	High	170	77.3	77.3	100.0
	Total	220	100.0	100.0	

Religion		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	112	50.9	50.9	50.9
	High	108	49.1	49.1	100.0
	Total	220	100.0	100.0	

Discussion

Demographics

According to the Urban Indian Health Commission (2007) research addressing the needs of American Indians living off-reservation remains scarce in spite of the fact that that more than half of all American Indians live outside the boundaries of a reservation (Ogunwole, 2006), with many residing in cities or towns. That trend is projected to continue. This is important for a variety of reasons, not the least of which is the need to identify and acknowledge within the literature that a large off-reservation American Indian population exists whose needs are being unmet. Identifying the unique needs of American Indians living off-reservation is imperative in informing the development of programs that can more effectively meet the needs of this population. This is especially important when considering that barriers to services (e.g., IHS) and other resources may often arise for American Indians living in an off-reservation environment.

The individuals who participated in this study were strongly representative of the Billings Area of the Indian Health Service, representing each of Montana's federally recognized tribes. The participants were also robustly representative of an off-reservation American Indian sample; with over 75% of the participants reporting that they currently resided in a city.

Cultural identity and depression

Cultural identity has been postulated as both a potential protective (Berlin, 1987; Oetting & Beauvais, 1991; Whitbeck, McMorris, Hoyt, Stubben, & LaFromboise, 2002) and risk factor (Phinney, 1990) for depression. One purpose of this study was to assess the participant's level of identification with American Indian culture and investigate

whether there was a relationship between identification as American Indian and endorsement of depressive symptoms. This study found that the participants in this sample endorsed high CES-D scores and that high identification with American Indian culture was not a significant predictor of lower CES-D scores.

Cultural identity and depression: Does gender play a role? American Indians have experienced rapid social and cultural change since the onset of Europeans arrival. The lifestyle changes and accompanying role shifts that have occurred over the last several hundred years have had a profound impact on the lives of American Indian men and women (Kraus & Buffler, 1979).

American Indian men have experienced considerable disruption of their traditional roles within the tribal community. In some tribal communities the traditional roles of hunter and warrior have been usurped by a societal shift requiring men to pursuit more conventional and less traditional ways of providing support, security and protection for their families and communities (Taylor, 2000). The traditional roles of warrior and hunter has been eclipsed by the fact that American Indian people are forced to coexist within a culture where survival is structured around the ability to successfully navigate within a mixed capitalistic economy.

One aspect of this study focused on identifying CES-D endorsement patterns in males who highly identified as American Indian. When exploring gender differences across levels of identification of American Indian culture, this study found that regardless of American Indian cultural identification and regardless of gender, the participants in this sample endorsed high CES-D scores.

These findings reveal that the male participants endorsed depressive symptoms at a rate essentially equal to that of the female participants. This is inconsistent with previous literature, which predominately suggests that males tend to endorse fewer depressive symptoms than females (Angst & Dobler-Mikola, 1984; Ernst & Angst, 1992; Mitchell & Abbot, 1987; Young, Scheftner, Fawcett, & Klerman, 1990). It also supports the findings of Plaud, Schweigman and Welty (1997) who also found no significant difference in CES-D scores based on gender within an American Indian population. These results highlight the need for research, specifically *primary* research, exploring the nuances that may exist between gender roles and depressive symptoms within an American Indian population.

Depression and gender

American Indian male and American Indian female participants similarly endorsed a significant number of depressive symptoms on the CES-D. The endorsement pattern displayed by this sample, where there was no significant difference on levels of endorsement of depressive symptoms, are not consistent with the overall pattern of endorsement usually demonstrated by gender in the majority population (APA, 2000; Kessler et al., 1994; Kuehner, 2003; Nolen-Hoeksema, 1990). There is evidence in the research, however, that suggests the trend of females endorsing symptoms of depression more frequently than males may be culture specific and not generalizable to American Indian people (Culbertson, 1997; Piccinelli & Wilkinson, 2000). Plaud, Schweigman, & Welty (1997) conducted a study that also investigated relationships between the CES-D and cultural and gender factors in an upper Midwest American Indian population. Consistent with the findings of this study, Plaud, Schweigman and Welty also found no

significant differences between males and females in relation to their CES-D scores. Their study also revealed no significant difference in CES-D scores related to ethnic background, identification, or comfortableness with native or nonnative cultures. Their study did, however find that frequency of use of traditional medicine and ability to speak one's native language yielded lower CES-D scores. This highlights the importance of distinguishing specific cultural factors that may serve as protective against depression and other mental health problems. One of the limitations of this project was that this information was not considered within the context of this study, it would have provided more specific information about the participants' level of involvement within their culture. If higher involvement in certain cultural practices can be correlated with positive mental health then there is an opportunity for future research to explore and identify those specific cultural factors.

Religion, spirituality and depression

Regardless of the level of importance placed on religion or spirituality, American Indian participants in this study consistently endorsed significant symptoms of depression demonstrated by high (>16) CES-D scores. These findings are congruent with Baetz, Griffen, Bowen, Koenig, and Marcoux's (2004) study which also found that individuals who indicated religion and spirituality as important exhibited more depressive symptoms.

Additionally, a significant positive correlation was revealed between the American Indian participants' ratings of importance of religion and spirituality in their lives. Researchers have previously been unable to draw a clear distinction between religion and spirituality as separate constructs and often have used the terms interchangeably. More recently, researchers have begun to more closely examine the

concept of religiosity, discriminating between intrinsic and extrinsic qualities of religion. This somewhat parallels the distinction made between religion and spirituality (i.e., individual vs. group experience). Despite the ongoing efforts to distinguish between the two, the ability to operationally define these complex constructs has not been achieved and the distinction remains muddled (Dein, 2006).

Due to the limited information regarding religion and spirituality collected in this study it is unclear exactly what the implications of these findings are. This investigation was conducted in an effort to discover supporting evidence of a difference between religion and spirituality within an American Indian sample. The constructs were not defined for the participants, which allowed them to identify "importance" of both religion and spirituality in their life without superimposing meaning onto the terms. In this way, the results could serve as an indicator of semantic differences that may exist between the two. Post-hoc frequency analyses revealed that there were differences that emerged between the two constructs. Although American Indian participants were almost evenly split regarding importance of religion, it should be noted that 4 more participants reported low importance of religion ($n = 112$) than those participants who reported high importance of religion ($n = 108$). Also interesting is the pronounced difference between American Indian participants reporting high importance of spirituality ($n = 170$) and American Indian participants reporting low importance of spirituality ($n = 50$). It is impossible to speculate as to what these differences might imply, but it does illustrate that differences do indeed exist. Future research examining these differences and investigating possible culture specific explanations could be a valuable contribution to the existing literature.

Conclusion

It appears that this population sample endorsed a high rate of depressive symptoms on the CES-D. The data used for this study was obtained from an archival data set, which naturally restricted the design of the study to the available data. Additionally, the measures chosen for inclusion from the original data set were not sufficient to provide insight into a variety of factors that could potentially have had influence on the high overall CES-D scores, such as previous mental health history, substance abuse, socioeconomic status, medical history, and barriers to care. Despite high overall CES-D scores, only 6.2% of the participants endorsed seeking Mental Health services. It is interesting to note that within this sample population, mental health services were the least sought after of all services by the participants in this study. The results of this study are important and support the call for future research, however the influence of specific variables on overall CES-D scores should be cautiously interpreted with careful consideration given to the prevalence of high CES-D scores within the sample. In light of the questions raised herein, the appropriateness of using the CES-D with American Indian populations is an area of interest within the literature and of special interest to this study.

Although we did not rely on cut-off scores or a multi-factor model of the CES-D in this study it is interesting to note that the participants' overall combined mean CES-D score was 19.54, and more than half (50.5%) of participants scored at or above the suggested cut-off score of 16, which is representative of considerable endorsement of depressive symptoms. These are important limitations to be considered when using and interpreting the CES-D with an American Indian population and the limitations will be

discussed below. For the purposes of this study we utilized the total CES-D score for each participant as a continuous variable demonstrating frequency of endorsement of depressive symptoms and thus it was not necessary to apply a cut off score or multi-factor weighting to our design.

Manson et al. (1990) strongly cautioned against assuming that Radloff's (1977) proposed cut-off score of 16 is appropriate for use with American Indian populations. Manson and colleagues (1990) argued that when the conventional cut off score of 16 was used in an adolescent American Indian population 58.1% of the population sample endorsed elevated symptoms of depression. They determined that when the CES-D cut-off of 16 was cross classified with other measures of depression the specificities were poor and were highly indicative of a false-positive interpretation. Manson et al. thus proposed a more appropriate cut-off score of 28. When Manson et al.'s suggested cut-off score of 28 was applied to this study, the percentage of participants categorized with depressive symptoms was reduced to 21.8%, illustrating the importance of critically examining the validity of the proposed cut-off score alongside other factors specific to your sample.

There is also additional research that suggests an abbreviated 12-item version of the CES-D may be more appropriate with some populations (Chapleski, Lamphere, Kaczynski, Lichtenberg, & Dwyer, 1997) and that the original four factor model design of the CES-D was not the most appropriate fit for the American Indian samples studied. Factor-analyses in two separate studies revealed that a three-factor model was in fact the best-fit model for working with these particular American Indian populations (Beals, et al., 1991; Manson, et al., 1990). This highlights previous discussion within the literature

addressing the validity and appropriateness of use and scoring dependent upon what the researcher is attempting to measure. In this study, because we were using the CES-D scores as a continuous variable measuring the frequency of reporting of depressive symptoms, there was not a conflict of interest in using the measure in its original form.

The disparity in the findings of previous research, especially the disproportionately high rate of CES-D scores reported across American Indian samples (some of them likely false-positives) highlight the need for carefully designed research that is directed toward a better understanding of what "depression" is in American Indian people. Does it exist? If so, what is the presentation of depressive symptoms in an American Indian population and how is it defined and experienced by the population? Are the current measures used to assess depressive symptoms appropriate for use within American Indian communities? Are contemporary psychological methods superimposing psychopathology where it may not exist, and are critical areas of need being missed? While it would be impossible to generalize the answers to these questions to all American Indian people, it is imperative to work ethically to understand individual tribal groups and further the knowledge base within the research in an effort to better understand and meet the mental health needs of all American Indian people.

Summary

Depression is diagnosed at high rates among American Indians. The goal of this study was to explore possible protective factors against depression. The impact of cultural identity, cultural identity and gender, gender, importance of spirituality, and importance of religion, on endorsement of depressive symptoms was investigated. As well as whether participants' appeared to distinguish between religion and spirituality.

While this study did not produce any statistically significant results based upon the hypotheses, it did provide fascinating information that may influence future areas of study. For example, post-hoc frequency analyses revealed that 50.5% of the sample endorsed a significant number of depressive symptoms. This may have impacted the predictive aptitude of the independent variables and highlights the need to investigate co-morbidity, history of mental illness, and other situational factors that could influence potential scores. Post-hoc analyses also revealed that despite the positive correlation between religion and spirituality, there were substantially fewer endorsements of high religion ($n = 108$) than high spirituality ($n = 170$) and that endorsement of high and low religion was almost equally split among participants, suggesting that there may be interesting distinctions between religion and spirituality in certain American Indian populations.

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Appendix A

The Center for Epidemiological Studies – Depression Scale (CES-D):
A Self-Report Depression Scale for Research in the General Population (Radloff, 1977)

Instructions for questions: Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

Answer choices are as follows:

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

<u>During the past week:</u>

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 the help from my family or friends.
4. I felt that 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".

CES-D scoring: Reverse score items 4, 8, 12, and 14. Add the scores to obtain a total. A score of 16 or higher serves to classify persons as having "depressive symptoms" validated with DSM-IV criteria for clinical depression.

Appendix B

The Orthogonal Cultural Identification Scale (Oetting, 1993)

These questions ask how close you are to different cultures.

Some families have special activities or traditions that take place every year at particular times (such as holiday parties, special meals, religious activities, trips or visits). Thinking about the family that raised you, how many of these special activities or traditions did your family have that are based on…

1. The American-Indian culture (A lot, Some, Not much, None)
2. The Spanish or Mexican-American culture (A lot, Some, Not much, None)
3. The White-American culture (A lot, Some, Not much, None)
4. Other culture, Specify Culture: _______ (A lot, Some, Not much, None)

As an adult with your own family or friends, do you do special things together or have special traditions that are based on…

1. The Spanish or Mexican-American culture (A lot, Some, Not much, None)
2. The American-Indian culture (A lot, Some, Not much, None)
3. The White-American culture (A lot, Some, Not much, None)
4. Other culture, Specify Culture: _______ (A lot, Some, Not much, None)

Does your family live by or follow…

1. The White-American culture (A lot, Some, Not much, None)
2. The American-Indian culture (A lot, Some, Not much, None)
3. The Spanish or Mexican-American culture (A lot, Some, Not much, None)
4. Other culture, Specify Culture: _______ (A lot, Some, Not much, None)

Do you live by or follow…

1. The American-Indian culture (A lot, Some, Not much, None)
2. The White-American culture (A lot, Some, Not much, None)
3. The Spanish or Mexican-American culture (A lot, Some, Not much, None)
4. Other culture, Specify Culture: _______ (A lot, Some, Not much, None)

Is your family a success in…

1. The White-American culture (A lot, Some, Not much, None)
2. The American-Indian culture (A lot, Some, Not much, None)
3. The Spanish or Mexican-American culture (A lot, Some, Not much, None)
4. Other culture, Specify Culture: _______ (A lot, Some, Not much, None)

As an adult, are you a success in…

1. The American-Indian culture (A lot, Some, Not much, None)
2. The White-American culture (A lot, Some, Not much, None)
3. The Spanish or Mexican-American culture (A lot, Some, Not much, None)
4. Other culture, Specify Culture: _______ (A lot, Some, Not much, None)